THE RESIDENCES @ SHORELINE GATEWAY

Draft Environmental Impact Report

SCH #2018092028

Prepared by
City of Mountain View

September 2019

In conjunction with
Environmental Science Associates

CITY OF MOUNTAIN VIEW

NOTICE OF AVAILABILITY OF A DRAFT ENVIRONMENTAL IMPACT REPORT

Project Title: Residences @ Shoreline Gateway Project (SCH# 2018092028)
City/County: City of Mountain View, Santa Clara County, California
Public Review Period: September 26, 2019 to November 11, 2019

NOTICE IS HEREBY GIVEN that the Draft Environmental Impact Report (EIR) for the Residences @ Shoreline Gateway Project in the City of Mountain View is available beginning on September 26, 2019 for review and comment by the public and all interested persons, agencies, and organizations for a period of 45 days, ending November 11, 2019. All comments on the Draft EIR must be received by that date.

Project Location: The Project site is located at 1001 North Shoreline Boulevard in the north central portion of the City of Mountain View on Assessor's Parcel Numbers (APNs) 153-15-032 and 153-15-033. The 7.81-acre site is bounded by North Shoreline Boulevard on the west, Terra Bella Avenue on the south, Linda Vista Avenue on the east, and U.S. Highway 101 (U.S. 101) on the north.

Project Description: The existing site contains one 111,443 square-foot four-story office building, surface parking lots, landscaping, and private amenity space. The Project proposes a General Plan Amendment from *General Industrial* to *Mixed-Use Center* and a Rezoning from *General Industrial* (MM) on the eastern portion of the Project site and *Limited Industrial* (ML) on the western portion of the Project site, to *Planned Community* (P) for the entire site to allow development on a 5.84-acre portion of the site. The existing office building would remain at the site; however, associated surface parking, amenity space, and landscaping would be removed. The Project would construct a new, seven-story residential structure with approximately 3,000 square feet of ground floor retail, two levels of podium parking and 203 residential units; and a new, seven-story residential structure with two levels of podium parking and 100 residential units, to the north and east of the existing office building. The Project would also include a six-story parking structure to accommodate parking for the existing office building. The Project will also require approval of a Planned Community Permit/Development Review Permit, a Vesting Tentative Subdivision Map, a Heritage Tree Removal Permit for the removal of approximately 23 Heritage Trees, and other City approvals as necessary to develop the Project.

The Project would not result in any significant and unavoidable impacts; all impacts can be mitigated to a less than significant level. With incorporation of mitigation measures, the Project would not create a significant hazard to the public or environment as a result of being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

Availability of the Draft Environmental Impact Report: Copies of the Draft EIR will be available for review beginning on September 26, 2019 at the following locations:

- City of Mountain View, Community Development Department, 500 Castro Street, 1st Floor, Mountain View, during business hours, Monday to Friday, 8:00 AM to 4:00 PM, (650) 903-6306.
- Mountain View Public Library, 585 Franklin Street, Mountain View, CA, 94041, (650) 903-6887.
- City of Mountain View Website: https://www.mountainview.gov/depts/comdev/planning/activeprojects/1001nshoreline.asp

Comments may be submitted in writing to: Diana Pancholi, Senior Planner, City of Mountain View Community Development Department, P.O. Box 7540, Mountain View, CA 94041, or emailed to diana.pancholi@mountainview.gov

Signature & Title: Pancholi Senior Planner Date: 9/26/19.

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TABLE OF CONTENTS

The Residences @ Shoreline Gateway
Draft Environmental Impact Report

Page

Appendices

Figures

Page

Figures (continued)

Tables

Page

Tables (continued)

CHAPTER 1
Introduction

1.1 Overview

This Draft Environmental Impact Report (EIR) is an informational document intended to disclose to the public and decision-makers the environmental effects of the Residences @ Shoreline Gateway Project (the Project or proposed Project). The Project site is owned by LH Shoreline, LP (herein referred to as the "applicant"), and currently contains one 111,443-square-foot, four-story office building, which would be retained on the site.

The City of Mountain View (City) has prepared this Draft EIR pursuant to the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq. and Section 15000 et seq.) and the state CEQA *Guidelines* (California Code of Regulations) promulgated thereunder (together "CEQA"), as well as the regulations and policies of the City of Mountain View. CEQA requires that an EIR be prepared by the agency with primary responsibility over the approval of a project (the Lead Agency). The City is the Lead Agency for this EIR, and as such is overseeing and administering the CEQA environmental review process.

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 on information submitted by the applicant in an application to the City for a General Plan amendment, Planned Community Permit, Development Review Permit, Heritage Tree Removal Permit, and other City approvals as necessary to develop the Project. This EIR is intended as an informational document that, in itself, does not determine whether the Project should be approved, but informs local officials in the planning and decision-making process.

1.2 Environmental Review under the California Environmental Quality Act

The proposed Project approvals constitute a "project" as defined by, and are subject to the requirements of, CEQA. 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 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 a 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 EIR must be prepared.

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 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 substantially reducing the Project's impacts.

The City has determined the Project requires the preparation of an EIR. Before any action may be taken to approve the Project, the City 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 Project.

1.2.1 CEQA Context

Impacts of the Environment on a Project

Impacts of the environment on a project, as opposed to impacts of a project on the environment, are generally beyond the scope of required CEQA review. The California Supreme Court has stated, "CEQA analysis is concerned with a project's impact on the environment, rather than with the environment's impact on a project and its users or residents." (*California Building Industry Association v. Bay Area Air Quality Management District*, [S213478, Dec. 17, 2015] ["*CBIA v. BAAQMD*"]). As the Court observed, certain considerations involving schools, residential developments and whether the project may exacerbate existing impacts must be analyzed. However, to the extent that the impacts discussed in this EIR (in such sections as 4.2, *Air Quality*; 4.6, *Geology, Soils, and Mineral Resources*; 4.7, *Climate Change and Greenhouse Gases*; 4.8, *Hazards and Hazardous Materials*; and 4.11, *Noise*) relate to the pre-existing environment's effects (whether on or off-site) on the Project or potential site users, except for those exceptions identified in *CBIA v. BAAQMD*, they are included for informational purposes. For the purpose of a thorough analysis, all thresholds for determining the significance of impacts in accordance with the requirements of the CEQA *Guidelines* have been included, including those found in CEQA *Guidelines* Appendix G.

1.2.2 Notice of Preparation

Per the requirements of CEQA for the initiation of environmental review, on September 13, 2018, the City sent a Notice of Preparation (NOP) to responsible and trustee government agencies, organizations, and individuals potentially interested in the Project. The NOP is included in **Appendix A** of this EIR. 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. Responses to the NOP are also included in Appendix A. As discussed in the NOP and per the provisions of CEQA, the City did not prepare a CEQA Initial Study prior to preparation of the

EIR, because the City determined that it was clear at the time of the issuance of the NOP that an EIR was required (CEQA *Guidelines* Section 15060[d]).

A scoping meeting on the NOP was held on September 26, 2018 to take comments regarding the scope and content of the Draft EIR. Materials from the meeting, including comment cards and a presentation given by City staff on the CEQA process, are also included in Appendix A.

1.2.3 Draft EIR

This document and all attachments hereto constitute the Draft EIR. The Draft EIR contains a description of the Project, description of the environmental setting, identification of Project impacts, identification of recommended mitigation measures to 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 reducing the Project's impacts, and a comparative analysis of those alternatives (see Section 1.3, below).

Public Notice and Public Review

The City filed a Notice of Completion (NOC) for this Draft EIR with the Governor's Office of Planning and Research to begin the public review period (Public Resources Code, Section 21161). The 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 City. A copy of the Draft EIR will be posted on the City's website for the Residences @ Shoreline Gateway Project (https://www.mountainview.gov/depts/comdev/planning/activeprojects/1001nshoreline.asp). 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:

Diana Pancholi, Senior Planner
City of Mountain View Planning Division
500 Castro Street
Mountain View, CA 94041
diana.pancholi@mountainview.gov

1.2.4 Final EIR and Certification

Following the public review period, a Final EIR will be prepared. The Final EIR will respond to comments relevant to CEQA including written comments received during the public review period.

Certification of the EIR and Project Consideration

The City will review and consider the Final EIR. If the City finds that the Final EIR is adequate and complete, the City will certify the Final EIR. Upon review and consideration of the Final EIR, the Mountain View City Council may take action to approve, conditionally approve, revise, or reject

the Project. A decision to approve the Project would be accompanied by written findings in accordance with CEQA *Guidelines* Sections 15091 and 15093, as applicable. A Mitigation Monitoring and Reporting Program, as described below, would also be adopted for mitigation measures that have been incorporated into the 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 Mountain View City Council for adoption at the time of Project approval. The 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 reasonable range of alternatives to the Project (see Chapter 5, *Alternatives to the Project*). This EIR describes and analyzes a reasonable range of 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 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 City 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, and the level of significance of impacts after mitigation. Detailed analysis of impacts and mitigation measures 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 Project. This chapter also includes a list of the City'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 Project. It includes the thresholds of significance used to determine the significance of

adverse environmental effects. This chapter also identifies the mitigation measures 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.

Alternatives (Chapter 5) evaluates a range of reasonable alternatives to the Project and identifies an environmentally superior alternative, consistent with the requirements of CEQA. The alternatives analyzed in Chapter 5 of this EIR are the No Project Alternative (Alternative 1), the Reduced Density Alternative (Alternative 2), and the No Retail Alternative (Alternative 3).

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

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 4.16).

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 **L**.

All reference documents listed at the end of each analysis section (Chapter 4) are available for review by the public. These documents are available at the City of Mountain View Planning Division, at 500 Castro Street, Mountain View, CA 94041, during normal business hours.

1.5 Intended Uses of the EIR

This EIR provides the CEQA compliance documentation upon which the City's consideration of, and action on, all applicable land use permits and other approvals (collectively, "approvals") for the proposed Project or an alternative 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).

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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 Residences @ Shoreline Gateway Project (Project) and its consequences. This chapter is intended to summarize in a stand-alone section the project described in Chapter 3, *Project Description*, the impacts and mitigation measures discussed in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, and the alternatives analysis presented in Chapter 5, *Alternatives to the Project*.

This Draft 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 City of Mountain View (City), is the public agency that has the principal responsibility for implementing the Project, which includes rezoning of the area comprising the Project site, and other approvals (referred to collectively hereafter as the Project or proposed Project).

2.2 Regional Location and Planning Area

The Project is located in the north central portion of the City, which is located south of San Francisco at the southern end of the San Francisco Peninsula, where the Peninsula joins the Santa Clara Valley in northwestern Santa Clara County. The City is approximately 12 square miles in size and is bounded by Palo Alto to the west, Los Altos to the south, Sunnyvale and the NASA-Ames/Moffett Federal Airfield complex to the east, and the San Francisco Bay and tidal marshes to the north, as shown on Figure 3-1. The Project site is located in the City's Moffett/Whisman Planning Area, in the north-central portion of the City.

The Project site is a total of 7.81 acres, bounded by North Shoreline Boulevard on the west, Terra Bella Avenue on the south, Linda Vista Avenue on the east and U.S. Highway 101 (U.S. 101) on the north. The proposed new buildings and associated improvements would be constructed on an approximately 5.84-acre portion of the Project site shown as the "Development Area" on Figure 3-2, which illustrates the Project site's local context. An existing six-story office building would remain on the Project site.

2.3 Project Description

The Project would construct a new, seven -story residential structure with approximately 3,000 square feet of ground floor retail, two levels of podium parking and 203 residential units; and a new, seven-story residential structure with two levels of podium parking and 100 residential units, to the north and east of the existing office building. The existing office building would remain at the site; however, associated surface parking, amenity space, and landscaping would be removed. The Project would also include a six-story parking structure to accommodate parking for the existing office building.

The two residential developments would be divided into two separate "blocks" (Block A and Block B). The Block A building would consist of five stories of wood structure above two stories of concrete parking podium, with approximately 244 parking spaces. Residential units in this building would be located on all stories and include up to 203 one-, two-, and three-bedroom units. Approximately 3,000 square feet of retail space would be included on the ground floor of Block A. Parking for the retail space would be provided in 12 dedicated surface parking spaces. The Block B building would consist of five stories of wood structure above two stories of concrete parking podium, with approximately 128 parking spaces. Residential units in this building would include up to 100 units including one-, two-, and three-bedroom units, as well as a limited number of two-level townhome-style units located on the ground level.

Block B would also include a six-level parking garage adjacent to the residential building. This building would provide approximately 359 garage parking spaces to serve the existing office building. The Project would also make available up to 100 spaces within the office garage for residential uses during evenings and weekends, when the office demand would be less and the office garage may be underutilized.

The Project includes an additional 40 surface parking spaces to be shared among office, retail, and residential uses for a total of 783 parking spaces provided on the Project site. The Project would also include building amenities, public and private open space, and landscaping. The Project would install public water and sewer mains on the Project site in joint trenches beneath internal roads as a part of a Capital Improvement Project (CIP) crossing State Highway 101 near North Shoreline Boulevard (Shoreline/101 CIP). Additional on-site utilities would be constructed as needed to connect to existing and/or proposed infrastructure.

The Project includes the removal of approximately 23 trees that meet the City's criteria for Heritage trees, which would be replaced with mitigation trees above the required mitigation ratio of 2:1 (approximately 50 mitigation trees). Approximately 276 total trees are estimated to be on the Project site at the time of Project completion.

2.4 Project Objectives

The following objectives have been identified for the Project:

1. Redevelop the Project site with approximately 300 new residential units and a diversity of housing choices, including new affordable residential units, to better balance the City's jobs/housing ratio;
2. Increase homeownership opportunities in the City of Mountain View and expand the supply of higher density attached, for-sale product by providing approximately 100 condominium units;
3. Locate higher density residential units in close proximity to both major job centers in Mountain View and the major thoroughfares of Highway 101 and Shoreline Boulevard;
4. Redevelop an underutilized site to allow for higher density housing in proximity to jobs and the existing 111,443 square foot office building on the Project site;
5. Provide amenities, shared auto and parking strategies, and TDM measures that promote walking, bicycling, telecommuting, and use of shuttles, transit and other transportation alternatives;
6. Respect the surrounding neighborhood and community through quality design, materials, and landscaping;
7. Implement sustainable building practices promoting energy and water efficiency;
8. Create a new common open space area with shade trees and an open plaza with outdoor seating to allow for the passive enjoyment by all residents and office building users.

2.5 Impacts of the Proposed Project

As provided by 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 Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR, and summarized in **Table 2-1** at the end of this chapter. The Project would not result in any significant and unavoidable impacts. The Project would also result in impacts that would not require measures to mitigate the impact – i.e., that would be "less than significant" – for several resources, including aesthetics; energy; geology, soils, and paleontological resources; hydrology and water quality; land use and planning; population and housing; public services and recreation; noise; transportation; and utilities and service systems. In addition, with the implementation of mitigation measures as described in this EIR, impacts from the Project on air quality; biological resources; cultural and tribal cultural resources; and hazards and hazardous materials would be mitigated to less-than-significant levels.

The City has identified standard conditions, which are typically imposed as conditions of approval for any development project submitted to the City Council. Standard conditions that would automatically be required for the Project and would ensure that no significant environmental impacts would occur, are also included in Chapter 4.

2.6 Alternatives to the Project

Chapter 5, *Alternatives to the Project*, analyzes a range of reasonable alternatives to the proposed Project, including the No Project Alternative (Alternative 1), the Reduced Density Alternative (Alternative 2), and the No Retail Alternative (Alternative 3). Project impacts that would be significant and unavoidable have not been identified; accordingly, the focus of the alternatives analysis is on assessing (1) the extent to which the Project alternatives would result in eliminating or reducing impacts identified as less than significant with mitigation in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*; and (2) whether the alternatives meet the basic objectives of the Project.

The analysis of the alternatives, including a comparison of alternatives to the proposed Project, is presented in Chapter 5, which provides a summary of impact levels within all environmental topic areas. Overall, the analysis shows that the No Project Alternative would reduce all of the Project's impacts, and that the Reduced Density Alternative and No Retail Alternative would reduce some of the Project's impacts, or would result in comparable impacts.

The No Project Alternative would not have the ability to meet the basic objectives of the Project. The Reduced Density Alternative would have the ability to meet all of the basic objectives of the Project (though would do so to a lesser degree for objectives pertaining to housing density). The No Retail Alternative would have the ability to meet all of the basic objectives of the Project.

Based on the evaluation described in Chapter 5, the No Project Alternative would be environmentally superior to the Project. However, the No Project 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, based on its combined incremental reduction in construction activity and substantial trip reduction, the No Retail Alternative would be the Environmentally Superior Alternative for the purpose of this analysis.

2.7 Comments on Notice of Preparation

In accordance with the CEQA *Guidelines*, the City distributed a Notice of Preparation of an EIR (NOP) for the EIR to affected agencies and the public for the required 30-day period ("EIR scoping period"). The NOP was posted on September 13, 2018, with a 32-day comment period running from September 13, 2018 to October 15, 2018. The NOP and comments submitted during the EIR scoping period are included in **Appendix A** of this Draft 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 traffic impacts, public safety, public facilities (open space), and aesthetic impacts. As a result, these issues are potential areas of controversy.

2.9 Issues to Be Resolved

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

- This EIR adequately describes the environmental impacts of the Project;
- Recommended mitigation measures should be adopted or modified;
- Additional mitigation measures need to be applied to the Project;
- Feasible alternatives exist that would achieve the objectives of the Project and reduce significant environmental impacts;
- Significant and unavoidable impacts would occur if the Project were implemented; and
- The Project should or should not be approved.

TABLE 2-1
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
4.1 Aesthetics		
Impact AES-1: The Project would not have a substantial adverse effect on a scenic vista nor substantially damage scenic resources.	None required	Less Than Significant
Impact AES-2: The Project would not conflict with applicable zoning and other regulations governing scenic quality.	None required	Less Than Significant
Impact AES-3: 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
CUMULATIVE IMPACT: **Impact C-AES-1:** The proposed Project would not result in a significant cumulative aesthetics impact when considering the combined effect of the Project, and past, present, approved, pending, and reasonably foreseeable future projects.	None required	Less Than Significant
4.2 Air Quality		
Impact AIR-1: The Project could conflict with or obstruct implementation of the applicable air quality plan.	**Mitigation Measure AIR-1: Exhaust Emissions Reduction Measures.** The Project applicant shall develop a plan demonstrating that the off-road equipment used on-site to construct the Project would achieve a fleet-wide average 77- to 81-percent reduction of DPM, considered as PM_{10} exhaust. One feasible plan to achieve this reduction would include the following: 1. All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet U.S. EPA particulate matter emissions standards for Tier 3 engines and this equipment shall include CARB-certified Level 3 Diesel Particulate Filters or equivalent. Equipment that meets U.S. EPA Tier 4 standards for particulate matter emissions or use of equipment that is electrically powered or uses non-diesel fuels would also meet this requirement; 2. Use electric-powered building cranes; 3. Use electric-powered portable equipment, which shall include air compressors and welders; and 4. Minimize diesel generator use by providing line power to the construction sites prior to building construction. Note that the construction contractor could use other measures to minimize construction period DPM emission to reduce the estimated cancer risk below the thresholds. The use of equipment that includes Tier 2 engines and CARB-certified Level 3 Diesel Particulate Filters or alternatively-fueled equipment (i.e., non-diesel) could meet this requirement. Alternatively, a combination of measures may be implemented, provided that these measures are approved by the City and demonstrated to reduce community risk impacts to below performance standards of an increased cancer risk of 10 in one million and a localized $PM_{2.5}$ concentration of 0.3 $\mu g/m^3$.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
4.2 Air Quality (cont.)		
Impact AIR-1 (cont.)	In the event that conditions near the site have changed prior to construction, the construction approach or timeframe changes, a new Health Risk Assessment could be prepared to reevaluate this impact and refine the mitigation requirements. Any updated analysis would need to be reviewed and approved by the City prior to construction and meet the above stated performance standards.	
Impact AIR-2: Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard.	None required	Less Than Significant
Impact AIR-3: Project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard.	None required	Less Than Significant
Impact AIR-4: Construction of the Project could expose sensitive receptors to substantial pollutant concentrations including toxic air contaminants (TACs) and fine particulate matter.	**Mitigation Measure AIR-1: Exhaust Emissions Reduction Measures.**	Less Than Significant
Impact AIR-5: The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	None required	Less Than Significant
CUMULATIVE IMPACTS: **Impact C-AIR-1:** The Project, in combination with past, present, and reasonably foreseeable future development of cumulative projects would not contribute to cumulative regional air quality impacts.	None required	Less Than Significant
Impact C-AIR-2: The Project, in combination with past, present, and reasonably foreseeable future development of cumulative projects could contribute to cumulative health risk impacts on sensitive receptors.	**Mitigation Measure AIR-1: Exhaust Emissions Reduction Measures.**	Less Than Significant
4.3 Biological Resources		
Impact BIO-1: Development of the Project could have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the United States Fish and Wildlife Service.	**Mitigation Measure BIO-1: Special-Status Bat Protection Measures**. In coordination with the City, a preconstruction survey for special-status bats shall be conducted by a qualified biologist in advance of tree and structure removal within the Project site to characterize potential bat habitat and identify active roost sites. Should potential roosting habitat or active bat roosts be found in trees and/or structures to be removed under the Project, the following measures shall be implemented: • Removal of trees shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 16 – August 14) and outside of months of winter torpor (approximately October 16 – February 28), to the extent feasible.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
4.3 Biological Resources (cont.)		
Impact BIO-1 (cont.)	• If removal of trees during the periods when bats are active 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 building 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 a qualified biologist. A 100-foot no disturbance buffer is a typical protective buffer distance however may be modified by the qualified biologist depending on existing screening around the roost site (such as dense vegetation) as well as the type of construction activity which would occur around the roost site. • The qualified biologist shall be present during tree removal if potential bat roosting habitat or active bat roosts are present. Trees with active roosts shall only be removed when no rain is occurring or is forecast to occur for 3 days and when daytime temperatures are at least 50°F. • Removal of trees with potential bat roosting habitat or active bat roost sites shall follow a two-step removal process: – 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. – 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).	
Impact BIO-2: Implementation of the Project would not conflict with any local policies or ordinances protecting biological resources.	None required	Less Than Significant
CUMULATIVE IMPACT: **Impact C-BIO-1:** The proposed Project, in conjunction with other past, current, or foreseeable development in Mountain View, could result in cumulative impacts on special-status species, local ordinances protecting biological resources, and an adopted local habitat conservation plan.	**Mitigation Measure BIO-1: Special-Status Bat Protection Measures**.	Less Than Significant
4.4 Cultural and Tribal Cultural Resources		
Impact CUL-1: Project construction could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5.	**Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources.** If indigenous or historic-era archaeological resources are encountered during Project construction activities, all activity within 100 feet of the find shall cease and the find shall be flagged for avoidance. The City and a qualified archaeologist, defined as one meeting the U.S. Secretary of the Interior's Professional Qualifications Standards for Archeology, shall be immediately informed of the discovery. The qualified archaeologist shall inspect the find within 24 hours of discovery and notify the City of their initial assessment. Indigenous 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,	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
4.4 Cultural and Tribal Cultural Resources (cont.)		
Impact CUL-1 (cont.)	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 building or structure footings and walls, and deposits of metal, glass, and/or ceramic refuse. If the City determines, based on recommendations from the qualified archaeologist, that the resource may qualify as a historical resource or unique archaeological resource (as defined in CEQA Guidelines Section 15064.5), or a tribal cultural resource (as defined in PRC Section 21074), the resource shall be avoided if feasible. Avoidance means that no activities associated with the Project that may affect cultural resources shall occur within the boundaries of the resource or any defined buffer zones. If avoidance is not feasible, the City of Mountain View shall consult with appropriate Native American tribes (if the resource is indigenous), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2 and CEQA Guidelines Section 15126.4. This shall include documentation of the resource and may include data recovery or other measures. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource. The resource and treatment method shall be documented in a professional-level technical report to be filed with the California Historical Resources Information System. Work in the area may commence upon completion of approved treatment and under the direction of the qualified archaeologist.	
Impact CUL-2: Project construction would not disturb human remains, including those interred outside of formal cemeteries.	None required	Less Than Significant
Impact CUL-3: Project construction could cause a substantial adverse change in the significance of a tribal cultural resource.	**Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources.**	Less Than Significant
CUMULATIVE IMPACT: **Impact C-CUL-1:** Project construction, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, could contribute to an adverse cumulative impact to cultural resources.	**Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources.**	Less Than Significant
4.5 Energy		
Impact ENE-1: The Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	None required	Less Than Significant
Impact ENE-2: Construction and operation of the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.	None required	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
4.5 Energy (cont.)		
CUMULATIVE IMPACT: **Impact C-ENE-1:** The proposed Project, in conjunction with other past, current, or foreseeable development in the City, would not conflict with adopted energy conservation plans, violate energy standards, or result in wasteful, inefficient and unnecessary use of energy, such that a cumulative impact would occur.	None required	Less Than Significant
4.6 Geology, Soils, and Paleontological Resources		
Impact GEO-1: Development of the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death due to seismically induced ground shaking.	None required	Less Than Significant
Impact GEO-2: Project development would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death due to seismically related ground failure, including liquefaction and lateral spreading.	None required	Less Than Significant
Impact GEO-3: The Project would not result in substantial soil erosion during excavation, grading, and construction activities.	None required	Less Than Significant
Impact GEO-4: The Project would not result in on- or off-site lateral spreading, subsidence, liquefaction, or collapse from placement of improvements on unstable geologic units or soils.	None required	Less Than Significant
Impact GEO-5: Project implementation would not create substantial risks to life or property due to the presence of expansive soils.	None required	Less Than Significant
Impact GEO-6: Project construction would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	None required	Less Than Significant
CUMULATIVE IMPACT: **Impact C-GEO-1:** The Project, in conjunction with past, present and reasonably foreseeable future projects, would not result in significant cumulative impacts with respect to geology, soils, seismicity, or paleontological resources.	None required	Less Than Significant
4.7 Greenhouse Gas Emissions		
Impact GHG-1: Development of the proposed Project would produce GHG emissions that would not have a significant impact on the environment.	None required	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
4.7 Greenhouse Gas Emissions (cont.)		
Impact GHG-2: Development of the Project would not conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing GHG emissions.	None required	Less Than Significant
CUMULATIVE IMPACT: **Impact C-GHG-1:** Development of the Project, combined with cumulative development, including past, present, existing, approved, pending, and reasonably foreseeable future development in the vicinity of the Project site, would not result in cumulative impacts regarding GHG emissions.	None required	Less Than Significant
4.8 Hazards and Hazardous Materials		
Impact HAZ-1: The Project would include the routine transport, use and disposal of hazardous materials but would not create a significant hazard to the public or the environment.	None required	Less Than Significant
Impact HAZ-2: The Project would not create a significant hazard to the public or environment through an upset or accident involving the release of hazardous materials.	None required	Less Than Significant
Impact HAZ-3: The Project could create a significant hazard to the public or environment as a result of being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	**Mitigation Measure HAZ-1a: Soil Management Plan and Air Monitoring Plan.** Prior to commencement of construction, the Project Applicant shall prepare and obtain Santa Clara County Department of Environmental Health (SCCDEH) written approval of a Soil Management Plan (SMP) and Air Monitoring Plan (AMP) that shall include consideration of the specific protocols and procedures identified below, as guided by the recommendations of the May 8, 2019 Cornerstone Earth Group Peer Review Letter (Appendix I). The specific elements of the SMP and AMP shall be approved by SCCDEH, but shall consider (but not be limited to) the following elements: • Protocols and procedures for determining when soil and air sampling and analytical testing should be performed. • Monitoring of vapors during excavation and grading activities (as guided by the procedures outlined by Cornerstone Earthwork Group in Appendix I and in consultation with SCCDEH). • Segregation and stockpiling of excavated soil in contact with groundwater. This soil shall be placed at a designated, plastic-lined stockpile area, and sampled per Department of Toxic Substances Control's (DTSC's) protocols to determine if soil can be reused onsite or if soil is required to be disposed offsite at a permitted facility. • Protocols for management of ground water discharges during excavation dewatering. Protocols shall be prepared to evaluate water quality and discharge/disposal alternatives. The pumped water shall not be used for onsite dust control or any other on-site use. • Protocols for management of Project site risks during earthwork activities in areas where impacted soil, soil vapor and/or ground water are present or suspected. Worker training requirements, health and safety measures, and soil handling procedures shall be described.	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
4.8 Hazards and Hazardous Materials (cont.)		
Impact HAZ-3 (cont.)	• During earthwork excavation activities (trenching approximately 5 feet or deeper) and/or any trench with ponded ground water, daily ambient air samples shall be collected at the Project site perimeter. Ambient air samples shall be collected and analyzed for TCE per the requirements outlined by SCCDEH. If the response action level is exceeded, DEH must be notified within two working days, and specific response actions are required to determine if additional mitigation and worker protection measures are necessary. If the above actions levels are not exceeded in the first three days of perimeter air monitoring, the monitoring shall be reduced to one event per work week. • Excavated soils from approximately 5 feet or deeper shall be field-screened for the presence of VOCs. Potentially contaminated soil shall be segregated and stockpiled at a designated, plastic-lined stockpile area for subsequent testing and laboratory analyses to determine if the soil can be reused onsite or if it is required to be disposed offsite at a permitted facility. • Evaluation and documentation of the quality of any soil imported to the Project site shall follow the Information Advisory Clean Imported Fill Material (DTSC, October 2001). Soil containing chemicals exceeding the current residential (unrestricted use) screening levels or typical background concentrations of metals shall not be accepted. • Evaluation of the residual contaminants to determine if they will adversely affect the integrity of below ground utility lines and/or structures (e.g., the potential for corrosion). • Measures to reduce soil vapor and ground water migration through trench backfill and utility conduits. Such measures shall be finalized in conjunction with SCCDEH and will include placement of low-permeability backfill “plugs” at specified intervals onsite and at all locations where the utility trenches extend offsite. In addition, utility conduits that are placed below ground water shall be installed with water-tight fittings to reduce the potential for ground water to migrate into the conduits. • Any removed utility line that is approximately 3 inches or greater in diameter shall be observed for sediment. If sediment is present, it shall be stockpiled as potentially contaminated material and sampled in accordance with the protocols outlined in the SMP. • Prior to the start of any construction activity that involves below ground work (e.g., mass grading, foundation construction, excavating or utility trenching), information regarding Project site risk management procedures (e.g., a copy of the SMP) shall be provided to the Contractors for their review, and each Contractor shall provide such information to its Subcontractors. • The Project Applicant’s Environmental Professional shall assist in the implementation of the SMP and shall, at a minimum, perform part-time observation services during excavation, grading and trenching activities. Within 60 days of completion of soil disturbance activities, the Environmental Professional shall prepare a report documenting compliance with the SMP; this report shall be submitted to the City and the SCCDEH. Additionally, prior to the commencement of construction activities, each contractor performing earth work or subsurface work at the Project site shall prepare and submit a Health and Safety Plan (HSP) to the City that addresses the safety and health hazards of each phase of site operations that includes the requirements and	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
4.8 Hazards and Hazardous Materials (cont.)		
Impact HAZ-3 (cont.)	procedures for employee protection. Workers conducting site investigation and earthwork activities in areas of contamination shall complete a 40-hour HAZWOPER training course (29 CFR 1910.120 (e)). The contractor shall be responsible for the health and safety of their employees as well as for compliance with all applicable federal, State, and local laws and guidelines. To ensure that the final SMP and AMP are able to consider the most current information regarding the Project site and apply the most up to date and appropriate mitigation methods, SCCDEH will retain final discretion regarding the specific protocols and procedures to be included in the SMP and AMP and implemented at the site. **Mitigation Measure HAZ-1b: Additional Assessments, Investigations, and/or Remediation.** SCCDEH shall be contacted to determine if additional investigation, mitigation and/or remediation is required for PCB contamination detected on-site at a concentration of 0.622 mg/kg at a former transformer pad, exceeding its residential screening level (0.24 mg/kg). SCCDEH shall be contacted regarding elevated PCE concentration in soil vapor detected at soil vapor probe SG-6 in EKI Environment & Water's Phase I/II Environmental Site Assessment dated June 14, 2019 (see Appendix I) to determine if further investigation, mitigation, and/or remediation will be required for this area. If a deep foundation system is proposed, the foundation of the building shall incorporate measures to help reduce the potential for the downward migration of contaminated ground water, if any. These measures shall be identified in the Geotechnical Investigation report and the SMP and implemented as a part of the development plans. The Project Applicant shall cooperate with SCCDEH, the San Francisco Regional Water Quality Control Board, and/or any other State or local oversight agency for the on-going investigation and subsequent remediation, if necessary, and implement any further requirements these agencies may have regarding subsurface contamination prior to occupation of the proposed improvements. **Mitigation Measure HAZ-1c: Vapor Mitigation System.** A vapor mitigation system shall be installed for all residential and commercial structures, using the Vapor Intrusion Mitigation Advisory (DTSC, October 2011) as guidance for the design. Prior to obtaining construction-related permits, the Project Applicant shall submit Vapor Intrusion Mitigation System drawings and specifications to the City SCCDEH for their review and written approval. Upon SCCDEH's written approval, these drawings and specifications shall be incorporated into the building permit plans. Within 60 days of completion of construction activities, the Project Applicant shall provide a Vapor Mitigation Completion Report to the City and the SCCDEH. The report shall document installation of the vapor control measures identified in the Vapor Intrusion Mitigation Plan, including final as-built design drawings, and present an Operation, Maintenance and Monitoring Plan. The Project Applicant shall submit SCCDEH written approval of the Vapor Mitigation Completion Report to the City prior to the issuance of any occupancy permit. The Project Applicant shall also provide Institutional Controls and Financial Assurance, or proof that adequate funds are available for long-term maintenance and monitoring of the vapor intrusion mitigation system as required by SCCDEH, with a copy to the City, to ensure that future Project site occupants are not exposed to unacceptable levels of VOC vapors.	

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
	To ensure that the final vapor mitigation measures are able to consider the most current information regarding the Project site and apply the most up to date and appropriate mitigation methods, SCCDEH will retain final discretion regarding the specific protocols and procedures to be included in the Vapor Intrusion Mitigation System and implemented at the site.	
4.8 Hazards and Hazardous Materials (cont.)		
Impact HAZ-4: The Project would not result in a safety hazard or excessive noise for people residing or working in the vicinity of a public airport or public use airport.	None required	Less Than Significant
Impact HAZ-5: The Project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	None required	Less Than Significant
Impact HAZ-6: The Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	None required	Less Than Significant
CUMULATIVE IMPACT: **Impact C-HAZ-1:** Development under the proposed Project, combined with cumulative development in the region, including past, present, existing, approved, pending, and reasonably foreseeable future development, could contribute considerably to cumulative impacts related to hazards and hazardous materials.	**Mitigation Measure HAZ-1a: Soil Management Plan and Air Monitoring Plan**. **Mitigation Measure HAZ-1b: Additional Assessments, Investigations, and/or Remediation**. **Mitigation Measure HAZ-1c: Vapor Mitigation System**.	Less Than Significant
4.9 Hydrology and Water Quality		
Impact HYD-1: The Project could result in an increase of stormwater pollutants due to construction activities and/or the introduction of new impervious surfaces with development but would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	None required	Less Than Significant
Impact HYD-2: The Project would increase demand for groundwater resources and increase impervious surfaces which would reduce the amount of stormwater runoff available for groundwater recharge, but not to the extent that it would substantially decrease groundwater supplies, interfere substantially with groundwater recharge, or impede sustainable groundwater management of the basin.	None required	Less Than Significant
Impact HYD-3: The Project would not substantially alter the existing drainage pattern such that substantial erosion, siltation, flooding, an exceedance of stormwater system capacity, or impedance to flood flows would occur.	None required	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
Impact HYD-4: The Project would not risk release of pollutants due to Project inundation.	None required	Less Than Significant
Impact HYD-5: The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	None required	Less Than Significant
4.9 Hydrology and Water Quality (cont.)		
CUMULATIVE IMPACT: **Impact C-HYD-1:** Development of the Project, in conjunction with past, present and reasonably foreseeable future projects, would not result in significant cumulative impacts with respect to hydrology and water quality.	None required	Less Than Significant
4.10 Land Use and Planning		
Impact LUP-1: The Project would not divide an established community.	None required	Less Than Significant
Impact LUP-2: The Project would not conflict with applicable regional or local plans and policies adopted for the purpose of avoiding or mitigating environmental effects.	None required	Less Than Significant
CUMULATIVE IMPACT: **Impact C-LUP-1:** Development of the Project, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, would not result in significant cumulative impacts to land use and planning.	None required	Less Than Significant
4.11 Noise		
Impact NOI-1: Construction of the Project would result in a temporary increase in ambient noise levels.	None required	Less Than Significant
Impact NOI-2: Project construction would not generate excessive ground-borne vibration.	None required	Less Than Significant
Impact NOI-3: Project operations would not cause a long-term increase in ambient noise levels in the Project site vicinity.	None required	Less Than Significant
Impact NOI-4: Occupants of the proposed residences in Project buildings would not be exposed to ambient noise levels in excess of standards established in the City's General Plan.	None required	Less Than Significant
CUMULATIVE IMPACTS: **Impact C-NOI-1:** Project construction activities combined with cumulative construction noise in the vicinity of the Project site would not cause a substantial temporary or periodic increase in	None required	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
ambient noise levels in the Project site vicinity during construction.		
Impact C-NOI-2: Traffic associated with the Project when considered with other cumulative development would not cause a substantial permanent increase in ambient noise levels in the Project vicinity.	None required	Less Than Significant
4.12 Population and Housing		
Impact POP-1: The Project would not directly or indirectly induce substantial unplanned population growth.	None required	Less Than Significant
CUMULATIVE IMPACT: **Impact C-POP-1:** Development of the Project, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, would not result in a significant impact on population and housing.	None required	Less Than Significant
4.13 Public Services and Recreation		
Impact PSR-1: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services.	None required	Less Than Significant
CUMULATIVE IMPACT: **Impact C-PSR-1:** The Project, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects with the vicinity of the Project site, would not contribute considerably to a cumulative impact related to public services and recreation.	None required	Less Than Significant
4.14 Transportation		
Impact TRA-1: The Project would not conflict with an applicable plan, ordinance or policy addressing the circulation system, including all modes of transportation and relevant components of the circulation system.	None required	Less Than Significant
Impact TRA-2: The Project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	None required	Less Than Significant

TABLE 2-1 (CONTINUED)
SUMMARY OF IMPACTS AND MITIGATION MEASURES FOR THE PROJECT

Impacts	Mitigation Measures	Significance After Mitigation
Impact TRA-3: The Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., use of large farm equipment).	None required	Less Than Significant
Impact TRA-4: The Project would not result in inadequate emergency access.	None required	Less Than Significant
4.14 Transportation (cont.)		
Impact TRA-5: The Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	None required	Less Than Significant
4.15 Utilities and Service Systems		
Impact UTL-1: The Project would not require or result in the construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	None required	Less Than Significant
Impact UTL-2: The Project would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years.	None required	Less Than Significant
Impact UTL-3: Development 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 UTL-4: Development of the Project would not generate solid waste in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	None required	Less Than Significant
Impact UTL-5: The Project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste.	None required	Less Than Significant
CUMULATIVE IMPACT: **Impact C-UTL-1:** The Project in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity would not contribute considerably to cumulative impacts to utilities and service systems.	None required	Less Than Significant

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CHAPTER 3
Project Description

3.1 Introduction

This chapter describes the Residences @ Shoreline Gateway Project (Project) evaluated in this EIR, and specifically describes the Project site location and general existing characteristics; the basic objectives for the Project; the Project site development plan; and general development characteristics. Also described are the jurisdictional approvals anticipated to be required to implement the Project, which will include associated amendments to the City's 2030 General Plan and Land Use Map as well as associated re-zoning amendments to the City's Zoning Ordinance and Map.

3.2 Project Location

The 7.81-acre Project site is owned by LH Shoreline, LP (herein referred to as the "applicant") and is located at 1001 North Shoreline Boulevard in the north-central portion of the City of Mountain View (City). The Project site is bounded by North Shoreline Boulevard on the west, Terra Bella Avenue on the south, Linda Vista Avenue on the east and U.S. Highway 101 (U.S. 101) on the north.

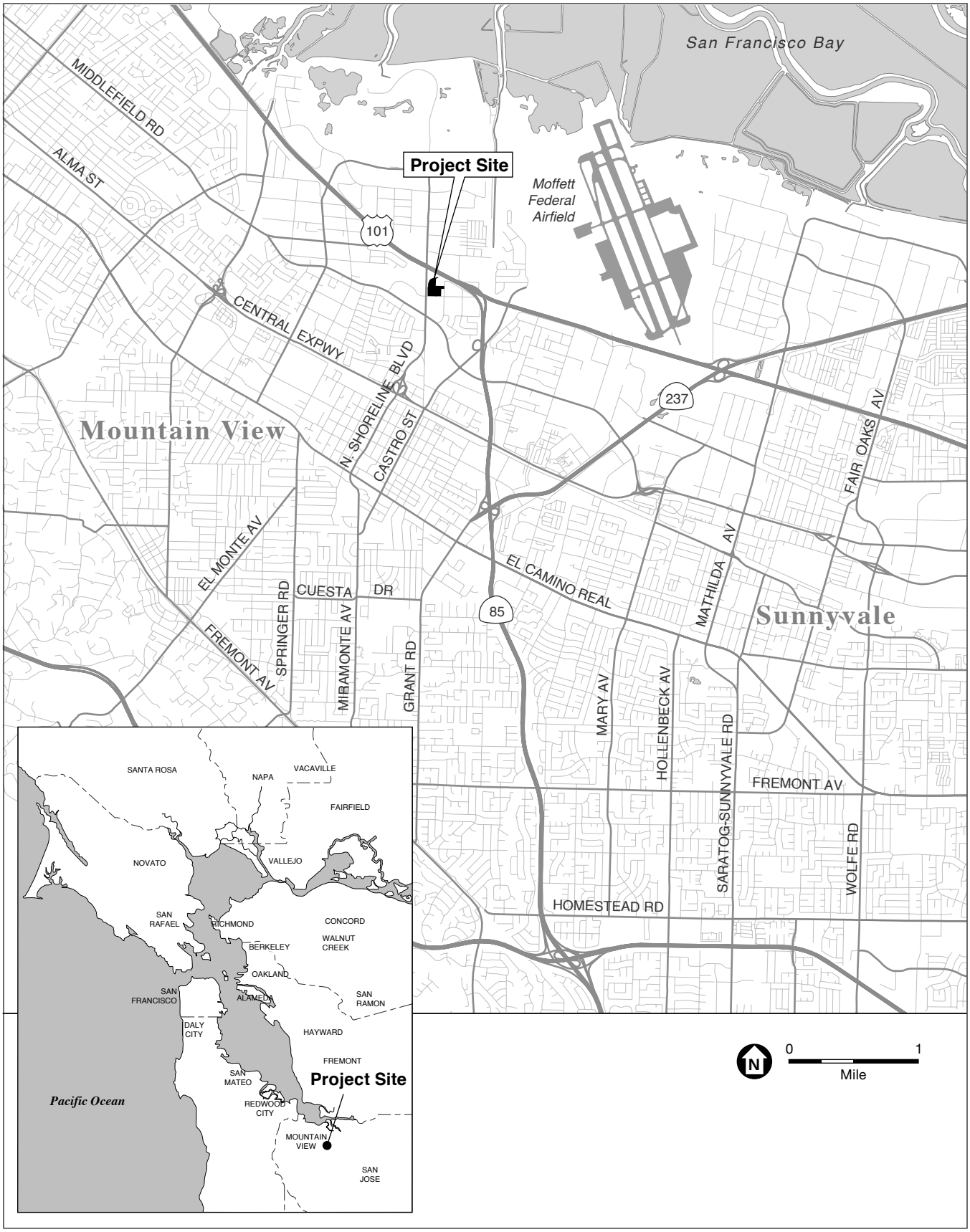
3.2.1 Regional and Local Setting

Mountain View is located south of San Francisco at the southern end of the San Francisco Peninsula, where the Peninsula joins the Santa Clara Valley in northwestern Santa Clara County. The City is approximately 12 square miles in size and is bounded by Palo Alto to the west, Los Altos to the south, Sunnyvale and the NASA-Ames/Moffett Federal Airfield complex to the east, and the San Francisco Bay and tidal marshes to the north, as shown on **Figure 3-1**. The Project site is located in the City's Moffett/Whisman Planning Area, in the north-central portion of the City.

3.3 Existing Site Conditions

3.3.1 Project Site

Figure 3-2 illustrates the Project site's local context. The overall 7.81-acre Project site, includes one 111,443-square-foot four-story office building, surface parking lots, and landscaping, and private amenity space. The Project site consists of two parcels (Assessor's Parcel Numbers [APNs] 153-15-032 and 153-15-033, referred to as 1001 North Shoreline Boulevard) at the corner of North Shoreline Boulevard and Terra Bella Avenue. It is bounded by North Shoreline



SOURCE: ESA, 2017

Residences @ Shoreline Gateway Project

Figure 3-1
Project Site Location

ESA

D170621

SOURCE: Studio T Square

Residences @ Shoreline Gateway Project

Figure 3-2

Project Vicinity

ESA

Boulevard on the west, Terra Bella Avenue on the south, Linda Vista Avenue on the east and U.S. Highway 101 (U.S. 101) on the north. The proposed three new buildings and associated improvements would be constructed on an approximately 5.84-acre portion of the Project site shown as the "Development Area" on Figure 3-2.

The site is relatively level and slopes gently from south to north, with ground surface elevation that varies from approximately 36 feet above sea level (asl) along the southern side of the Project site to 30 feet asl near the site's northwestern corner.

3.3.2 Site Surroundings and Existing Uses

Surrounding properties include predominantly industrial and office uses. Two existing buildings at 1080 and 1066 Linda Vista Avenue, owned and operated as a church by the Church of Scientology, are located adjacent to the north and east of the Project site. Two vacant office buildings at 1012 Linda Vista Avenue and 1110 Terra Bella Avenue are located immediately east of the Project site. A public storage facility is also located further east of the Project site. A Taco Bell restaurant, and vacant office/light industrial properties (1145 and 1155 Terra Bella Avenue) are located immediately south of the Project site across from Terra Bella Avenue. The Stevens Creek Trail is located approximately 0.5 mile east of the site, and the San Francisco Bay is located approximately 2 miles to the north. Moffett Field and the NASA Ames Research Center are located across U.S. 101, approximately 1.2 miles east of the site. The City of Sunnyvale is approximately 1.75 miles east of the site.

The closest residential uses are located approximately 200 feet southeast of the Project site on Linda Vista Avenue, with a larger residential neighborhood located approximately 700 feet south of the site, along Linda Vista Avenue.

Along with the newly-constructed 111,443-square-foot office building, existing features on the Project site include a paved parking area containing 371 spaces, 57 bicycle parking spaces (40 in secure indoor facilities and 17 in bicycle racks), walkways, a sports amenity area, landscaping, and approximately 341 trees. The maximum occupancy of the office building is approximately 557 employees. Parcel 153-15-033 ("parcel 33") at the northern end of the Project site flanking the southbound on-ramp to U.S. 101 was acquired by the applicant from the California Department of Transportation ("Caltrans") and would be developed with one of the proposed residential buildings and landscaping. As shown on the proposed vesting tentative map, Caltrans holds a blanket easement across the parcel. The applicant has an agreement with Caltrans whereby the applicant will relocate existing utilities within a 10-foot easement at the rear (northwest portion) of the parcel and Caltrans will abandon the blanket easement. Caltrans requires an Encroachment Permit for the relocation of the existing utilities. Existing land uses adjacent to the Project site are shown on **Figure 3-3**.

D170621

SOURCE: Studio T Square

Residences @ Shoreline Gateway Project

Figure 3-3
Project Site Plan and Surrounding Uses

ESA

3.3.3 Existing General Plan and Zoning Designations

The City of Mountain View General Plan land use and zoning designations for the Project site are:

1. General Plan Designation: *General Industrial*
2. Zoning Designation: MM (*General Industrial*), and ML (*Limited Industrial*)

As discussed further in this chapter, the Project will include an application for a General Plan Land Use Map amendment and Zoning Map amendment.

3.3.4 Existing Access and Circulation

Primary regional auto access to the Project site is provided by U.S. 101, via the Shoreline Boulevard exit, to Terra Bella Avenue. Vehicular access to the site is provided via Linda Vista Avenue and Terra Bella Avenue.

3.3.5 Existing Utilities

The Project site is located in an urban area and is currently served by the City's municipal utility systems. Utility infrastructure required for the Project would include new or upgraded water, sanitary sewer, and storm drain connections. These improvements would be installed within the Project site and would connect to existing utilities on the site or in the right of way of the adjacent streets. Further detail is presented in Section 4.15, *Utilities and Service Systems*.

3.4 Project Description

The applicant proposes to demolish the existing surface parking lots and remove and replace portions of the landscaping in order to develop two residential buildings and a parking structure on these areas of the site. The existing office building would remain. Specific Project components are illustrated on Figure 3-3, and summarized in **Table 3-1**.

3.4.1 Proposed General Plan and Zoning Amendments

The Project would require text and map amendments to the City of Mountain View 2030 General Plan to change the Project site land use designation from *General Industrial* to *Mixed-Use Center*. This would allow the addition of the Project's residential uses in the Moffett/Whisman Planning Area. The Project also would require associated re-zoning amendments to the City's Zoning Ordinance and Map from *General Industrial* (MM) on the eastern portion of the Project site and *Limited Industrial* (ML) on the western portion of the Project site, to *Planned Community* (P) for the entire site.

3.4.2 Block A

The residential development would be divided into two separate buildings, or "blocks." The Block A building would consist of five stories of wood structure above two stories of concrete parking podium, with approximately 244 parking spaces. Residential units in this building would

be located on all stories and include up to 203 one-, two-, and three-bedroom units ranging from approximately 635 to 1,464 square feet in size. As shown in the building elevations for Block A depicted on **Figure 3-4**, the building height would extend up to seven stories. The building height would be approximately 86.5 feet from the lowest point of the curb on Shoreline Boulevard to the highest point of the elevator projection.

Approximately 3,000 square feet of retail space would be included on the ground floor of Block A. The 3,000 square feet of retail space would include a high ceiling, open to the second floor above. The retail space would be accessible via the internal Project roads and parking would be provided in 12 dedicated surface parking spaces. The Project includes an additional 40 surface parking spaces to be shared among office, retail and residential uses.

TABLE 3-1
PROPOSED PROJECT LAND USE PROGRAM

Proposed Land Use	Number of Units	Approximate Size		Building Heights[b]
		Unit Size (Average)	Total Square Footage[a]	
Block A				
Multi-Family Residential[c]	203	924 sf	252,128	7 stories / Approx. 86.5 ft
Residential Amenity Space	NA	NA	13,083	
Retail			3,000 (Plus 1,846 of 2nd floor area/non-usable SF)	
Subtotal:			**270,057**	
Block B				
Multi-Family Residential[d]	100	1055 sf	149,539	7 stories / Approx. 86.5 ft
Residential Amenity Space	NA	NA	2,882	
Subtotal:			**152,421**	
Existing Office				
Office building to remain on site	NA	NA	**(111,443)**	4 stories / 71 ft
Parking				
Resident garage (Block A)	244		99,558	
Resident garage (Block B)	128		51,464	
Office Garage	359		130,820	
Surface Parking	52		NA	
Subtotal:	783		**281,842**	
Bicycle Parking	334		NA	

NOTES:
sf = square feet; ft = feet; NA = Not Applicable or Not Available
[a] Gross square footage
[b] Building height is measured from the lowest point of the curb to the highest point of the elevator projection.
[c] Assumed as apartment units in this Draft EIR.
[d] Assumed as condominium units in this Draft EIR.

BLOCK A - NORTH ELEVATION

BLOCK A - WEST ELEVATION

D170621

SOURCE: Studio T Square

Residences @ Shoreline Gateway Project

Figure 3-4
Block A Elevations

ESA

3.4.3 Block B

The Block B building would consist of five stories of wood structure above two stories of concrete parking podium, with approximately 128 parking spaces. Residential units in this building would include up to 100 residential units including one-, two-, and three-bedroom units ranging in size from approximately 749 to 1,895 square feet, as well as a limited number of two-level townhome-style units located on the ground level. As shown in building elevations for Block B depicted on **Figure 3-5**, building height would extend up to seven stories, or approximately 86.5 feet from the lowest point of the curb at Terra Bella Avenue to the highest point of the elevator projection.

Block B would also include a six-level parking garage adjacent to the Block B building. This building would provide approximately 359 garage parking spaces to serve the existing office building. The Project would also make available approximately 100 spaces within the office garage for residential uses during evenings and weekends, when the office demand would be less and the office garage may be underutilized.

3.4.4 Project Parking

The Project would include the construction of three above-grade parking garages. Block A would contain a two-level podium parking garage for the Block A building residents. Access to the parking garage would be located in two locations on the eastern side of Block A. Block B would contain a two-level podium parking garage for Block B building residents and a six-level parking garage to accommodate parking for the existing office building. Access to the parking garage would be located on the western side of Block B, and access to the office parking garage would be located on the northern side of Block B. The Project would also provide 52 total surface parking spaces located along internal roads. Of these, 12 surface parking spaces would be reserved to serve proposed retail use and 40 surface parking spaces would be shared by all uses for guest parking. Overall, approximately 783 parking spaces would be provided on the Project site (244 garage spaces for Block A residents, 128 garage spaces for Block B residents, approximately 359 garage spaces for office employees, and 52 surface parking spaces).

The Project would also make available approximately 100 spaces in the office parking garage (most likely on the lower levels) for residential uses during evenings and weekends, when the office demand would be less and the office garage may be underutilized. Approximately 40 of the surface parking spaces would also be shared with all land uses on the Project site.

The proposed Project would provide approximately 334 bicycle parking spaces (224 for Block A and 110 for Block B residents and guests, respectively). Approximately 203 interior bicycle parking spaces would be provided in Block A for residents, and 21 outdoor bicycle spaces would be for guests. Block B would similarly provide 100 indoor bicycle parking spaces for residents, and 10 outdoor bicycle spaces for guests. The existing 57 bicycle parking spaces provided for the office building would remain.

BLOCK B - SOUTH ELEVATION

BLOCK B - EAST ELEVATION

D170621

SOURCE: Studio T Square

Residences @ Shoreline Gateway Project

Figure 3-5
Block B Elevations

ESA

3.4.4.1 Proposed Vehicle Access and Circulation

Project access would be provided via private entrance driveways from Terra Bella Avenue along the southern border of the Project site and from Linda Vista Avenue along the eastern border of the Project site. Access for emergency vehicles (EVA) would also be provided from these entrance driveways, and would include a hammerhead turnaround on the western side of the Project site. On-site circulation is presented on **Figure 3-6**.

3.4.5 Amenities and Open Space

Proposed amenities for the residences in Block A would include a main lobby, mailroom, leasing office, swimming pool and spa, courtyard with BBQ island, lounge seating and fitness center, clubroom, business lounge, dog run and pet spa, seating areas, and roof deck. Amenities for the residents in Block B would include a lobby, mailroom, courtyard, and clubroom. Block B residents would have access to amenities in Block A.

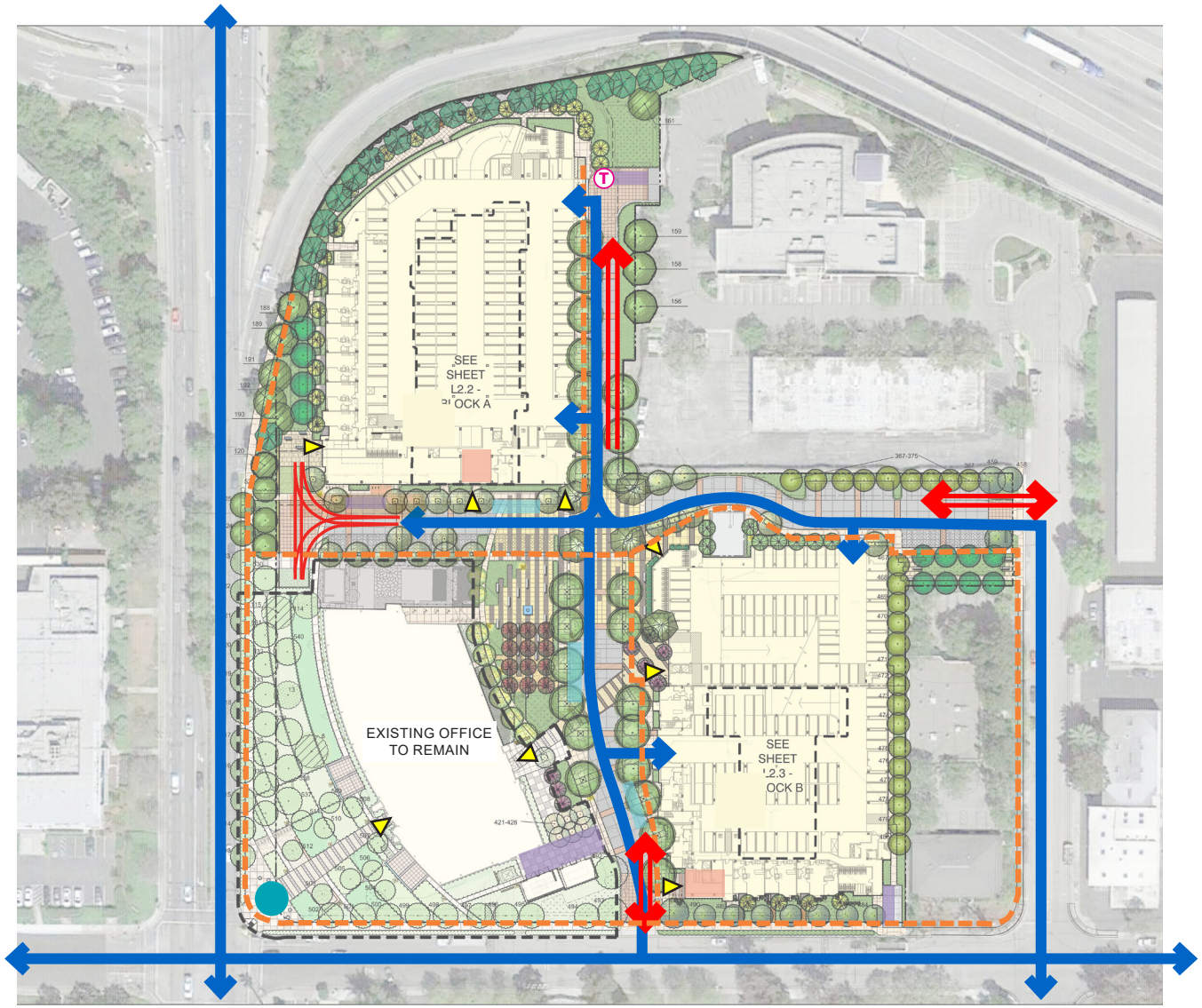
Block A would provide approximately 7,160 square feet and Block B would provide approximately 3,520 square feet of private open space via unit balconies. In addition, the Project would provide approximately 139,583 square feet of common open space. The project would provide approximately 496 square feet of combined private and public open space per residential unit.

Common open space available to residents in Block A would include a courtyard with a swimming pool and spa, BBQ island, and lounge seating, roof deck, and dog run. Common open space available to residents in Block B would include a courtyard on the podium deck with lounge areas, outdoor fireplace, BBQ island with community table and chairs, clubroom, as well as access to Block A amenities. In addition, the Central Plaza will be accessible to all residents and employees and provide outdoor benches, tables and seating, a shaded tree grove, and a landscaped open area with an art piece, that can be shared by all residents and employees for special events and programming. The Central Plaza is also designed to provide a connection between the residential and retail use on the property. Overall, the Project site would include approximately 139,583 square feet of common open space and 10,680 square feet of private open space for a total of 150,263 square feet of open space.

3.4.6 Landscaping and Tree Removal

The Project would also include landscaping, pathways, and plazas throughout the site. Landscaping improvements would include the installation of lawns, groundcover, shrubs, stormwater treatment areas, and pedestrian/vehicular concrete and accent paving.

The Project includes the removal of approximately 23 trees that meet the City's criteria for Heritage trees, which would be replaced with mitigation trees above the required mitigation ratio of 2:1 (approximately 50 mitigation trees). Approximately 276 total trees are estimated to be on the Project site at the time of Project completion. A conceptual landscape plan is presented in **Figure 3-7**. A detailed discussion of Heritage tree removal and replacement is included in Section 4.3, *Biological Resources*.



D170621

SOURCE: Studio T Square

Residences @ Shoreline Gateway Project

Figure 3-6
Project Site Circulation

ESA

SOURCE: Studio T Square

Residences @ Shoreline Gateway Project

Figure 3-7
Project Conceptual Landscape Plan

ESA

3.4.7 Transportation Demand Management Program

The Project will also include a transportation demand management (TDM) plan for the proposed residential and retail uses. The purpose of a TDM plan is to: (1) Reduce the amount of traffic generated by new development or the expansion of existing development; (2) Promote the more efficient utilization of existing transportation facilities and ensure that new developments are designed in ways to maximize the potential for alternative transportation usage; and (3) Establish an ongoing monitoring and enforcement program to ensure that alternative mode use goals are achieved.

Proposed measures in the TDM will include:

- **Participation in the Mountain View Transportation Management Association (MVTMA):** By participating in the MVTMA, the Project would partially fund the MVgo shuttle which operates within convenient walking distance of the Project site, including stops located at Shoreline Boulevard/Terra Bella Avenue.
- **On-site TDM Coordinator:** The on-site TDM transportation Coordinator would provide TDM services for the residential land uses, and would be in charge of providing up-to-date information to residents regarding parking, on-site bike share opportunities, shuttles, transit facilities, and shared mobility opportunities. Additionally, the TDM Coordinator would arrange and manage the annual monitoring and reporting program which will establish the efficacy of the TDM plan itself.
- **TDM Marketing:** The TDM Coordinator would provide materials to residential leasing and management employees to make sure they are aware of the programs available, including the benefits of trip and parking reduction, alternate mode options, and local street parking restrictions.
- **Pedestrian connections:** The on-site pedestrian network would be designed to conveniently link the residential units and office space to the common open space, and proposed on-site retail. The design would not include physical barriers such as walls, landscaping, or slopes that could impede pedestrian circulation. The on-site pedestrian network would connect to the public sidewalks on North Shoreline Boulevard, Terra Bella Avenue, and Linda Vista Avenue and would include pedestrian scale lighting on-site to enhance pedestrian safety.
- **On-site Bicycle Amenities:**
  - Long-term bicycle storage would be provided for 303 bicycles split between the two residential buildings, including 100 secure spaces serving the Block B building and 203 secure spaces in the Block A building. The Project would also provide 21 short-term outdoor bike parking spaces for the Block A building and 10 for the Block B building, for a total of 334 indoor and outdoor bike parking spaces.
  - A resident-only bike share program would be established and administered by the on-site TDM coordinator. A total of 10 bike share bicycles would be provided on-site located within the long term bicycle storage space of the Block A parking garage. Residents would be able to check-out and reserve bikes via the bike share program. The TDM coordinator would be responsible for procurement and maintenance of the bike share fleet.
  - Two bicycle repair stations would be constructed, one within the Block A building, and the other within the Block B building. The bicycle repair stations would consist of tools and amenities to make it convenient for residents and employees to repair bicycles on-site.

- **Unbundled parking:** The parking supply for the residential Project would be unbundled from the sale or rental of the residential units and sold or rented separately. A minimum price of $100 would be set for the unbundled spaces in the Block A building and market pricing would be established for homeowners who wish to purchase additional spaces, as a method to deter parking spillover and vehicle ownership overall in general.
- **On-site transit amenities:** The Project applicant proposes to install an alternative mode kiosk and monitors to provide residents with information about (1) transit routes and schedules, (2) carpooling and vanpooling, (3) bicycle lanes, routes, paths, and facilities. The monitors would display real-time arrival and departure times for nearby transit stops using a Google Transit feed. Each ground level residential lobby will have a monitor prominently positioned to provide this data, and this information would be maintained by the designated TDM Coordinator.
- **Car share vehicles on-site:** The Project applicant would also provide a total of five car share vehicles on-site.
- **Telecommuting facilities:** The Project would provide telecommuting facilities such as high speed internet connections.

3.4.8 Project Construction

3.4.8.1 Construction

The Project could either be developed in one phase with each block being developed simultaneously, or the two blocks could be developed in sequence. Block A could be developed simultaneously with Block B, or Block A construction could commence after Block B construction has been completed. Under the sequenced scenario, construction of Block B and then Block A would occur from the years 2020-2023. Under the simultaneous scenario, construction of Blocks A and B would occur from the years 2020-2021.

Site construction would include grading, tree removal, and general site preparation followed by construction of the proposed buildings, paving, and architectural coatings. Construction staging areas (i.e., areas where vehicles, construction materials, equipment, and workers would be assembled and stored) would be located on the Project site, within the Project development area; no off-site staging or street laydown is anticipated. Construction contractors would be required to limit standard construction activities to the requirements of the City of Mountain View. The number of construction workers on-site could reach a maximum of approximately 95 workers per day during peak construction periods. Anticipated construction vehicles and equipment would include pick-up trucks, forklifts, concrete trucks, concrete pumps, excavators, aerial lifts, and mobile cranes. The proposed Project would not require pile driving.

The demolition of existing features on the Project site would include the removal of asphalt parking area, private recreational amenity space, trees, and other on-site vegetation. Of the existing 341 trees, a total of 238 trees would be removed, including 23 heritage trees, 58 existing trees, and 157 trees associated with the office development. These would be replaced with approximately 178 new trees for a total of 276 trees on the Project site. The Project would reuse soil on-site and existing concrete and asphalt would be reused as base material in parking areas.

The Project will require approximately 3,900 cubic yards (cy) of fill to be hauled to the Project site and 1,200 cy of cut material to be removed from the Project site. To account for shrinkage or expansion, the net amount of soil import is estimated to be 3,240 cy.

3.4.8.2 Green Building and Emissions Reduction Features

The Project would be built according to the Mountain View Green Building Code (MVGBC), which requires the Project to meet energy requirements of Title 24, Part 6 of the California Building Code (CBC). The MVGBC also requires new residential buildings over five units to adhere to the Residential Mandatory Measures of the 2016 California Green Building Code (CALGreen) and meet the minimum requirement of 70 GreenPointRated points. According to Project Plans dated July 31, 2019, the Project is designed to exceed the minimum and is expected to achieve approximately 122 GreenPointRated points and a Gold certification level.

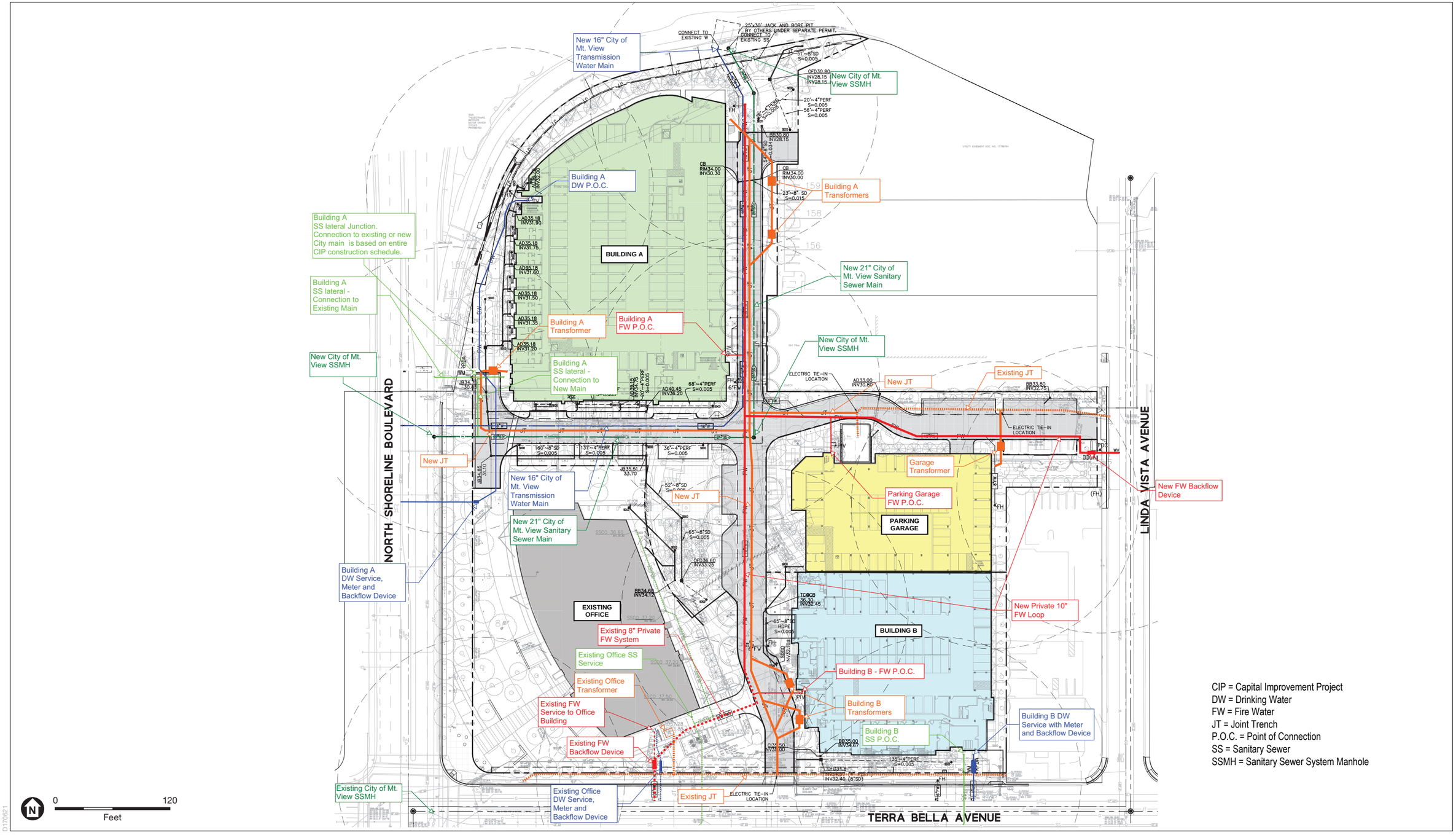
3.4.9 Existing Utilities and Off-site City Public Utility Project

Existing 12-inch water mains and 18-inch sewer mains surround the eastern, western, and southern Project site boundaries. The City's Department of Public Works is in the process of upgrading the City's water and sewer mains in the Project vicinity as a part of a Capital Improvement Project (CIP) crossing State Highway 101 near N Shoreline Boulevard (Shoreline/ 101 CIP). These upgrades include a new 16-inch City transmission water main and a new 21-inch City sanitary sewer main that would run beneath internal streets on the Project site, and would eventually cross under Highway 101 (see **Figure 3-8**).

The Shoreline/101 CIP project requires easement acquisition from the Santa Clara Valley Transportation Authority (VTA) for the proposed water and sewer main because a portion of the proposed utilities go through VTA's property. The design of the Shoreline/101 CIP project is targeted to be completed in Summer 2020. Due to the easement acquisition process with VTA, the bidding of the Shoreline/101 CIP project may not begin until end of 2020.

The Project would install the Shoreline/101 CIP sewer and water pipelines through the Project site, as part of the Project. Existing utilities and the Shoreline/101 CIP are further discussed in Section 4.15, *Utilities and Service Systems*, of this EIR. As discussed in Section 4.15, the CIP improvements are needed to accommodate planned growth within the City, but are not specifically required to serve this proposed project.

There is an existing monopole, which is owned by Verizon and contains telecommunications equipment, located on the northeastern portion of development area, adjacent to the north side of the proposed parking garage (refer to Figure 3-3). The applicant is pursuing the relocation of this monopole equipment to the top of the existing office building. If relocated during project construction, the equipment would be placed within the existing screening on the top of the building, and would not be visible. The rooftop of the existing office building was designed and built with input from Verizon to meet their specifications and support their equipment.



CIP = Capital Improvement Project
DW = Drinking Water
FW = Fire Water
JT = Joint Trench
P.O.C. = Point of Connection
SS = Sanitary Sewer
SSMH = Sanitary Sewer System Manhole

SOURCE: Studio T Square

Residences @ Shoreline Gateway Project

Figure 3-8
Proposed Utility Plan

ESA

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3.4.10 Project Utility Improvements

The Project would use existing and available water and wastewater treatment and off-site transmission/conveyance capacity. The Project applicant would assume responsibility for constructing additional on-site domestic water, fire water and wastewater lines, laterals, connections and other improvements as needed to tie into the existing and proposed backbone infrastructure and adequately serve the Project. Joint trenches, located mainly under internal Project roads, would be utilized to convey new utility lines across the Project site.

3.4.10.1 Water System Improvements

The Project would utilize three existing 12-inch water mains to provide domestic and fire water to the Project site. These water mains include: the existing 12-inch water main in Terra Bella Avenue, the existing 12-inch water main in North Shoreline Boulevard, and the existing 8-inch water main in Linda Vista Avenue. The Project would connect to the existing 12-inch water main in North Shoreline Boulevard; however, if the Shoreline/101 CIP improvements in North Shoreline Boulevard are completed prior to Project construction, then the Project would connect to the new 16-inch water main.

As demonstrated in Figure 3-8, Project water system improvements would include a domestic water point of connection on the west side of the Block A building, a domestic water service, meter, and backflow device near the southwest corner of the Block A building, and a fire water point of connection for the Block A building on the east side of the building. A new private 10-inch fire water loop would be constructed which would run from Linda Vista along the north side of the parking garage and south around the west side of the parking garage and the Block B building to a fire water point of connection for the building. A new fire water point of connection would be constructed to connect the parking garage to the new fire water loop and a fire water backflow device would be constructed near Linda Vista Avenue. The Block B building's domestic water service connection, meter, and backflow device would be located near the southeast corner of the building.

Existing fire hydrants on North Shoreline Boulevard, Terra Bella Avenue, and Linda Vista Avenue would remain in place. The Project would include one new hydrant along Terra Bella Avenue and on-site fire mains that would connect existing water mains in Terra Bella Avenue and Linda Vista Avenue to four hydrants on the Project site.

3.4.10.2 Wastewater (Sewer) System Improvements

Project sewer flow would be discharged into the existing 18-inch diameter City sewer main in Terra Bella Avenue and to the proposed new 21-inch diameter City sewer main through the Project site. Due to the uncertainty of construction timing for the Shoreline/101 CIP, the Project could also include a connection to the existing 18-inch City sewer main in North Shoreline Boulevard. As demonstrated in Figure 3-8, as part of the Project, a new sewer system lateral and lateral junction would be installed near the southwestern corner of the Block A building to connect the to the City's existing main. A sewer system lateral would also be constructed near the

southeastern corner of the Block A building in order to connect the building to the City's proposed new sewer main. A sewer system point of connection would be installed at the southeastern corner of the Block B building in order to connect the building to the existing City sewer main in Terra Bella Avenue.

3.4.10.3 Stormwater System Improvements

Project site stormwater runoff would be retained and treated on the site, including a bioretention area (as further discussed in Section 4.9, *Hydrology and Water Quality*, of this EIR). The applicant would also recondition and reuse existing storm drain lines and outfalls, or, if reuse of the existing lines is determined to be infeasible, construct new stormwater conveyance facilities for the purpose of collecting and discharging the stormwater run-off after it has been treated on site.

3.4.10.4 Other Utility Improvements

New gas and electrical lines would also be included in the joint trenches. The Project would construct new gas and electrical lines in order to connect into existing systems. Transformers for the Block A building are proposed along the eastern border and the southwestern corner of Block A. A garage transformer is proposed at the northeastern corner of the office parking garage and transformers for the Block B building are proposed at the southwestern corner of Block B.

3.5 Project Objectives

The following objectives have been identified for the Project:

1. Redevelop the Project site with approximately 300 new residential units and a diversity of housing choices, including new affordable units, to better balance the City's jobs/housing ratio;
2. Increase homeownership opportunities in the City of Mountain View and expand the supply of higher density attached, for-sale product by providing approximately 100 condominium units;
3. Locate higher density residential units in close proximity to both major job centers in Mountain View and the major thoroughfares of Highway 101 and Shoreline Boulevard;
4. Redevelop an underutilized site to allow for higher density housing in proximity to jobs and the existing 111,443-square-foot office building on the Project site;
5. Provide amenities, shared auto and parking strategies, and TDM measures that promote walking, bicycling, telecommuting, and use of shuttles, transit and other transportation alternatives;
6. Respect the surrounding neighborhood and community through quality design, materials, and landscaping;
7. Implement sustainable building practices promoting energy and water efficiency;
8. Create a new common open space area with shade trees and an open plaza with outdoor seating to allow for the passive enjoyment by all residents and office building users.

3.6 Uses of This EIR

3.6.1 City of Mountain View

Pursuant to CEQA, this EIR is a public information document prepared for use by governmental agencies and the public to identify and evaluate potential environmental consequences of Project implementation, to evaluate and recommend mitigation measures that would substantially lessen or eliminate significant environmental adverse impacts, and to examine a reasonable range of feasible alternatives to the Project. This EIR is intended to provide the information and objective environmental analysis necessary to assist the Lead Agency, the City of Mountain View, in considering the series of interrelated planning and regulatory approvals required by the Project. Specifically, the City is considering taking the following approval actions:

1. **Certification of the Project EIR** pursuant to CEQA;
2. **Approval of associated amendments to the City's 2030 General Plan** to reflect and implement land uses specified for the Project. The applicant has applied for a General Plan amendment to change the land use designation of the site from *General Industrial* to *Mixed-Use Center*;
3. **Approval of associated amendments to the City's Zoning Ordinance map** to reflect and implement zoning districts, development standards, and design criteria specified for the Project. The applicant has applied for a re-zoning of the Project site from *General Industrial* (MM) and *Limited Industrial* (ML) to *Planned Community* (P);
4. **Approval of a Vesting Tentative Subdivision Map.** The applicant has applied for a Vesting Tentative Subdivision Map to create legal parcels for the purpose of subdividing the property and to create lots for common areas, the parking garage, office building, the Block A mixed-use residential and retail building, and for the Block B for sale units.
5. **City of Mountain View Public Works Department** approvals will be required for water and sewer hookups and any upgrades to the backbone water and sewer system; and
6. **Development Agreement.** Although not required, the City and the applicant may elect to enter into a Development Agreement.
7. **Other City approvals that may be required**, such as:
   - Planned Community Permit
   - Development Review Permit;
   - Heritage Tree Removal Permit;
   - Grading permits,
   - Demolition permits,
   - Encroachment permits,
   - Building permits, and
   - Other City approvals as necessary to develop the Project.

The Project and associated General Plan amendment and rezoning would require review and recommendation by the Development Review Committee and Environmental Planning Commission to the City Council, followed by consideration and action by the City Council. This EIR is intended to provide the CEQA-required environmental documentation for use in considering these and any other City approvals required to approve the Project.

3.6.2 Other Governmental Agency Approvals

As the Lead Agency and as appropriate under CEQA, the City also intends this 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 (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:

3.6.2.1 Local Agencies

Santa Clara County Department of Environmental Health (DEH) review and permits may be required if wells or soil borings are required (for environmental cleanup, for example), or if abandoned wells or septic tanks are proposed to be destroyed during construction.

The Project site is within the Moffett Federal Airfield Airport Influence Area and Santa Clara County Airport Land Use Commission (SCC ALUC) review and permits may be required.

3.6.2.2 Regional and State Agencies

1. San Francisco Bay Regional Water Quality Control Board (RWQCB). Required approvals would include:
   - National Pollution Discharge Elimination System (NPDES) General Permit for storm water discharges associated with construction activity,
   - Notice of Intent for construction activities, and
   - Storm Water Pollution Prevention Plan (SWPPP) for on-site storm water management and pollution prevention.
2. Santa Clara Valley Transportation Authority
3. Department of Transportation (Caltrans)
   - Encroachment Permit
4. Santa Clara Valley Water District
5. California Department of Toxic Substances Control (DTSC)

CHAPTER 4

Environmental Setting, Impacts, and Mitigation Measures

4.0 Introduction to the Environmental Analysis

Organized by environmental resource area, this chapter provides an integrated discussion of the environmental setting (including the regional, local and/or Project setting and regulatory setting) and environmental consequences (including environmental impacts and mitigation measures for potentially significant impacts) associated with the construction, operation, and maintenance of the Project.

This chapter includes an introductory overview for the reviewer and then addresses each CEQA environmental topic. Specifically, this introduction to the analysis presents an overview of the scope and organization of the analysis sections, the methods for determining what impacts are significant, and the nomenclature for impacts and mitigation measures used throughout the document.

4.0.1 CEQA Requirements

The California Environmental Quality Act (CEQA) and the CEQA *Guidelines* require that the environmental analysis for an Environmental Impact Report (EIR) must evaluate impacts associated with a project and identify mitigation measures for any potentially significant impacts. All phases of a project are evaluated in the analysis. The CEQA *Guidelines* state:

- An EIR shall identify and focus on the significant environmental effects of the project. In assessing the impact of a project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the Notice of Preparation (NOP) is published, or where no NOP is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, the human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause by bringing development and people into the area affected (CEQA *Guidelines* Section 15126.2[a]).

- An EIR must discuss any inconsistencies between the project and applicable general plans and regional plans, including, without limitation, the applicable air quality attainment or maintenance plan or State Implementation Plan, area-wide waste treatment and water quality control plans, regional transportation plans, regional housing allocation plans, habitat conservation plans, natural community conservation plans and regional land use plans (CEQA *Guidelines* Section 15125[d]).
- An EIR must describe feasible measures that could minimize significant adverse impacts; such measures must be fully enforceable through permit conditions, agreements, or other legally-binding instruments. Mitigation measures are not required for effects that are found to be less than significant (CEQA *Guidelines* Section 15126.4[a]).

4.0.2 Project Baseline

The environmental baseline identifies the existing physical conditions on, around, and affecting the Project site. The baseline is established to provide a point of comparison between pre-Project conditions (the baseline) and post-Project conditions to determine whether the change to the existing environment caused by the Project is significant under CEQA. While stable regarding its point in time, the baseline condition is tailored to each environmental topic area and is established by the significance criteria (discussed below). For most topics or resource areas (such as hazards and hazardous materials; utilities and service systems; noise; and other aspects of the physical environment), the baseline is the same as the "environmental setting," *i.e.*, the physical environmental conditions in the vicinity of the Project as they existed in the Fall of 2018[1] when the City published the NOP for the Project (CEQA *Guidelines* Sections 15125[a], 15126.2[a]). The air quality and greenhouse gas baseline emissions at the Project site are assumed to be zero because no uses currently operate within the development area of the Project site. Similarly, no vehicle trips are currently generated from the development area of the Project site. For traffic, potential Project impacts are evaluated in the context of scenarios referred to as "Existing Conditions" (existing conditions with volumes obtained from recent traffic counts and the existing roadway system), "Background Conditions" (existing traffic volumes plus the projected volumes from approved but not yet constructed developments in the vicinity of the Project), as well as future "Cumulative Conditions" (estimated by applying a two percent annual growth factor for five years to existing traffic volumes and adding trips associated with approved developments in the Project vicinity).

4.0.3 Environmental Impacts

This EIR addresses impacts of the Project on the existing environment pursuant to CEQA. As discussed in Chapter 1, *Introduction*, of this EIR, potential effects of the environment on a project may not be legally required to be analyzed or mitigated under CEQA, although the CEQA *Guidelines* include certain significance criteria that pertain to the effect of the environment on a project. A growing number of court cases have supported the position that CEQA is solely, or largely, concerned with the effects of a project on the environment and not the effects of the environment on a project; that latter may include thresholds related to air quality (e.g., locating a new residential project near an existing source of air pollution), geology

[1] The City issued the NOP for the EIR on September 13, 2018.

(e.g., locating a new structure in a seismic hazards zone), and noise (e.g., locating a new residential project on a loud street).

Most recently, the California Supreme Court's *CBIA v. BAAQMD* decision[2] has indicated that the impact of existing environmental conditions on a project's future users or residents are generally not required to be considered in a CEQA evaluation, except when the project may exacerbate existing hazards or existing conditions.

Consistent with previous City practice and CEQA guidance, this EIR continues to address impacts of the environment on the Project caused by the existing environment with respect to air quality, geology and soils, climate change and greenhouse gases, hazards and hazardous materials, and noise. These impacts are also addressed to provide information to the public and decision-makers of the Project.

4.0.4 Mitigation Measures

Project-specific mitigation measures are identified throughout this EIR where feasible and necessary to avoid, minimize, rectify, reduce, or compensate for potential significant, adverse impacts of the Project in accordance with CEQA *Guidelines* Section 15126.4. All mitigation measures will be (1) included as part of the design, construction, and operations of the proposed Project; (2) adopted as conditions of approval for the proposed Project; and (3) subject to monitoring and reporting requirements of CEQA and the terms of the discretionary approvals for the Project.

4.0.5 Section Contents and Definition of Terms

4.0.5.1 Chapter Organization

Chapter 4 is organized into sections that address the following 15 environmental resource or issue areas (also sometimes referred to as environmental topics):

4.1 Aesthetics
4.2 Air Quality
4.3 Biological Resources
4.4 Cultural and Tribal Cultural Resources
4.5 Energy
4.6 Geology, Soils, and Paleontological Resources
4.7 Greenhouse Gas Emissions
4.8 Hazards and Hazardous Materials
4.9 Hydrology and Water Quality
4.10 Land Use and Planning

[2] *California Building Industry Association v. Bay Area Air Quality Management District,* 62 Cal.4th 369. Opinion Filed December 17, 2015. In the decision, the Court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment – and not the environment's impact on the project – that compels an evaluation of how future residents or users could be affected by exacerbated conditions."

4.11 Noise
4.12 Population and Housing
4.13 Public Services and Recreation
4.14 Transportation
4.15 Utilities and Service Systems
4.16 Effects Found Not to Be Significant

4.0.5.2 Section Contents

Sections 4.1 through 4.16 follow this format:

- **Environmental Setting:** Provides an overview of the physical environmental conditions in the area at the time of, or prior to, the publication of the NOP, that could be affected by implementation of the Project in accordance with State CEQA *Guidelines* Section 15125.

- **Regulatory Setting:** Identifies the laws, regulations, ordinances, plans, and policies that are relevant to each resource area.

- **Significance Criteria:** Provides the criteria used in this document to define the level at which an impact would be considered significant. This EIR applies the significance criteria identified in the provisions in the CEQA *Guidelines*[3] for determining the significance of environmental effects, including CEQA *Guidelines* Sections 15064, 15064.5, 15065, 15382, and Appendix G.[4] This section also discusses, where applicable, the *Approach to Analysis* (i.e., analytical methodology), and, where applicable, a summary of *Topics with No Impact or Otherwise Not Addressed in this EIR*.

- **Discussion of Impacts and Mitigation Measures:** Presents the potential resulting impacts and, where applicable, feasible mitigation measures. The cumulative analysis follows the Project-level analysis in each section.

  Impacts. The impacts analysis addresses all parts of the Project action: construction and operations, and secondary impacts resulting from the implementation of mitigation measures, where applicable.

  Each section lists impacts numerically and sequentially. An impact statement (always in bold text) precedes the discussion of each impact analysis and summarizes the potential for the Project to have an impact. Impact statements use an abbreviated designation that corresponds to the environmental topic (e.g., "AES" for aesthetic impacts). A number follows the designation to indicate the order in which that impact is identified within that particular analysis. For example, "Impact CUL-3" is the third cultural resources impact identified in the cultural resources analysis. The impact statement culminates with the level of impact and indicates whether mitigation measures are required to achieve that level of impact. The impact determination after the incorporation of mitigation measures is stated at the close of the impact analysis discussion. An impact is categorized as one of the following:

[3] The significance criteria considered reflect the changes to Appendix G of the CEQA *Guidelines* effective in 2018, with the exception of impacts related to transportation, which is discussed further in Section 4.14, *Transportation*.

[4] Although no Environmental Review Checklist was prepared for this EIR, the factors listed for consideration in the Environmental Review Checklist are evaluated in this EIR.

- ***No Impact (N)*:** The Project would not cause a noticeable effect on the environment as measured by the applicable significance criterion and threshold; therefore, no mitigation would be required.
- ***Less than Significant (LTS)*:** The impact of the Project, either before or after implementation of feasible mitigation measures, does not reach or exceed the defined threshold of significance. The impact would not cause a substantial adverse change in the environment as measured by the applicable significance criterion and threshold; therefore, no mitigation would be required.
- ***Less than Significant with Mitigation (LTSM)*:** The Project would cause a substantial adverse change in the physical conditions of the environment; one or more feasible mitigation measures would reduce the environmental effects to a less-than-significant level.

No significant and unavoidable impacts, or impacts that would not be reduced to less-than-significant levels with mitigation incorporated, were identified in this Draft EIR.

Standard Conditions of Approval. The City has identified standard conditions of approval, which are typically imposed as conditions of approval for any development project submitted to the City Council. Standard conditions that would automatically be required for the Project and would ensure that no significant environmental impacts would occur are identified in each section. Generally, all standard conditions of approval are indented, and titles are in bold, italicized text.

Mitigation Measures. Mitigation measures are designated in the same manner described above for impact statements, and each mitigation measure is numbered sequentially. Generally, all mitigation measures are indented, and titles are in bold text.

4.0.6 Cumulative Analysis

4.0.6.1 Approach

CEQA defines cumulative as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the CEQA *Guidelines* requires that an EIR evaluate potential environmental impacts when the project's incremental effect is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past, present, existing, approved, pending and reasonably foreseeable future projects. These impacts can result from a combination of a proposed project together with other projects causing related impacts.

CEQA *Guidelines* Section 15130(b)(1) identifies two approaches to cumulative impacts analysis. Specifically, cumulative impacts analysis can be based on: (1) a list of past, present, and probable future projects producing related impacts that could combine with those of a proposed project; or (2) a summary of projections contained in a general plan or related planning document. As described below, this EIR uses both a list-based approach and a projections approach, as appropriate for each impact area. The effects of existing development, including past projects, is considered for each environmental topic discussed in this chapter, as part of baseline conditions.

4.0.6.2 Cumulative Context

The context used for assessing cumulative impacts typically varies depending on the specific topic being analyzed to reflect the different geographic scope of different impact areas. For example, considerations for the cumulative air quality analysis are different from those used for the cumulative analysis of aesthetics. In assessing aesthetic impacts, only development within the vicinity of the Project site could contribute to a cumulative visual effect. In assessing air quality impacts, on the other hand, all development within the air basin contributes to regional emissions of criteria pollutants, and basin-wide projections of emissions comprise the best tool for determining the cumulative effect. Accordingly, the geographic setting and other parameters of each cumulative analysis discussion can vary.

For the purposes of this EIR analysis, the larger cumulative context area is defined as the City-designated Moffett/Whisman Planning Area, in the north central portion of the City, which contains a mix of general industrial, commercial, and residential uses and is bounded by Caltrain Central Expressway tracks to the south, Steirlin Road and North Shoreline Boulevard to the west, Highway 101 to the north, and, generally, State Route 237 to the west, and the City as a whole.

Cumulative Land Use and Infrastructure Assumptions

Information used to determine cumulative land use assumptions includes the Association of Bay Area Government's (ABAG's) projections for year 2040, information from the City's 2030 General Plan, and information regarding projects in the vicinity of the Project site that are under construction, approved, and pending based on the City's list of all development projects under review as of August, 2018 provided by the City's Planning Division. For the analyses of traffic and noise impacts, cumulative scenario projections were developed using a growth factor and a citywide approved Project list to analyze near-term cumulative traffic impacts (see Appendix K). Certain improvements assumed in the cumulative traffic scenario are further detailed in Section 4.14, *Transportation*. In addition, for the analysis of cumulative utility and service system impacts, cumulative water demand from the City's InfoWater model was used and cumulative sewer flow was based on the City's InfoSWMM model, both of which were developed as part of the City's 2030 General Plan Updated Utility Impact Study that has been updated to include recent City approved projects (see Appendix L). Certain improvements assumed in the cumulative utilities analysis are further detailed in Section 4.15, *Utilities and Service Systems*.

Cumulative Projects in the Vicinity of the Project Site

Projects in the immediate vicinity of the Project site include mostly infill development projects. Projects in the larger vicinity of the Moffett/Whisman Planning Area, have also been reviewed.

Cumulative projects considered in the analysis are presented in **Table 4.0-1**. The table does not include all projects that would contribute to cumulative impacts along with the Project; rather, it includes a number of projects in the area that are larger in relative size to demonstrate the scope and nature of development in the cumulative vicinity. For some environmental topic areas, and as specified in sections throughout Chapter 4 as needed, the cumulative context includes more development than listed in Table 4.0-1 (for example, modeling for traffic impacts).

As shown in the table, two foreseeable (approved/under construction or under review/pending) projects – 1185 Terra Bella Avenue and 1075 Terra Bella Avenue – are located within 1,000 feet of the Project site. The Project site is also included in the Terra Bella Visioning project boundary; however, this Project involves the creation of development principles which will provide a foundation to guide review of future development projects in the area, and does not propose construction. Cumulative impacts are discussed throughout Chapter 4 as necessary, and discussed further in Chapter 6.

TABLE 4.0-1
CUMULATIVE PROJECTS

Project Name	Description of Project	Approximate Distance from Project Site	Environmental Review and Construction Schedule
Approved Projects/Projects under Construction			
1185 Terra Bella Avenue (Terra Bella, LLC)	9,700 square feet of office	100 feet	Approved
1075 Terra Bella Avenue (Calvano Development)	19,301 square feet of office	200 feet	Approved
750 Moffett Boulevard (Broadreach Capital Partners)	255-room hotel and 200,000 square feet of office	0.4 mile	Under Construction
535 & 555 Walker Drive (Summer Hill Homes)	Demolition of 2 units and construction of 58-unit rowhouse development	0.6 mile	Approved
870 Leong Drive (Temple Hospitality)	41,039-square-foot, 78-room hotel	0.6 mile	Approved
660 Tyrella Avenue (Taylor Morrison Homes)	37-unit rowhouse development	0.7 mile	Under Construction
450 N. Whisman Drive (Summer Hill Homes)	37-unit rowhouse development	0.9 mile	Under Construction
369 N. Whisman Road (Whisman Associates, LLC)	180,773 square feet of office	1.1 miles	On hold; entitlements vested through September 2021
500 Ferguson Drive (EFL Development)	394 apartments; 3,000 square feet or commercial	1.5 miles	Under Construction
777 W. Middlefield Road (Fortbay)	Rezone; demolition of 208 existing apartment units and construction of 711 new apartment units	0.3 mile	Approved
700 and 800 E. Middlefield Road and 1100 W. Maude Avenue (LinkedIn)	Rezone; 1.08 million square feet of office (468,000 square feet of existing buildings that are occupied and will remain; 612,000 square feet of cumulative pending project)	1.9 miles	Approved
Projects under Review/Pending			
759 W. Middlefield Avenue (Prometheus)	75 apartment units	0.4 mile	Under Planning Review
555 W. Middlefield Road (AvalonBay Communities)	Rezone; 341-unit addition to an existing 402-unit residential development	0.6 mile	Under Planning Review
186 E. Middlefield Road (DeNardi Homes)	8-unit condominium project	1.0 mile	Building Permit Application under review
277 Fairchild Drive (Warmington Residential)	22-unit rowhouse development	1.0 mile	Building Permit Application under review
580-620 Clyde Avenue (Renault & Handley)	Rezone; 178,477 square feet of office	1.6 miles	Building Permit Application under review

TABLE 4.0-1 (CONTINUED)
CUMULATIVE PROJECTS

Project Name	Description of Project	Approximate Distance from Project Site	Environmental Review and Construction Schedule
Reasonably Foreseeable Projects			
355-415 East Middlefield Road (Summer Hill Homes)	448 new housing units	1.3 miles	Informal Planning Review
465 Fairchild Drive (The Sobranto Organization)	259,595-square-foot office building	1.3 miles	Informal Planning Review
303 Ravendale Drive (Sand Hill Property)	181,000-square-foot office	1.8 miles	Informal Planning Review
189 N Bernardo Avenue (Sand Hill Property)	86,160-square-foot office building to replace an existing 58,400-square-foot office building	2.0 miles	Informal Planning Review
Studies, Plans, Transportation Projects, and Other Projects			
Terra Bella Visioning	The plan will include development principles which will provide a foundation to guide review of future development projects in the area.	Includes Project site	Under Planning Review
Shenandoah Square Precise Plan	Annexation of an approximately 17-acre parcel to allow multi-family residential redevelopment and a new Precise Plan to regulate future development activities on the site.	0.4 mile	On hold
East Whisman Precise Plan	The Plan will include policy, standards, and guidelines for new residential, office, and mixed-use development. It will also include new open space and circulation plans for the area.	1.1 miles	Under Planning Review

SOURCE: City of Mountain View, 2018.

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4.1 Aesthetics

4.1.1 Introduction

This section evaluates the potential for development of the Project to affect existing visual conditions (generally, as of September, 2018), specifically, scenic vistas and resources, visual character and quality, and light and glare. This analysis is based on existing conditions information from field reconnaissance in and around the Project site, including publically accessible parks and open space areas, to assess potential views of the Project site within existing scenic vistas.

Comments received on the Notice of Preparation (NOP) included concerns with a transition in building heights relative to the surrounding neighborhood. This issue is discussed in this section.

4.1.2 Environmental Setting

4.1.2.1 Existing Visual Conditions

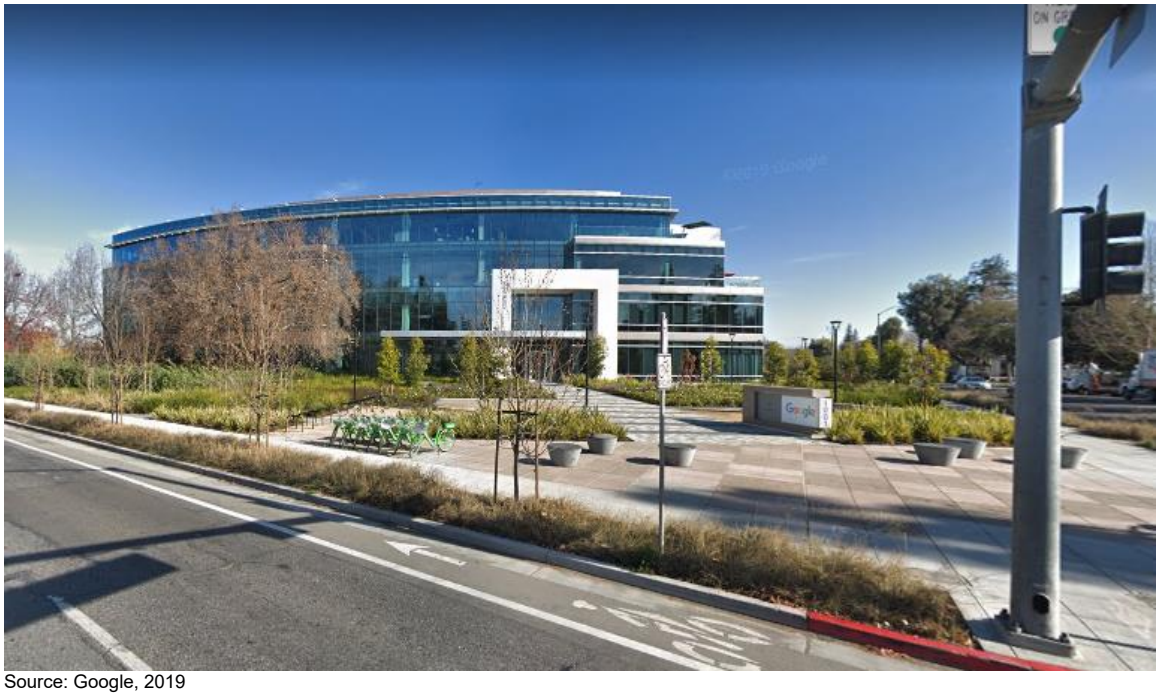
Regional and Local Setting

As discussed in Chapter 3, *Project Description*, Mountain View is located south of San Francisco at the southern end of the San Francisco Peninsula, where the Peninsula joins the Santa Clara Valley in northwestern Santa Clara County. The City is approximately 12 square miles and is bounded by Palo Alto to the west, Los Altos to the south, Sunnyvale and the NASA-Ames/Moffett Federal Airfield complex to the east, and the San Francisco Bay and tidal marshes to the north. The Project site is located in the City's Moffett/Whisman Planning Area, in the north central portion of the City. The Moffett/Whisman Planning Area generally contains a mix of general industrial, commercial, and residential uses (City of Mountain View, 2012b).

Project Site

The approximately 7.81-acre Project site currently contains one 111,443-square-foot (sf) four-story office building, which would be retained on the site. The Project site is relatively level and slopes gently from south to north, with ground surface elevation that varies from approximately 36 feet above sea level (asl) along the southern side of the Project site to 30 feet asl near the site's northwestern corner.

Along with the newly-constructed office building, existing features on the Project site include a paved parking area containing 371 spaces, walkways, a volleyball and basketball court, and landscaping, and approximately 341 trees (including adjacent off-site street trees and overhanging neighbors' trees). Views of the Project site are included in **Figures 4.1-1** through **4.1-4** below.



Source: Google, 2019

Figure 4.1-1
View of Project Site from N Shoreline Blvd Looking Northeast

Source: Google, 2019

Figure 4.1-2
View of Project Site from N Shoreline Blvd Looking East

Source: Google, 2019

Figure 4.1-3
View of the Project Site from Terra Bella Ave Looking Northeast

Source: Google, 2019

Figure 4.1-4
View of the Project Site from Terra Bella Ave Looking Northwest

Areas Surrounding the Project Site

As shown in Figure 3-3 in Chapter 3, *Project Description*, surrounding properties include predominantly industrial and office uses. A single story vacant commercial building and office building are located immediately east of the Project site. The Stevens Creek Trail is located approximately 0.5 mile east of the site, and the San Francisco Bay is located approximately 2 miles to the north. Moffett Field and the NASA Ames Research Center are located across Highway 101 (U.S. 101), approximately 1.2 miles east of the site. The City of Sunnyvale is approximately 1.75 miles east of the site.

The closest residential uses are located approximately 200 feet southeast of the Project site on Linda Vista Avenue, with a larger residential neighborhood located approximately 700 feet south of the Project site also on Linda Vista Avenue. Two existing buildings at 1080 and 1066 Linda Vista Avenue, owned by the Church of Scientology have recently undergone renovation into a church and café.

Existing Views Toward the Project Site

The visual exposure of the Project site is generally limited to nearby (short-distance) viewpoints available to motorists, bicyclists, and pedestrians traveling along North Shoreline Boulevard and U.S. 101, as well as nearby residents. The Project site cannot be seen from long-distance viewpoints primarily due to the raised freeway overpass at Shoreline Boulevard and development including commercial, office, and industrial buildings in the immediate vicinity of the Project site, the one- and two-story buildings to the south of the site, and the presence of mature trees.

Existing Light and Glare

There are various sources of lighting and glare on the Project site and throughout the adjacent area from neighboring commercial, office, and industrial uses and from sources typical in developed areas, including: headlights from vehicles, parking/security lights from nearby parking areas, and reflective surfaces such as windows. However, existing trees surrounding the Project site provide some screening of these nearby sources of light and glare. There are multiple light sources stemming from the existing office building and the surface parking lots. There are three streetlights along the western perimeter of the Project site, and one streetlight on each of the southern and eastern perimeters. Additionally, there are multiple light sources located along the northern perimeter of the Project site that serve U.S. 101 and the adjacent southbound on-ramp.

4.1.2.2 Scenic Vistas/Corridors and Scenic Resources

As identified in the City's 2030 General Plan, views of the surrounding mountains inspired the City's name and contribute to its distinct sense of place. Views of other natural features such as the Diablo Mountain Range to the southeast, Mission Peak to the east, San Francisco Bay to the north, and Stevens Creek in the eastern portion of the City are available from various locations within Mountain View. Views of the San Francisco Bay are generally only available from Shoreline Park in the North Bayshore Area (City of Mountain View, 2012a). No scenic vistas or scenic resources are located on the Project site.

Gateways are the entries to a city, district, or neighborhood. They act as a point of distinction between different areas and contribute to a sense of place by announcing a threshold or a passage into a place while also reinforcing the unique identity of that place. For the most part, gateways in the City are associated with the City's major transportation corridors, particularly those which cross the jurisdictional boundaries of Palo Alto, Los Altos, and Sunnyvale. Shoreline Boulevard, located adjacent to the Project site, serves as the primary gateway into Downtown Mountain View from U.S. 101.

There are two main creek corridors in Mountain View: Stevens Creek and Permanente Creek, both of which include creek-side trails. Stevens Creek, approximately 0.5 miles east of the Project site, extends from Shoreline Regional Park south through the City and into Sunnyvale. The Project site is not visible from Stevens Creek Trail.

4.1.3 Regulatory Setting

4.1.3.1 State

California State Scenic Highway Program

No highways formally designated as State Scenic Highways, or eligible for designation, currently exist within the City per the California Department of Transportation's Scenic Highway Program (Caltrans, 2018). The California Scenic Highway Program was created by the State Legislature in 1963, to protect and enhance the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment.

Title 24 Outdoor Lighting Zones

The California Energy Commission (CEC) establishes Building Energy Efficient Standards within Title 24 that address outdoor lighting for public and private uses. The standards specify outdoor lighting requirements for residential and non-residential development, and their intent is to improve the quality of outdoor lighting and help reduce the impacts of light pollution, light trespass, and glare. The standards regulate lighting characteristics, such as maximum power and brightness, shielding, and sensor controls to turn lighting on and off.

4.1.3.2 Local

City of Mountain View 2030 General Plan

Land Use Designation

The Project site's General Plan Land Use Map designation is *General Industrial* (City of Mountain View, 2012b). The Project would require text and map amendments to the City of Mountain View 2030 General Plan to change the Project site land use designation from *General Industrial* to *General Mixed-Use*. This would allow the addition of the Project's residential uses in the Moffett/Whisman Planning Area.

Relevant General Plan Policies

The City's 2030 General Plan contains several policies related to views, scenic vistas, and visual character. The Land Use and Design Element of the 2030 General Plan contains the following goals and policies related to views, scenic vistas, and visual character applicable to the Project:

> ***Policy LUD 6.1. Neighborhood character.*** Ensure that new development in or near residential neighborhoods is compatible with neighborhood character.
>
> ***Policy LUD 6.3. Street presence.*** Encourage building facades and frontages that create a presence at the street and along interior pedestrian paseos or pathways.

Goal LUD-9. Buildings that enhance the public realm and integrate with the surrounding neighborhood.

> ***Policy LUD 9.1. Height and setback transitions.*** Ensure that new development includes sensitive height and setback transitions to adjacent structures and surrounding neighborhoods.
>
> ***Policy LUD 9.3. Enhanced public space.*** Ensure that development enhances public spaces through these measures:
>
> - Encourage strong pedestrian-oriented design with visible, accessible entrances and pathways from the street.
> - Encourage pedestrian-scaled design elements such as stoops, canopies and porches.
> - Encourage connections to pedestrian and bicycle facilities.
> - Locate buildings near the edge of the sidewalk.
> - Encourage design compatibility with surrounding uses.
> - Locate parking lots to the rear or side of buildings.
> - Encourage building articulation and use of special materials to provide visual interest.
> - Promote and regulate high-quality sign materials, colors and design that are compatible with site and building design.
> - Encourage attractive water-efficient landscaping on the ground level.
>
> ***Policy LUD 9.5 View preservation.*** Preserve significant viewsheds throughout the community.
>
> ***Policy LUD 9.6. Light and glare.*** Minimize light and glare from new development.
>
> ***Policy LUD 10.1. Sustainable design and materials.*** Encourage high-quality and sustainable design and materials.
>
> ***Policy LUD 10.7. Beneficial landscaping options.*** Promote landscaping options that conserve water, support the natural environment, and provide shade and food sources.
>
> ***Policy LUD 10.9. Sustainable roofs.*** Encourage sustainable roofs that reduce a building's energy use and provide other ecological benefits.

City of Mountain View Municipal Code

The City of Mountain View addresses visual considerations for development in many City documents, including the Municipal Code. The City Zoning Ordinance (Title 36) sets forth specific design guidelines, height limits, building density, building design and landscaping standards, architectural features, sign regulations, and open space and setback requirements.

The Zoning Ordinance promotes good design and careful planning of development projects to enhance the visual environment. The City's development review process ensures that the architecture and urban design of new developments would protect the City's visual environment and includes the review of preliminary plans, the consideration of public input at the Development Review Committee, Zoning Administrator, Environmental Planning Commission and the City Council. The City's Planning Division reviews private and public development applications for conformance with City plans, ordinances, and policies related to zoning, urban design, subdivision, and CEQA.

Zoning District

The Project also would require associated re-zoning amendments to the City's Zoning Ordinance and Map from *General Industrial* (MM) on the eastern portion of the Project site and *Limited Industrial* (ML) on the western portion of the Project site, to *Planned Community* (P) for the entire site.

The P zoning district is designed to provide for those uses or combinations of uses which may be appropriately developed as a planned area development. It is intended to be applied only to those areas which; by reason of their proximity to other zoning districts, topography, geographic location, size, shape or existing development; require special consideration in order to be properly integrated into the community and adjacent developed districts. It is also intended to further the planned circulation patterns, residential densities, planned coverage limitations, and the preservation of open spaces; as recommended by modern land planning and zoning concepts and techniques. There are no set height restrictions within this zoning district.

Planned Community Permit

A Planned Community Permit is required prior to the development of any use within a P district, other than crop and tree farming. The application for such a permit may be considered concurrently with, or subsequent to, the consideration of P district zoning. A proposal must clearly demonstrate superior site and building design and compatibility with surrounding uses and developments for approval of the Planned Community Permit.

4.1.4 Aesthetics Impacts

4.1.4.1 Significance Criteria

Consistent with Appendix G of the State CEQA *Guidelines*, except as provided in Public Resources Code Section 21099, the Project would cause significant adverse impacts to aesthetic resources if it were to:

a) Have a substantial adverse effect on a scenic vista;

b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;

c) Conflict with applicable zoning and other regulations governing scenic quality; or

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

4.1.4.2 Approach to Analysis

"Scenic vistas" (also referred to as *viewsheds*) are views that capture the total field of vision from a specific viewpoint—they generally encompass a large geographic area for which the field of view can be quite wide and extend into the distance. Scenic vistas are formed by built and natural physical elements that guide lines of sight and control view directions available to pedestrians and motorists. The expanse of a scenic vista or viewshed can be limited by the framing of a photograph or illustration.

Whether an adverse environmental effect on aesthetics occurs is based on whether development of a project would result in the substantial interference or obstruction of a scenic view from a public vantage point. The obstruction of an individual landowners' view from private property is not considered a significant environmental impact under CEQA. As a result, CEQA analysis generally does not consider or evaluate a project's impact on views from private residences or other private vantage points.

A significance determination for Criteria a) and b) above is based on whether the Project would prominently obstruct, or block the majority of the expanse of, a scenic vista or scenic resource as seen by most viewers from public locations while taking into account the view as a whole as well as the City's land use policies. The analysis considers the sensitivity of the affected resource based on the prominence of its visibility and/or the viewpoint location, as well as the characteristics of the view. View characteristics include whether it is widely unobstructed, fleeting, intermittent, or transitory as viewed from roadways. Moreover, the significance is measured in light of the context in which the effect occurs. The CEQA *Guidelines* state "the significance of an activity may vary with the setting. For example, an activity which may not be significant in an urban area may be significant in a rural area" (CEQA *Guidelines* Section 15064(b)).

"Scenic resources" (also referred to as *features*) are elements of high scenic value or visual prominence that appear within a scenic vista or scenic corridor. Impacts can be analyzed using both visual resources and architectural character as guidelines for determining whether a project would have a substantial demonstrable negative aesthetic effect. With respect to visual character, for a project to have significant visual impacts, the project must either block views of an aesthetic resource or be located in an area that is itself considered to be an aesthetic resource.

The analysis also addresses whether the Project would conflict with applicable zoning and/or other regulations governing scenic quality or create a new source of substantial light or glare (Criteria c and d).

4.1.4.3 Discussion of Impacts and Mitigation Measures

Impact Analysis

Scenic Vistas and Resources

Impact AES-1: The Project would not have a substantial adverse effect on a scenic vista nor substantially damage scenic resources. (Criteria a. and b.) *(Less than Significant, No Mitigation Required)*

There are no identifiable scenic view corridors through the Project site. The site itself is relatively level with a gradual slope that varies from 36 feet above sea level (asl) in the south to around 30 feet asl in the northwestern corner. Short-range public views of the Project site are provided from the adjacent streets to the south, east, and west, respectively, and from passing vehicles, bicyclists, and pedestrians traveling along these roads. However, these views are limited by existing buildings, landscaping, and the overall configuration of the Project site. Short-range public views would also be available to vehicles traveling along U.S. 101 to the north; however, these views are largely obscured by the existing concrete wall that separates the Project site from the highway and by mature trees located on the site. Additionally, the Project site is not visible from Stevens Creek Trail.

There are no existing buildings, improvements or landscaping on the Project site or in its immediate vicinity that qualify as an aesthetic resource. Therefore, the Project would not result in a substantial adverse effect on an aesthetic resource.

Caltrans administers California's Scenic Highway Program, which was established by the California Legislature in 1963. Its purpose is to preserve and protect scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The highways nearest to the proposed Project (SR 85 and U.S. 101) are not designated by Caltrans as scenic highways. The nearest scenic highways designated by Caltrans are SR 9 in Santa Clara County from the Santa Cruz County line to the Los Gatos City limit, and SR 1 in San Mateo County from the Santa Cruz County Line to Half Moon Bay. Both are several miles from the Project site. The Project is not visible from any scenic highway or vista and therefore would not result in any impacts on scenic highways or vistas.

Therefore, the proposed Project would not have a substantial adverse effect on a scenic vista nor substantially damage scenic resources. The impact would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Scenic Quality

Impact AES-2: The Project would not conflict with applicable zoning and other regulations governing scenic quality. (Criterion c.) ***(Less than Significant, No Mitigation Required)***

The Project site is currently developed with a four-story office building, surface parking lots, a basketball and volleyball court, and landscaping. The proposed Project would develop two approximately 86.5–foot-tall residential buildings and a six-level parking garage. The Project would require associated re-zoning amendments to the City's Zoning Ordinance and Map to *Planned Community* (P) for the entire site. The P zoning district does not dictate height restrictions; therefore, the Project's proposed heights would not conflict with the zoning district.

As noted above, the P zoning district is intended to be applied only to those areas which require special consideration in order to be properly integrated into the community and adjacent developed districts. The Project would involve infill development on a site with an existing four-story office building. The Project would result in development on the site that is denser and taller than the adjacent properties and would change the visual character of the site itself. While the proposed buildings would be taller than the existing office building onsite and the immediately adjacent uses, the proposed Project design would be similar to more intensive land uses and buildings within the North Bayshore Precise Plan area located north of U.S. 101. The Project is located adjacent to the U.S. 101 and Shoreline Boulevard interchange to the south, and would transition into the intensified North Bayshore Precise Plan area to the north.

The City's 2030 General Plan identifies Shoreline Boulevard, located adjacent to the Project site, as the primary gateway into Downtown Mountain View from U.S. 101. Therefore, the Project would act as a point of transition from U.S. 101, a major transportation corridor, into Downtown Mountain View.

The Project would be reviewed by the City's Development Review Committee, which is responsible for reviewing the architecture and site design of new development. The Project would also be reviewed by the Zoning Administrator, and Environmental Planning Commission (EPC) which would ensure that the changes to the general plan map and zoning are consistent with City standards relating to massing and building height. Further, the Project would require approval of a Planned Community Permit, which would ensure that the Project clearly demonstrates superior site and building design and compatibility with surrounding uses and developments. Therefore, the Project would not conflict with applicable zoning and other regulations governing scenic quality, and impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Light and Glare

Impact AES-3: 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. (Criterion d.) *(Less than Significant, No Mitigation Required)*

The Project would include various lighting, including pedestrian-scale pole lights, bollard lights, recessed wall lights, and in-ground uplights to illuminate and accent landscaping, walkways, buildings, and parking areas, and to provide security lighting for the building.

The City's Development Review Committee requires the proposed design and construction materials to be consistent with standards for residential development, lighting security requirements. The City's Development Review Committee would also ensure that the Project does not adversely affect the visual quality of the area or create a substantial new source of light and glare. Per the City's Standard Conditions of Approval, the Project would be designed so light does not spill offsite. Furthermore, as noted above, tree and shrub plantings would occur along the edges of the Project site, which would reduce the potential for a substantial new source of light and glare.

> ***Standard Condition PL-68 (Lighting Plan)*:** The applicant shall submit a lighting plan with the application for building permit. This plan should include photometric contours, manufacturer's specifications on the fixtures, and mounting heights. The design and location of outdoor lighting fixtures shall ensure there will be no glare and light spillover to surrounding properties. The lighting plan submitted with building permit drawings must be approved by the Zoning Administrator prior to building permit issuance.

Overall, the Project's compliance with the City's development review process and the requirements presented above would ensure that Project lighting is appropriately tailored for particular uses and locations, is low to the ground, and incorporates techniques to avoid light spill. The Project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area. The impact would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

Impact C-AES-1: The proposed Project would not result in a significant cumulative aesthetics impact when considering the combined effect of the Project, and past, present, approved, pending, and reasonably foreseeable future projects. *(Less than Significant, No Mitigation Required)*

Cumulative Setting

Section 4.0, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR includes a list of cumulative projects and plans. Given that the projects closest to the Project site would also be infill projects in an already-developed urban environment, these projects would not likely

combine to create significant adverse aesthetics effects. Moreover, as with past projects, all current and future projects would be subject to the policies and actions in the City's 2030 General Plan, as well as the requirements of relevant City ordinances (including the zoning ordinance), discretionary permits, and the development review process, each of which has components designed to protect and enhance scenic quality. Evaluations of proposed projects according to these requirements take into account cumulative conditions, and consistency with existing surroundings. Where applicable, individual projects would adhere to conditions and/or mitigation measures, applicable design guidelines, and development standards to address potential adverse impacts related to aesthetic appearance.

Cumulative Impacts

The scenic quality of Mountain View is characterized by extensive views of the Santa Cruz Mountains to the south and west and views of other natural features such as the Diablo Mountain range to the southeast, Mission Peak to the east, and Stevens Creek in the eastern portion of the City. Views of San Francisco Bay are generally available only from Shoreline Park in the North Bayshore Area. Views of ridgelines are available along the City's edges, streets, and other open areas, which are unimpeded by built structures. There are no officially designated State Scenic Highways in Mountain View, and no portions of Mountain View encompass the viewshed of a State Scenic Highway. Additionally, with development under the North Bayshore Precise Plan and the Project, more development at increased heights will be visible.

Therefore, while cumulative past, present or reasonably foreseeable future development in the area could incrementally result in visual changes on sites in the region, the combined effect that would occur relative to existing conditions would not be significant primarily because the effects related to aesthetics would be localized and would not combine with other sources to contribute to view obstructions, light, or glare.

General Plan Aesthetics Analysis and Findings

In the process of certifying the EIR for the 2030 General Plan, the City found that development activities associated with the proposed General Plan would not result in significant adverse aesthetic impacts for CEQA purposes, and that impacts to the visual character and quality of the City at the programmatic level of the General Plan process would be less than significant. General Plan Policies LUD 6.3 and LUD 10.1, listed above, were found to reduce the potential for impacts on scenic resources and visual character. In addition, as previously described, the City's development review process, which includes the City Zoning Administrator and the Development Review Committee, would ensure that the architecture and urban design of new developments would protect the City's visual environment (City of Mountain View, 2012a).

Regarding new sources of light and glare, the City is primarily built out, and a significant amount of ambient light and glare from urban uses already exists. The 2030 General Plan EIR includes policies to ensure that new buildings and associated lighting would not substantially adversely affect daytime or nighttime views. The City's 2030 General Plan, ordinances, and discretionary permit and development review process each have components designed to protect and enhance the visual character of the City while embracing the changes that will normally take place in an urbanized area. The CEQA findings for the 2030 General Plan EIR stated that General Plan

Policies LUD 9.1, LUD 10.1, LUD 10.7, and LUD 10.9 would reduce the potential for impact on light and glare.

In summary, the CEQA findings for the 2030 General Plan EIR concluded that aesthetic impacts under the General Plan, and cumulatively, would be less than significant (City of Mountain View, 2012a).

Summary

The CEQA findings for the 2030 General Plan EIR and the potential for other cumulative development to combine with the proposed Project to create a significant adverse aesthetic impact, are largely factored into the impact determination for aesthetics. The Project, combined with other cumulative development in the area, would not result in cumulative adverse changes that would substantially degrade the existing aesthetic conditions of the Project site or its surroundings. The impact is less than significant.

Significance: Less Than Significant.

Mitigation: None required.

4.1.5 Summary of Aesthetics Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact AES-1: The Project would not have a substantial adverse effect on a scenic vista nor substantially damage scenic resources.	Less than Significant	None required	-
Impact AES-2: The Project would not conflict with applicable zoning and other regulations governing scenic quality	Less than Significant	None required	-
Impact AES-3: 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	None required	-
Impact C-AES-1: The proposed Project would not result in a significant cumulative aesthetics impact when considering the combined effect of the Project, and past, present, approved, pending, and reasonably foreseeable future projects.	Less than Significant	None required	-

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4.1.6 References – Aesthetics

California Department of Transportation (Caltrans), 2018. Scenic Highways Program. Available at: http://www.dot.ca.gov/hq/LandArch/16_livability/scenic_highways/index.htm, accessed January 19, 2018.

City of Mountain View, 2012a. *City of Mountain View Draft 2030 General Plan and Greenhouse Gas Reduction Program.* September, 2012.

City of Mountain View, 2012b. *Mountain View 2030 General Plan*. Adopted July 10, 2012.

4.2 Air Quality

4.2.1 Introduction

This section addresses the impacts of the Project on ambient air quality and the exposure of people, especially sensitive individuals, to unhealthful pollutant concentrations. The analysis of Project-related emissions focuses on whether the Project would cause an exceedance of a State or national ambient air quality standard, a health-based standard for exposure to toxic air contaminants, or a CEQA threshold considered by the Bay Area Air Quality Management District (BAAQMD). Potential impacts from greenhouse gas emissions (GHGs) on climate change are evaluated in Section 4.7, *Greenhouse Gas Emissions*. This analysis uses information contained in a construction air quality analysis that was prepared for the Project site dated April 25, 2019, by Illingworth & Rodkin, Inc. (**Appendix B**).

4.2.2 Existing Setting

Air quality is a function of both the rate and location of pollutant emissions under the influence of meteorological conditions and topographic features that influence pollutant movement and dispersal. Atmospheric conditions such as wind speed, wind direction, atmospheric stability, and air temperature gradients interact with the physical features of the landscape to determine the movement and dispersal of air pollutants, and consequently affect air quality.

4.2.2.1 Physical Setting

Climate and Meteorology

The Project site is located in northwestern Santa Clara County and is within the boundaries of the San Francisco Bay Area Air Basin (Bay Area Air Basin). The Bay Area Air Basin encompasses the nine-county region, including all of Alameda, Contra Costa, Santa Clara, San Francisco, San Mateo, Marin and Napa counties, and the southern portions of Solano and Sonoma counties. The climate of the Bay Area Air Basin is determined largely by a high-pressure system that is almost always present over the eastern Pacific Ocean off the West Coast of North America. During winter, the Pacific high-pressure system shifts southward, allowing more storms to pass through the region. During summer and early fall, when few storms pass through the region, emissions generated within the Bay Area can combine with abundant sunshine under the restraining influences of topography and subsidence inversions to create conditions that are conducive to the formation of photochemical pollutants, such as ozone, and secondary particulates, such as nitrates and sulfates.

Within the Bay Area Air Basin, the Project site is located within the Santa Clara Valley climatological subregion, which is bounded by the Bay to the north and by mountains to the east, south and west. The wind patterns in this subregion are greatly influenced by the terrain, resulting in a prevailing flow that roughly parallels the valley's northwest-southeast axis. A north-northwesterly sea breeze flows through the valley during the afternoon and early evening, and a light south-southeasterly drainage flow occurs during the late evening and early morning. In the summer the southern end of the valley sometimes becomes a “convergence zone,” when air

flowing from the Monterey Bay gets channeled northward into the southern end of the valley and meets with the prevailing north-northwesterly winds. Wind speeds are greatest in the spring and summer and weakest in the fall and winter. Nighttime and early morning hours frequently have calm winds in all seasons, while summer afternoons and evenings are quite breezy. Strong winds are rare, associated mostly with the occasional winter storm (BAAQMD, 2017a).

The air pollution potential of the Santa Clara Valley is high. High summer temperatures, stable air and mountains surrounding the valley combine to promote ozone formation. In addition to the many local sources of pollution, ozone precursors from San Francisco, San Mateo and Alameda Counties are carried by prevailing winds to the Santa Clara Valley. The valley tends to channel pollutants to the southeast. In addition, on summer days with low level inversions, ozone can be recirculated by southerly drainage flows in the late evening and early morning and by the prevailing northwesterly winds in the afternoon. A similar recirculation pattern occurs in the winter, affecting levels of carbon monoxide and particulate matter. This movement of the air up and down the valley increases the impact of the pollutants significantly.

Pollution sources are plentiful and complex in this subregion. The Santa Clara Valley has a high concentration of industry at the northern end, in the Silicon Valley. Some of these industries are sources of air toxics as well as criteria air pollutants. In addition, Santa Clara Valley's large population and many work-site destinations generate the highest mobile source emissions of any subregion in the Bay Area Air Basin (BAAQMD, 2017a).

Existing Air Quality

The BAAQMD operates a regional monitoring network that measures the ambient concentrations of criteria air pollutants of concern within the Bay Area. Existing levels of air quality at the Project site can generally be inferred from ambient air quality measurements conducted by the BAAQMD at its nearest monitoring station. The monitoring station nearest to the Project site is the San Jose – Jackson station, which is located approximately 11 miles southeast of the Project site. This station monitors ozone (1-hour and 8-hour), particulate matter (PM_{10} and $PM_{2.5}$), carbon monoxide, and nitrogen dioxide. **Table 4.2-1** shows a three-year summary of monitoring data (2016 through 2018) for these pollutants. The table also compares these measured concentrations with State and federal ambient air quality standards. As shown in Table 4.2-1, the San Jose – Jackson monitoring station has recorded violations of ozone, PM_{10}, and $PM_{2.5}$ standards from 2016-2018. Particulate levels in October 2017 and November 2018 were greatly influenced by wildfires within the state that contributed to some of these violations.

Criteria Air Pollutants

Ground-level Ozone (O_3) is the main component of smog. Ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere, but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving reactive organic gases (ROG) and nitrogen oxides (NOx). ROG and NOx are known as precursor compounds for ozone. Significant ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours.

TABLE 4.2-1
AIR QUALITY DATA SUMMARY (2016–2018) FOR THE PROJECT AREA

Pollutant	Standard	2016	2017	2018
Ozone				
Highest 1-Hour Average (ppm)	0.09 ppm	0.087	0.121	0.078
State Standards Exceedance Days		0	3	0
Highest 8-Hour Average (ppm)	0.070 ppm	0.067	0.098	0.061
State Standard Exceedance Days		0	4	0
National Standard Exceedance Days	0.070 ppm	0	4	0
Particulate Matter (PM_{10})				
Highest 24 Hour Average (µg/m^3)	—	41	70	122
Estimated Days over National Standard	150 µg/m^3	0	0	0
Estimated Days over State Standard	50 µg/m^3	0	6	4
State Annual Average	20 µg/m^3	18.5	21.6	23.1
Fine Particulate Matter ($PM_{2.5}$)				
Highest 24-Hour Average (µg/m^3)	35 µg/m^3	22.6	49.7	133.9
Measured Days over National Standard Exceedances/Samples		0	6	15
Annual Average (µg/m^3)	12 µg/m^3	8.4	9.5	12.8
Nitrogen Dioxide (NO_2)				
Highest Hourly Average (ppm)	0.18 ppm	0.051	0.068	0.086
Measured Days over State Standard Exceedances/Samples		0	0	0
Carbon Monoxide (CO)				
Highest 8-Hour Average (ppm)	9.0 ppm	1.4	1.8	2.1
Measured Days over State Standard		0	0	0
Sulfur Dioxide (SO_2)				
Highest 1 Hour Average (ppb)	0.075 ppm	1.8	3.6	6.9
Days over National Standard		0	0	0
Highest 24 Hour Average (ppb)	0.04 ppm	0.8	1.1	1.1
Days over National Standard		0	0	0

NOTES:
ppm = parts per million; µg/m^3 = micrograms per cubic meter; ppb = parts per billion
1. Measurements are from the San Jose – Jackson Monitoring Station.
2. Generally, State standards and national standards are not to be exceeded more than once per year.
3. A violation occurs only if the standard is exceeded. Because 0.091 rounds to 0.09, it is not considered a violation. A recorded concentration of 0.095 or greater would constitute a violation of the State standard.

SOURCE: BAAQMD, 2019.

Ozone is a regional air pollutant because it is not emitted directly by sources, but is formed downwind of sources of ROG and NOx under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when the long sunny days combine with regional subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds, like ozone.

According to the United States Environmental Protection Agency (U.S. EPA), ozone can cause the muscles in the airways to constrict potentially leading to wheezing and shortness of breath. Ozone can make it more difficult to breathe deeply and vigorously; cause shortness of breath and pain when taking a deep breath; cause coughing and sore or scratchy throat; inflame and damage the airways; aggravate lung diseases such as asthma, emphysema and chronic bronchitis; increase the frequency of asthma attacks; make the lungs more susceptible to infection; continue to damage the lungs even when the symptoms have disappeared; and cause chronic obstructive pulmonary disease. Long-term exposure to ozone is linked to aggravation of asthma, and is likely to be one of many causes of asthma development and long-term exposures to higher concentrations of ozone may also be linked to permanent lung damage, such as abnormal lung development in children (U.S. EPA, 2018). According to the California Air Resources Board (CARB), inhalation of ozone causes inflammation and irritation of the tissues lining human airways, causing and worsening a variety of symptoms and exposure to ozone can reduce the volume of air that the lungs breathe in and cause shortness of breath (CARB, 2019a).

Carbon monoxide (CO) is a non-reactive pollutant that is a product of incomplete combustion and is mostly associated with motor vehicle traffic. High CO concentrations develop primarily during winter when periods of light winds combine with the formation of ground level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

According to CARB, the most-common effects of CO exposure are fatigue, headaches, confusion, and dizziness due to inadequate oxygen delivery to the brain. For people with cardiovascular disease, short-term CO exposure can further reduce their body's already compromised ability to respond to the increased oxygen demands of exercise, exertion, or stress. Inadequate oxygen delivery to the heart muscle leads to chest pain and decreased exercise tolerance. Unborn babies, infants, elderly people, and people with anemia or with a history of heart or respiratory disease are most likely to experience health effects with exposure to elevated levels of CO (CARB, 2019c).

Nitrogen dioxide (NO_2) is an air quality pollutant of concern because it acts as a respiratory irritant. NO_2 is a major component of the group of gaseous nitrogen compounds commonly referred to as NOx. A precursor to ozone formation, NOx is produced by fuel combustion in motor vehicles, industrial stationary sources (such as industrial activities), ships, aircraft, and rail transit. Typically, NOx emitted from fuel combustion is in the form of nitric oxide (NO) and NO_2. NO is often converted to NO_2 when it reacts with ozone or undergoes photochemical reactions in the atmosphere.

Ambient air quality standards have been promulgated for NO_2, which is a reddish-brown, reactive gas. The principle form of NOx produced by combustion is NO, but NO reacts quickly in the atmosphere to form NO_2, creating the mixture of NO and NO_2 referred to as NOx (CARB, 2019b). Major sources of NOx include emissions from cars, trucks and buses, power plants, and off-road equipment (U.S. EPA, 2016). The terms NOx and NO_2 are sometimes used interchangeably. However, the term NOx is typically used when discussing emissions, usually from combustion-related activities, and the term NO_2 is typically used when discussing ambient air quality standards. Where NOx emissions are discussed in the context of the thresholds of significance or impact analyses, the discussions are based on the conservative assumption that all NOx emissions would oxidize in the atmosphere to form NO_2.

According to the U.S. EPA, NO_2 can potentially irritate airways in the human respiratory system. Short-term exposures can aggravate respiratory diseases, particularly asthma, leading to respiratory symptoms (such as coughing, wheezing or difficulty breathing), hospital admissions and visits to emergency rooms and longer exposures to elevated concentrations of NO_2 may contribute to the development of asthma and potentially increase susceptibility to respiratory infections (U.S. EPA, 2016). According to CARB, controlled human exposure studies that show that NO_2 exposure can intensify responses to allergens in allergic asthmatics (CARB, 2019b).

Sulfur dioxide (SO_2) is a combustion product of sulfur or sulfur-containing fuels such as coal. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter (both PM_{10} and $PM_{2.5}$) and contributes to potential atmospheric sulfuric acid formation that could precipitate downwind as acid rain. In the Bay Area, high concentrations of SO_2 are only a concern in areas close to refinery operations. According to the U.S. EPA, short-term exposures to SO_2 can harm the human respiratory system and make breathing difficult (U.S. EPA, 2019). According to CARB, health effects at levels near the State one-hour standard are those of asthma exacerbation, including bronchoconstriction accompanied by symptoms of respiratory irritation such as wheezing, shortness of breath and chest tightness, especially during exercise or physical activity. Exposure at elevated levels of SO_2 (above 1 ppm) results in increased incidence of pulmonary symptoms and disease, decreased pulmonary function, and increased risk of mortality (CARB, 2019d).

Particulate matter less than 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) can be inhaled into air passages and the lungs and can cause adverse health effects. Particulate matter in the atmosphere results from many kinds of dust- and fume-producing industrial and agricultural operations, fuel combustion, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition and construction activities, are more local in nature, while others, such as vehicular traffic, have a more regional effect. 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.

According to CARB, both PM_{10} and $PM_{2.5}$ can be inhaled, with some depositing throughout the airways. PM_{10} is more likely to deposit on the surfaces of the larger airways of the upper region of the lung while $PM_{2.5}$ is more likely to travel into and deposit on the surface of the deeper parts of the lung, which can induce tissue damage, and lung inflammation. Short-term (up to 24 hours'

duration) exposure to PM_{10} has been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits. Short-term exposure to $PM_{2.5}$ has been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days and long-term exposure to $PM_{2.5}$ has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children (CARB, 2017).

Lead has a range of adverse neurotoxic health effects, and was formerly released into the atmosphere primarily via the combustion of leaded gasoline. The phase-out of leaded gasoline in California resulted in decreasing levels of atmospheric lead. In the Bay Area, high concentrations of lead are only a concern in areas close to general aviation airports. Lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system, and affects the oxygen carrying capacity of blood (U.S. EPA, 2017).

Toxic Air Contaminants

Toxic Air Contaminants (TACs) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer or serious illness) and include, but are not limited to, the criteria air pollutants listed above. Specifically, TACs include diesel particulate matter (DPM) (discussed below) emitted by diesel engines, and benzene and CO emitted by gasoline engines. Air pollution sources located near sensitive receptors are known to pose health risks. Sensitive receptors typically include land uses where individuals are susceptible to health risks when exposed to air pollution, including residences, day cares facilities, schools, medical facilities, and parks and recreational facilities. TACs are typically emitted by on- and off-road motor vehicles, stationary emission sources, and by industrial and commercial manufacturing. The California Office of Environmental Health Hazard Assessment (OEHHA) has identified several TACs that pose short-term (acute health risk), long-term (chronic risk), and/or carcinogenic health risks.

Diesel Particulate Matter (DPM) is the predominant TAC in urban air, with the potential to cause cancer. CARB identified DPM as a toxic air contaminant in 1998, primarily based on evidence demonstrating cancer effects in humans. 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 DPM are higher near heavily traveled highways and rail lines with diesel locomotive operations. The estimated lifetime cancer risk from exposure to diesel exhaust is much higher than the risk associated with any other toxic air pollutant routinely measured in the region. The risk from diesel particulate matter as determined by CARB declined from 750 in one million in 1990 to 570 in one million in 1995; by 2000, CARB estimated the average statewide cancer risk from DPM at 540 in one million (CARB, 2009).

Stationary sources of TACs within 1,000 feet of the Project site include the following: Teledyne Microwave (1274 Terra Bella Avenue), Chevron #9-6377 (808 N Shoreline Boulevard), and Shoreline Shell (807 N Shoreline Boulevard) (**Appendix C**).

4.2.2.2 Sensitive Land Uses

Some persons are considered more sensitive than others to air pollutants. The reasons for heightened sensitivity may include age, health problems, proximity to the emissions source, and duration of exposure to air pollutants. Land uses such as schools, hospitals, and convalescent homes are considered to be relatively sensitive to poor air quality because the very young, the old, and the infirm are more susceptible to respiratory infections and other air quality-related health problems than the general public. Residential areas are considered sensitive to poor air quality because people are often at home for extended periods. Recreational land uses are moderately sensitive to air pollution, because vigorous exercise associated with recreation places a high demand on the human respiratory system.

The Project site is located near residential land uses. The nearest residences are located approximately 200 feet southeast of the Project site on Linda Vista Avenue, with a larger residential neighborhood located approximately 700 feet south of the Project site along Linda Vista Avenue.

4.2.3 Regulatory Setting

The federal Clean Air Act requires each state to prepare an air quality control plan referred to as the State Implementation Plan (SIP). The United States Environmental Protection Agency (U.S. EPA) is responsible for implementing the programs established under the federal Clean Air Act, such as establishing and reviewing the federal ambient air quality standards and judging the adequacy of SIPs. However, the U.S. EPA has delegated the authority to implement many of the federal programs to the states while retaining an oversight role to ensure that the programs continue to be implemented. In California, CARB is responsible for establishing and reviewing the State ambient air quality standards, developing and managing the California SIP, securing approval of this plan from U.S. EPA, identifying TACs, regulating mobile emissions sources in California, and overseeing the activities of air quality management districts, which are organized at the county or regional level. Air quality management districts, such as the BAAQMD, are primarily responsible for regulating stationary emissions sources at facilities within their geographic areas and for preparing the air quality plans that are required under the federal and state Clean Air Acts.

4.2.3.1 Federal

The federal Clean Air Act requires the U.S. EPA to identify National Ambient Air Quality Standards (NAAQS or "national standards") to protect public health and welfare. National standards have been established for O_3, CO, NO_2, sulfur dioxide, respirable particulate matter (PM_{10} and $PM_{2.5}$), and lead. **Table 4.2-2** shows current national and State ambient air quality standards, as well as the Bay Area attainment status and common sources for each pollutant.

Pursuant to the 1990 federal Clean Air Act amendments, 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 national standards have been achieved. Table 4.2-3 shows the current attainment status for the state and the Bay Area Air Basin.

TABLE 4.2-2
AMBIENT AIR QUALITY STANDARDS AND SAN FRANCISCO BAY AREA AIR BASIN ATTAINMENT STATUS

Pollutant	Averaging Time	State Standard	Bay Area Air Basin Attainment Status for State Standard	Federal Primary Standard	Bay Area Air Basin Attainment Status for Federal Standard
Ozone	8 Hour	0.070 ppm	Non-Attainment	0.070 ppm	Non-Attainment
	1 Hour	0.090 ppm	Non-Attainment	---	---
Carbon Monoxide	8 Hour	9.0 ppm	Attainment	9 ppm	Attainment
	1 Hour	20 ppm	Attainment	35 ppm	Attainment
Nitrogen Dioxide	Annual Average	0.030 ppm	---	0.053 ppm	Attainment
	1 Hour	0.18 ppm	Attainment	0.100 ppm	Unclassified
Sulfur Dioxide	Annual Average	---	---	0.030 ppm	Attainment
	24 Hour	0.04 ppm	Attainment	0.14 ppm	Attainment
	1 Hour	0.25 ppm	Attainment	0.075 ppm	Attainment
Respirable Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 $\mu g/m^3$	Non-Attainment	---	---
	24 Hour	50 $\mu g/m^3$	Non-Attainment	150 $\mu g/m^3$	Unclassified
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Mean	12 $\mu g/m^3$	Non-Attainment	12.0 $\mu g/m^3$	Unclassified/Attainment
	24 Hour	---	---	35 $\mu g/m^3$	Non-Attainment
Sulfates	24 Hour	25 $\mu g/m^3$	Attainment	---	---
Lead	Calendar Quarter	---	---	1.5 $\mu g/m^3$	Attainment
	30-Day Average	1.5 $\mu g/m^3$	Attainment	---	---
	3-Month Rolling Average	---	---	0.15 $\mu g/m^3$	Unclassified
Hydrogen Sulfide	1 Hour	0.03 ppm	Unclassified	No Federal Standard	---
Vinyl Chloride	24 Hour	0.010 ppm	No information available	---	---
Visibility Reducing Particles	8 Hour	Extinction of 0.23/km; visibility of 10 miles or more	Unclassified	No Federal Standard	---

NOTES: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter; --- = data not available

SOURCE: BAAQMD, 2017b

The federal Clean Air Act amendments added requirements for states containing areas that violate the national standards to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is a living document that is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The U.S. EPA has responsibility to review all SIPs to determine if they conform to the mandates of the federal Clean Air Act amendments and will achieve air quality goals when implemented. If the U.S. EPA determines a SIP to be inadequate, it may prepare a Federal Implementation Plan (FIP) for the nonattainment area and may impose additional control measures. Failure to submit an approvable SIP or to implement the plan within mandated timeframes can result in sanctions being applied to transportation funding and stationary air pollution sources in the Bay Area Air Basin.

Regulation of TACs, termed Hazardous Air Pollutants (HAPs) under federal regulations, is achieved through federal, state, and local controls on individual sources. The 1977 federal Clean Air Act amendments required the U.S. EPA to identify National Emission Standards for HAPs to protect public health and welfare. These substances include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals.

4.2.3.2 State

CARB manages air quality, regulates mobile emissions sources, and oversees the activities of county Air Pollution Control Districts and regional Air Quality Management Districts. CARB establishes State ambient air quality standards and vehicle emissions standards. California has adopted ambient standards that are more stringent than the federal standards for the criteria air pollutants. California has air quality standards for some pollutants for which there is no corresponding national standard. Under the California Clean Air Act (which is patterned after the federal Clean Air Act), areas have been designated as attainment or nonattainment with respect to the State standards. Table 4.2-2 summarizes the Bay Area's attainment status with regard to California standards.

The Health and Safety Code defines TACs as air pollutants which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health. The State Air Toxics Program was established in 1983 under Assembly Bill (AB) 1807 (Tanner). A total of 243 substances have been designated TACs under California law; they include the 189 (federal) Hazardous Air Pollutants adopted in accordance with AB 2728. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Toxic air contaminant emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment and, if specific thresholds are violated, are required to communicate the results to the public in the form of notices and public meetings.

In August of 1998, CARB identified DPM as a TAC. CARB subsequently developed the *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles* (CARB, 2000). The document contains proposals to reduce diesel particulate emissions, with the goal of reducing emissions and associated health risks by 75 percent by 2010 and by 85 percent by 2020. The program aims to require the use of state-of-the-art catalyzed diesel particulate filters and ultra-low sulfur diesel fuel on diesel-fueled engines.

In 2005, the California Air Resources Board approved a regulatory measure to reduce emissions of toxic and criteria pollutants by limiting the idling of new heavy-duty diesel vehicles. The regulations generally limit idling of commercial motor vehicles (including buses and trucks) within 100 feet of a school or residential area for more than five consecutive minutes or periods aggregating more than five minutes in any one hour. Buses or vehicles also must turn off their engines upon stopping at a school and must not turn their engines on more than 30 seconds before beginning to depart from a school. Also, State law Senate Bill 352 was adopted in 2003 and limits locating public schools within 500 feet of a freeway or busy traffic corridor (section 17213 of the Education Code; section 21151.8 of the Public Resources Code).

4.2.3.3 Regional and Local

Air Quality Plans

Air quality plans developed to meet federal requirements are referred to as SIPs. The federal CAA and the California CAA require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the State PM_{10} standard). In April 2017, the BAAQMD adopted the *2017 Clean Air Plan* (BAAQMD, 2017c). The plan's primary goals are to protect public health and protect the climate. The plan includes a wide range of proposed control measures, which consist of actions to reduce combustion-related activities, decrease fossil fuel combustion, improve energy efficiency, and decrease emissions of potent GHGs. The *2017 Clean Air Plan* updates the *Bay Area 2010 Clean Air Plan* and complies with State air quality planning requirements as codified in the California Health and Safety Code. The Air Basin is designated non-attainment for both the 1- and 8-hour State ozone standards. In addition, emissions of ozone precursors in the Bay Area Air Basin contribute to air quality problems in neighboring air basins. Under these circumstances, State law requires the Clean Air Plan to include all feasible measures to reduce emissions of ozone precursors and to reduce the transport of ozone precursors to neighboring air basins.

The 2017 Clean Air Plan contains 85 measures to address reduction of several pollutants: ozone precursors, particulate matter, air toxics, and/or GHGs. Other measures focus on a single type of pollutant, potent GHGs such as methane and black carbon, or harmful fine particles that affect public health. These control strategies that can be grouped into the following categories:

- Stationary source measures;
- Transportation control measures;
- Energy Control Measures;
- Building Control Measures;
- Agricultural Control Measures;
- Natural and Working Lands Control Measures;
- Waste Management Control Measures;
- Water Control Measures; and
- Super GHG Control Measures

BAAQMD Rules, Regulations, and CEQA Guidelines

The BAAQMD is the regional agency responsible for rulemaking, permitting, and enforcement activities affecting stationary sources in the Bay Area. The BAAQMD does not have authority to regulate emissions from motor vehicles. Specific rules and regulations adopted by the BAAQMD limit the emissions that can be generated by various stationary sources, and identify specific pollution reduction measures that must be implemented in association with various activities. These rules regulate emissions of the six criteria air pollutants; TACs emissions sources subject to these rules are regulated through the BAAQMD's permitting process and standards of operation. Through the permitting process, including an annual permit review, the BAAQMD monitors generation of stationary emissions and uses this information in developing its air quality plans. Any sources of stationary emissions constructed as part of the Project would be subject to the BAAQMD Rules and Regulations. Both federal and state ozone plans rely heavily upon stationary source control measures set forth in the BAAQMD's Rules and Regulations.

The BAAQMD adopted updated *CEQA Air Quality Guidelines* (Guidelines), including new thresholds of significance, in June 2010, and revised them in May 2011 (BAAQMD, 2017a). The Guidelines advised lead agencies on how to evaluate potential air quality impacts, including establishing quantitative and qualitative thresholds of significance. The thresholds BAAQMD adopted were called into question by a minute order issued January 9, 2012 in *California Building Industry Association v. BAAQMD,* Alameda Superior Court Case No. RGI0548693. The minute order states that "The Court finds [BAAQMD's adoption of thresholds] is a CEQA Project," and the court made no further findings or rulings. The claims made in the case concerned the CEQA impacts of adopting the thresholds, particularly, how the thresholds would affect land use development patterns. Petitioners argued that the thresholds for health risk assessments encompassed issues not addressed by CEQA. As a result, the BAAQMD resolutions adopting and revising the significance thresholds in 2011 were set aside by a judicial writ of mandate on March 5, 2012. In May of 2012, the BAAQMD updated its CEQA Air Quality Guidelines to continue to provide direction on recommended analysis methodologies, but without recommended quantitative significance thresholds. On August 13, 2013, the First District Court of Appeal ordered the trial court to reverse the judgment and upheld the BAAQMD's CEQA thresholds (*California Building Industry Ass'n v. Bay Area Air Quality Mgmt. Dist*. [CBIA v. BAAQMD], Case No. A135335 & A136212 [Court of Appeal, First District, August 13, 2013]).

The California Supreme Court granted review of the appeal, but only to address whether or not CEQA requires an analysis of how existing environmental conditions will impact future residents or users of a proposed project, and did not review or address the adequacy of specific thresholds adopted by the BAAQMD in 2011. On December 17, 2015, the Supreme Court concluded that agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents, reversing the Court of Appeal's judgment on that issue. The case was the remanded back to the Court of Appeal on August 12, 2016 which concluded that "the challenged thresholds are not invalid on their face, but may not be used for the primary purpose envisioned by District, namely, to routinely assess the effect of existing environmental conditions on future users or occupants of a project" (*CBIA v. BAAQMD* [2016] 1 Cal.App.5th 715).

In May 2017, the BAAQMD released an updated version of its *CEQA Air Quality Guidelines* which include revisions made to the 2010 Guidelines to address the California Supreme Court's 2015 opinion in *CBIA v. BAAQMD*. The air quality impact analysis in this EIR uses the adopted thresholds and methodologies from the 2017 BAAQMD *CEQA Air Quality Guidelines* to determine the potential impacts of the Project on the environment.

Mountain View General Plan 2030 General Plan

The City has established goals and policies in the 2030 General Plan in regard to air quality. Goals and policies as outlined in the Infrastructure and Conservation Element that would apply to the proposed Project are listed as follows (City of Mountain View, 2012b):

Goal INC-20. Clean, breathable air and strongly controlled city sources of air pollution.

Policy INC 20.1: Pollution Prevention. Discourage mobile and stationary sources of air pollution.

Policy INC 20.2: Collaboration. Participate in state and regional planning efforts to improve air quality.

Policy INC 20.3: Pollution-reduction Technologies. Encourage the use of non-fossil fuels and other pollution-reduction technologies in transportation, machinery and industrial processes.

Policy INC 20.6: Air Quality Standards. Protect the public and construction workers from construction exhaust and particulate emissions.

Policy INC 20.7: Protect Sensitive Receptors. Protect the public from substantial pollutant concentrations.

Policy 20.8: Offensive Odors. Protect residents from offensive odors.

4.2.4 Air Quality Impacts

4.2.4.1 Significance Criteria

Consistent with Appendix G of the CEQA *Guidelines*, the impact of the Project on air quality would be considered significant if it would:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard;

c) Expose sensitive receptors to substantial pollutant concentrations; or

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

4.2.4.2 Approach to Analysis

Air quality analysis conducted for this impact assessment employs the guidance, emission factors, models and tools distributed by a variety of agencies including CARB, the California Air Pollution Officers Association (CAPCOA), OEHHA, and U.S. EPA. Additionally, the analysis includes methods identified in the BAAQMD Guidelines (BAAQMD, 2017a). While the air district is currently developing an update to its Guidelines, which may or may not include changes to its thresholds of significance, no draft has yet been made public and therefore this analysis applies the most recent guidance available.

In the *California Building Industry Association v. Bay Area Air Quality Management District* case decided in 2015,[1] the California Supreme Court held that CEQA does not generally require lead agencies to consider how existing environmental conditions might impact a project's users or residents, except where the project would significantly exacerbate an existing environmental condition. Accordingly, the significance criterion c) above related to exposure of sensitive receptors to substantial pollutant concentrations are valid only to the extent that the project significantly exacerbates the air quality conditions. An impact is considered significant if the project would significantly exacerbate existing or future air quality conditions.

Criteria Pollutant Emissions

As described above under Regulatory Framework, the Bay Area Air Basin experiences low concentrations of most pollutants when compared to federal or State standards and is designated as either in attainment or unclassified for most criteria pollutants, with the exception of ozone, $PM_{2.5}$, and PM_{10}, for which these pollutants are designated as non-attainment for either the State or federal standards.

By definition, regional air pollution is largely a cumulative impact in that no single project is sufficient in size to, by itself, result in nonattainment of air quality standards. Instead, a project's individual emissions are considered to contribute to the existing, cumulative air quality conditions. If a project's contribution to cumulative air quality conditions is considerable, then the project's impact on air quality would be considered significant (BAAQMD, 2017a).

Potential impacts are assessed by modeling the estimated average daily emissions generated by Project construction and Project operations using the California Emissions Estimator Model (CalEEMod) land use emissions model version 2016.3.2 and presented in Appendices B and C. Project emissions are then compared to the significance criteria in the BAAQMD Guidelines, determining whether the Project would:

- Result in total construction emissions of ROG, NOx, or $PM_{2.5}$ (exhaust) of 54 pounds per day or greater.
- Exceed a construction emission threshold for PM_{10} (exhaust) of 82 pounds per day or greater.
- Result in total operational emissions of ROG, NOx, or $PM_{2.5}$ of 10 tons per year or greater or 54 pounds per day or greater.
- Exceed an operational emission threshold for PM_{10} of 15 tons per year or greater or 82 pounds per day.
- Result in CO concentrations of 9.0 ppm (8-hour average) and 20.0 ppm (1-hour average) as estimated by roadway vehicle volumes exceeding 44,000 vehicles per hour at any intersection.

For PM_{10} and $PM_{2.5}$ that would be a component of fugitive dust generated during construction, the BAAQMD Guidelines specify compliance with Best Management Practices as the threshold.

[1] *California Building Industry Association v. Bay Area Air Quality Management District,* 62 Cal.4th 369. Opinion Filed December 17, 2015.

Health Risk Impacts of the Project

The results of the Project-level health risk analysis contained herein are based on a Health Risk Assessment (HRA) conducted to address exposure impacts to off-site receptors that would result from construction activities under the Project and presented in Appendix C to this EIR. This analysis assesses the increased cancer risk and localized $PM_{2.5}$ concentrations attributable to the proposed Project at off-site receptors. The proposed Project would be considered to have a significant health risk impact if Project construction emissions would result in exposure of persons to substantial levels of TAC resulting in (a) an incremental cancer risk level greater than 10 in one million, (b) a noncancerous risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$).

As previously discussed in Section 4.0, on December 17, 2015, the California Supreme Court issued an opinion in *CBIA v. BAAQMD* holding that CEQA is primarily concerned with the impacts of a project on the environment, and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents. Therefore, this analysis considers construction impacts to off-site receptors as described above.

Cumulative Criteria Pollutant Emissions

Regarding the assessment of cumulative impacts, a project's contribution to cumulative impacts to regional air quality from emission of criteria air pollutants would be considered cumulatively considerable and significant if the impact individually would be significant (i.e., exceeds the BAAQMD's quantitative thresholds). For a project or plan that would not result in a significant impact individually, the project or plan contribution to any cumulative impact would be considered less than significant if the project or plan is consistent with the local General Plan and the local general plan is consistent with the applicable regional air quality plan. In this case, the applicable regional air quality plan is the BAAQMD's *Bay Area 2017 Clean Air Plan*.

Cumulative Risk and Hazard Impacts

Cumulative air quality impacts of the Project from exposure to TACs or $PM_{2.5}$ are assessed by evaluating whether the Project's contribution to cancer risk or localized $PM_{2.5}$ concentrations during construction to off-site receptors would be cumulatively considerable. For increased cancer risk, a cumulatively considerable contribution would be an incremental increase of 10 in one million. Additionally, a cumulative cancer risk to off-site receptors is estimated by combining the increased risk of Project construction with those estimated for other projects proposed within 1,000 feet, as available, and highways, roadways, and stationary sources within 1,000 feet of the MEI, and comparing those risks to the 100 in one million cumulative cancer risk developed by the BAAQMD. For localized $PM_{2.5}$ concentrations, a cumulatively considerable contribution would be an incremental concentration of 0.8 ug/m^3.

As noted above, per *CBIA v. BAAQMD,* CEQA is primarily concerned with the impacts of a project on the environment, and generally does not require agencies to analyze the impact of existing conditions on a project's future users or residents. Therefore, this analysis considers cumulative construction impacts to off-site receptors as described above.

4.2.4.3 Discussion of Impacts and Mitigation Measures

Impact AIR-1: The Project could conflict with or obstruct implementation of the applicable air quality plan. (Criterion a.) (*Potentially Significant*)

The most recently adopted air quality plan in the San Francisco Bay Area Air Basin is the BAAQMD's *Bay Area 2017 Clean Air Plan* (2017 CAP; BAAQMD, 2017c). Under BAAQMD's updated 2017 methodology, a determination of consistency with the most recently adopted Clean Air Plan, must demonstrate that a project supports the primary goals of the Clean Air Plan, includes applicable control measures of the Clean Air Plan, and would not disrupt or hinder implementation of any control measures of the Clean Air Plan.

Project Support of the Primary Goals of the 2017 Clean Air Plan

The primary goals of the 2017 CAP are to: (1) Attain all State and national air quality standards; (2) Eliminate disparities among Bay Area communities in cancer health risk from toxic air contaminants; and (3) Reduce Bay Area GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. Any project that would not support these goals would not be considered consistent with the 2017 Clean Air Plan. If approval of a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered consistent with the 2017 CAP.

As indicated in the discussion below (**Impact AIR-2** and **Impact AIR-3**), the Project would not result in significant and unavoidable air quality impacts, because the Project would have a less-than-significant construction and operational impact on air quality. With respect to the second goal (reduction of population exposure to hazardous emissions), the Project would result in a less-than-significant impact with respect to exposure to TACs after implementation of feasible mitigation measures (**Impact AIR-4, Mitigation Measure AIR-1**). Likewise, as discussed in Section 4.7, *Greenhouse Gas Emissions*, the Project would have less than significant impacts with respect to greenhouse gas emissions. Thus, the proposed Project would not hinder the region from attainment of the goals outlined in the 2017 CAP.

Consistency with Control Measures Contained in the Clean Air Plan

The second question recommended in the 2017 BAAQMD Guidelines for evaluating consistency with the 2017 CAP is whether the project includes applicable control measures from the air quality plan. The 2017 CAP includes 85 control measures to reduce emissions of PM, ozone precursors, and other air pollutants from a wide variety of emission sources. Forty of these measures address stationary sources and primarily direct the BAAQMD to adopt or revise rules and regulations and other air quality programs, and are therefore, not directly applicable to implementation of a mixed use development project.

The 2017 CAP contains transportation control measures and measures related to energy, green building, waste management, water control and control of short-lived GHGs. The measures applicable to criteria air pollutants, TACs, or greenhouse gases generated under the proposed Project are identified in **Table 4.2-3**. The table identifies the control measure and existing or proposed mechanisms that the Project or surrounding local jurisdictions and transit agencies

would have in place to implement these measures. Existing mechanisms or those included in the proposed Project would be consistent with all of the relevant control measures of the 2017 CAP.

TABLE 4.2-3
PROJECT CONSISTENCY WITH APPLICABLE CONTROL MEASURES OF THE 2017 CLEAN AIR PLAN

Control Measure	Existing or Proposed Implementation Mechanism	Consistency of Proposed Project with Measure
TR1 – Clean Air Teleworking Initiative	Future residents within the Project area could be expected to take advantage of teleworking opportunities, but the extent to which teleworking would occur cannot be accurately predicted at this time.	Yes
TR2 – Trip Reduction Programs	The project would address this Measure through implementation of its Transportation Demand Management (TDM) program.	Yes, with implementation of project TDM program
TR3 – Local and Regional Bus Service	Existing public transit services in the Project area are provided by the Santa Clara Valley Transportation Authority (VTA), the Mountain View Transportation Management Association (TMA), and the City of Mountain View. VTA operates bus and light-rail transit (LRT) services in Santa Clara County, the TMA provides free MVgo shuttle service between the Mountain View Transit Center and corporate campuses in the North Bayshore and Whisman areas, and Mountain View partnering with Google provides free community shuttle service in the City.	Yes
TR4 – Local and Regional Rail Service	The project site is located within 1 mile of the Mountain View Caltrain and LRT stations at the Mountain View Transit Center, which is served by numerous connecting buses.	Yes
TR5 – Transit Efficiency and Use	There are four VTA bus routes serving the Project vicinity: Routes 32, 40, 185 and 120 with bus stops located at: N. Shoreline Boulevard and Terra Bella Avenue (100 feet from the site), N. Shoreline Boulevard and Middlefield Road (1,000 feet from the site), N. Shoreline Boulevard and La Avenida Street (1,800 feet from the site), and N. Shoreline Boulevard and Pear Avenue (0.5 miles from the site). The TMA currently provides three MVgo shuttle routes that start and end at the Mountain View Transit Center. The shuttle schedule is coordinated with Caltrain arrivals in the morning and departures in the afternoon, with the nearest shuttle stops located on N. Shoreline Avenue at Terra Bella Avenue approximately 100 feet south of the project site.	Yes
TR8 - Ridesharing	The TDM Program includes approximately five car share vehicles and parking on-site.	Yes, with implementation of project TDM program
TR9 – Bicycle and Pedestrian Access and Facilities	In the project vicinity, Class II bike lanes exist on both sides of North Shoreline Boulevard. The Class II bike lanes extend in both the northbound direction until Charleston Road and to El Camino Real in the southbound direction. The 2015 Mountain View Bicycle Transportation Plan also includes bicycle improvements along roadway segments and intersections adjacent to the Project site including a Class IV Bikeway (two-way cycle track) along Shoreline Boulevard between North Road and Montecito Avenue, and a protected intersection to be located at the intersection of Shoreline Boulevard/Terra Bella Avenue. The Project would provide approximately 334 bicycle parking spaces, with indoor spaces for residents and outdoor spaces for guests. The proposed on-site pedestrian network would connect to the public sidewalks on North Shoreline Boulevard, Terra Bella Avenue, and Linda Vista Avenue.	Yes
TR10 – Land Use Strategies	The Project would include mixed-use, higher density construction and other land use strategies that would result in trip reductions.	Yes

TABLE 4.2-3 (CONTINUED)
PROJECT CONSISTENCY WITH APPLICABLE CONTROL MEASURES OF THE 2017 CLEAN AIR PLAN

Control Measure	Existing or Proposed Implementation Mechanism	Consistency of Proposed Project with Measure
TR13 - Parking Policies	The TDM program will include unbundled parking programs as part of the overall TDM strategy.	Yes, with implementation of project TDM program
TR14 – Cars and Light Trucks	EV charging spaces will be provided on-site in proposed parking garages, per California Green Building Standards Code (CalGreen) and Mountain View Green Building Code (MVGBC) requirements.	Yes
TR-22 – Construction, Freight and Farming Equipment	Per Mitigation Measure AIR-1, Tier 3 engines at a minimum would be required for Project diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously.	Yes, with implementation of Mitigation Measure AIR-1
EN2 – Decrease Electricity Demand	The Project would seek GreenPoint Rated Gold level certification, and would comply with the CalGreen Code, MVGBC, and Title 24 building energy efficiency requirements, and would include energy saving measures such as high-efficacy lighting and solar hot water systems to preheat domestic hot water.	Yes
BL1 – Green Buildings	See above discussion for EN-2	Yes
BL2 – Decarbonize Buildings	See above discussion for EN-2. Additionally, as discussed in Section 4.15, *Utilities and Service Systems*, electricity in Mountain View is provided by the Community Choice Energy Agency, Silicon Valley Clean Energy (SVCE), which automatically enrolls customers in the Carbon Free program which includes electricity generated from renewable and carbon-free sources.	Yes
BL4 – Urban Heat Island	The MVGBC requires the Project to achieve 70 points at a minimum on the GreenPoint Rated checklist, which includes heat island effect reduction as a potential measure. Additionally, approximately 276 total trees are estimated to be on the Project site at the time of Project completion.	Yes
NW2 – Urban Tree Planting	See above discussion for BL4.	Yes
WA3 – Green Waste Diversion; and WA4 – Recycling and Waste Reduction	The Project would seek GreenPoint Rated Gold level certification, and would comply with the CalGreen Code, MVGBC, and Title 24 requirements, and would divert at least 65 percent of construction and demolition waste for the Project. Additionally, as discussed in Section 4.15, *Utilities and Service Systems*, the Project-specific Trash Management Plan designed a waste management system for the Project which would facilitate the proper recycling and disposal of waste from residential and retail uses in accordance with the City of Mountain View's waste management requirements as well as statewide waste reduction goals.	Yes
WR2 – Support Water Conservation	The Project would be required to comply with indoor water conservation measures included in the CalGreen Code and MVGBC. The Project would also be required to comply with the City's Water Conservation in Landscape Regulations that promote the use of region-appropriate plants that require minimal supplemental irrigation and establishes standards for irrigation efficiency.	Yes

SOURCE: BAAQMD, 2017c

Disruption or Hindrance of Applicable Control Measures

Examples of projects that could cause the disruption or delay of the 2017 CAP control measures are projects that would preclude the extension of a transit line or bike path, or projects that would include excessive parking beyond parking requirements. The Project would provide for extension of bike facilities to the area to provide direct access to other areas within the City. The Project also proposes pedestrian and bicycle pathways through the Project site. The Project would not provide excessive parking; it proposes 372 parking spaces for the residential units, 70 spaces fewer than 442 required by the City's Model Parking Standard. (see Section 4.14, *Transportation*). Further, as part of the Project's proposed draft TDM plan, the Project also includes special parking for car-share vehicles, as well as unbundled parking. Indoor bicycle parking would be provided in each residential building, and the Project proposes a resident-only bike share program and a bicycle repair facility on-site. These elements of Project development demonstrate that control measure disruption or delay would not occur. With elements identified as part of the Project, along with implementation of mitigation measures identified in this EIR, the Project would not adversely affect implementation of any 2017 CAP control measure.

Consequently, based on BAAQMD guidance, the Project is also considered consistent with the 2017 CAP. This would be a less-than-significant impact.

Mitigation: Mitigation Measure AIR-1, described under Impact AIR-4.

Significance After Mitigation: Less Than Significant.

Impact AIR-2: Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard. (Criterion b.) (*Less than Significant, No Mitigation Required*)

Construction

Construction of the Project would result in emissions of criteria pollutants from the use of heavy-duty construction equipment, haul truck trips, and vehicle trips generated from construction workers traveling to and from the site. In addition, fugitive dust PM_{10} emissions would result from excavation, trenching, and other earth-moving activities.

Construction-related emissions from the Project were calculated using CalEEMod version 2016.3.2, based on the anticipated construction of up to 303 housing units and a conservative estimate of the Project footprint. Two modeling scenarios were developed to address the potential sequence of Project construction: 1) Block B would be constructed, followed by Block A; and 2) Block A and Block B would be constructed simultaneously. The sequenced construction would occur from the years 2020-2023, while simultaneous construction would occur from the years 2020-2021. Construction phasing would include demolition, site preparation, grading, trenching, building construction, architectural coating, and paving. The CalEEMod model was used to develop construction assumptions that include schedule, equipment usage, and construction traffic generation, and CalEEMod default site acreages were used to conservatively estimate construction

activity and emissions, as these acreages are larger than the Project construction site. The amount of net soil import during construction was estimated at 3,240 cubic yards using California Department of Resources Recycling and Recovery (CalRecycle) asphalt demolition volume estimates, and the modeling conservatively assumed 1,000 cubic yards of export in addition to the import estimate. All Project construction model inputs and outputs are provided in Appendix B.

As shown in **Table 4.2-4**, estimated peak daily construction-related exhaust emissions would not exceed the thresholds for ROG, NOx, PM_{10} or $PM_{2.5}$. The impact of exhaust emissions would be less than significant because average daily construction emissions are estimated to be less than the thresholds for NOx, ROG, PM_{10} and $PM_{2.5}$.

TABLE 4.2-4
AVERAGE UNMITIGATED DAILY CONSTRUCTION-RELATED POLLUTANT EMISSIONS
(POUNDS PER DAY)

	ROG	NOx	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Simultaneous Construction Emissions				
Block A & B Construction Emissions (tons)	3.89	7.97	0.35	0.33
Average Daily Emissions (lbs/day)	22.88	46.88	2.06	1.94
Sequenced Construction Emissions				
Block A Construction Emissions (tons)	2.38	3.71	0.17	0.17
Block B & Office Parking Emissions (tons)	1.51	4.26	0.17	0.16
Average Daily Emissions (lbs/day)	12.50	25.70	1.10	1.00
BAAQMD Threshold for Significant Construction Impacts (lbs/day)	54	54	82	54
Potential Significant Impact?				
Simultaneous Construction	No	No	No	No
Sequenced Construction	No	No	No	No

SOURCE: Illingworth & Rodkin, Inc., 2019. (Appendix B)

Construction-related effects from fugitive dust from the proposed Project would be greatest during the demolition, site preparation, trenching, and grading phases due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions in the area of the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM_{10} emissions would vary from day to day, depending on the nature and magnitude of construction activity (amount of equipment operating), local weather conditions (such as wind speed), and characteristics such as soil moisture and silt content of the soil. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

For mitigation of fugitive dust emissions, the BAAQMD recommends implementing best management practices (BMPs), as a pragmatic and effective approach to controlling fugitive dust emissions (BAAQMD, 2017a). The BAAQMD notes that individual measures have been shown

to reduce fugitive dust by anywhere from 30 percent to more than 90 percent. Therefore, implementation of these BMPs would ensure the Project's fugitive dust emissions remained below a level of significance. These BMPs are included as City Standard Conditions of Approval, which would ensure the Project's impact would be less than significant.

> ***Standard Condition PL-116 (Basic Air Quality Construction Measures)*:** The applicant shall require all construction contractors to implement the basic construction mitigation measures recommended by BAAQMD to reduce fugitive dust emissions. Emission reduction measures will include, at a minimum, the following measures. Additional measures may be identified by BAAQMD or contractor as appropriate, such as:
>
> 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
> 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
> 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
> 4. All vehicle speeds on unpaved roads shall be limited to 15 mph.
> 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
> 6. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
> 7. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
> 8. Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Since the Project construction emissions of criteria air pollutants would not exceed the BAAQMD's thresholds for significant construction impacts, and the City's Standard Condition of Approval would reduce fugitive dust emissions, the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment, including ozone (ROG and NOx) and PM, during construction. Therefore, Project construction impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None Required.

Impact AIR-3: Project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard. (Criterion b.) (*Less than Significant, No Mitigation Required*)

Operation

Operational emissions of criteria pollutants were estimated using the CalEEMod version 2016.3.2 emissions inventory model (**Table 4.2-5**). All Project operation model inputs and outputs are provided in Appendix C.

TABLE 4.2-5
UNMITIGATED AVERAGE OPERATIONAL CRITERIA POLLUTANT EMISSIONS

Air Pollutant	Estimated Emissions (lbs/day)			
	ROG	NOx	PM_{10}	$PM_{2.5}$
Mobile Sources[a]	3.88	13.70	10.50	2.87
Area Sources[a]	11.82	0.31	0.14	0.14
Energy Sources[a]	0.08	0.66	0.05	0.05
Total	15.78	14.67	10.69	3.06
BAAQMD Threshold for Significant Operations Impacts[b]	54	54	82	54
Significant Impact?	No	No	No	No

[a] Mobile sources are motor vehicles and trucks. Area sources include landscape maintenance (equipment used for these activities such as gasoline-powered lawnmowers and blowers), maintenance application of paints and other interior and exterior surface coatings, and use of consumer products that result in emissions of ROG. Energy sources include natural gas combustion for space and water heating.
[b] Operational thresholds are from Table 2-1 of BAAQMD's 2017 CEQA Air Quality Guidelines (BAAQMD, 2017a).

SOURCE: ESA (see Appendix C).

Vehicle emissions from retail and residential traffic associated with commuting and other daily travel would be the primary source of Project operational emissions. In addition to exhaust emissions, vehicles would also generate PM_{10} and $PM_{2.5}$ from entrained road dust and tire and brake wear. Emissions would also be generated by on-site natural gas combustion, operation of landscape maintenance equipment, and maintenance application of paint and other architectural coatings.

Traffic volumes used to estimate vehicle-related emissions were derived from the traffic study prepared for the Project (as discussed and presented in Section 4.14, *Transportation*). Project operations would generate an estimated 2,597 daily vehicle trips.

As shown in Table 4.2-5, estimated operational emissions would not exceed the thresholds for ROG, NOx, PM_{10} or $PM_{2.5}$. The Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment during operation, including ozone (ROG and NOx) and PM, because Project daily operational emissions of criteria air pollutants would not exceed the BAAQMD's thresholds for significant operations impacts. Therefore, Project operational impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact AIR-4: Construction of the Project could expose sensitive receptors to substantial pollutant concentrations including toxic air contaminants (TACs) and fine particulate matter. (Criterion c.) (*Potentially Significant*)

Diesel-powered construction equipment would generate DPM, which has been identified by the State of California as a TAC. In addition, fine particulate matter (i.e., $PM_{2.5}$) emitted as exhaust could lead to elevated annual $PM_{2.5}$ concentrations that also result in community risk impacts. To assess risks associated with DPM and $PM_{2.5}$ that would be generated by construction equipment, a Health Risk Assessment (HRA; Appendix C) was prepared for the Project. The HRA addresses DPM and $PM_{2.5}$ emissions from on-site equipment and haul trucks associated with construction of the Project.

The BAAQMD considers the relevant zone of influence for an assessment of air quality health risks to be within 1,000 feet of a project site. As discussed in the Environmental Setting section, above, the closest sensitive receptors to the Project site is a single-family residence about 200 feet southeast of the Project site along Linda Vista Avenue. Other sensitive receptors include residences in the townhome developments approximately 700 feet south of the Project site. These sensitive receptors, which are within 1,000 feet of the Project site, were included in the dispersion modeling and HRA. No schools or daycare centers are located within 1,000 feet of the Project site.

Health Impacts on Existing Residences

As stated in the Approach to Analysis, based on BAAQMD-developed thresholds, the Project would be considered to have a significant health risk impact if Project emissions would result in exposure of persons to substantial levels of TACs resulting in (a) an incremental cancer risk level greater than 10 in one million, (b) a noncancerous risk (chronic or acute) hazard index greater than 1.0, or (c) an increase of annual average $PM_{2.5}$ of greater than 0.3 micrograms per cubic meter ($\mu g/m^3$).

Construction emissions of particulate matter predicted using CalEEMod (see **Table 4.2-6** below) were used with dispersion modeling to predict exposures at sensitive receptors within 1,000 feet of the project site. The emissions presented in Table 4.2-6 include on- and near-site traffic emissions. A construction travel distance of 1 mile was applied to all construction travel in CalEEMod to represent these local traffic emissions. Since truck haul routes are not known but likely to travel away from sensitive receptors south of the site (i.e., along U.S. 101 or Shoreline Boulevard north of U.S. 101), the emissions were assigned to the Project site.

Increased Cancer Risk Impacts

Cancer Risk methodology recommended by OEHHA and BAAQMD were used to compute cancer risk associated with these exposures. For cancer risk assessments, children are the most sensitive receptors, since they are more susceptible to cancer causing TACs. Residential locations are assumed to include third trimester, infant, and small children exposure. The cancer risk methodology is described in Appendix B.

TABLE 4.2-6
LOCALIZED PROJECT CONSTRUCTION EMISSIONS OF DPM AND $PM_{2.5}$

	Exhaust PM_{10} (Considered DPM, tons)	Total $PM_{2.5}$ (tons)
Block A Construction Emissions – Year 1	0.1006	0.1810
Block A Construction Emissions – Year 2	0.0705	0.0695
Block B and Office Parking Emissions – Year 1	0.1006	0.1821
Block B and Office Parking Emissions – Year 2	0.0705	0.0687
Total Block A and B Construction Emissions	**0.3422**	**0.1808**

SOURCE: Illingworth and Rodkin, Inc., 2019 (Appendix B)

Table 4.2-7 below presents a summary of the results of the HRA analysis in terms of predicted impacts to existing receptors from unmitigated Project construction activities. As discussed in Impact AIR-2, the Project was modeled using two scenarios, simultaneous and sequenced construction of Blocks A and B. As shown in Table 4.2-7, the maximum cancer risk from unmitigated proposed Project construction emissions for a residential-infant child receptor would be 45.7 or 53.5 per million.[2] The maximum concentrations would occur at a residential receptor (also known as the maximum exposed individual or MEI) located approximately 200 feet southeast of the Project site on Linda Vista Avenue. Thus, the cancer risk due to construction activities and Project operations are potentially above the BAAQMD threshold of 10 per million and would be potentially significant. Implementation of **Mitigation Measure AIR-1**, Exhaust Emission Reduction Measures, as presented below, would address this impact.

TABLE 4.2-7
ESTIMATED HEALTH IMPACTS FOR EXISTING RECEPTORS WITHOUT MITIGATION

	Increased Cancer Risk (per million)	Hazard Impact (acute/chronic)	Exhaust $PM_{2.5}$ ($\mu g//m^3$)
Unmitigated Sequenced Project Construction	**45.7**	0.03	0.30
Unmitigated Simultaneous Project Construction	**53.5**	0.06	**0.48**
BAAQMD Construction Threshold	10	1.0	0.3
Potential Significant Impact?	**Yes**	No	**Yes**

NOTE: **Bolded** figures indicate values exceed significance threshold.

SOURCE: Illingworth and Rodkin, Inc., 2019 (Appendix B)

To reduce DPM emissions, Mitigation Measure AIR-1 would require the Project applicant to develop a plan demonstrating that the off-road equipment used on-site to construct the Project would achieve a fleet-wide average 77- to 81-percent reduction of PM_{10} exhaust. **Table 4.2-8** below presents a summary of the results of the HRA analysis from Project construction activities including the identified mitigation. Mitigated results are based on the identified feasible construction mitigation plan that would reduce construction emissions by 90 percent

2 This theoretical individual would be born before construction year one and subsequently be exposed to the full construction period. Individuals born after construction year one would be exposed to a shorter period of construction activity and thus, be exposed to lower risk and health impacts.

(Appendix B). As shown in Table 4.2-8, with the implementation of Mitigation Measure AIR-1, the maximum cancer risk from proposed Project construction for a residential-infant child receptor would be 4.6 or 5.4 per million. Thus, identified feasible mitigation would reduce the cancer risk from construction activities to below the BAAQMD threshold of 10 per million and result in impacts that would be less than significant with mitigation.

TABLE 4.2-8
ESTIMATED HEALTH IMPACTS FOR EXISTING RECEPTORS WITH MITIGATION

	Increased Cancer Risk (per million)	Hazard Impact (acute/chronic)	Exhaust $PM_{2.5}$ (µg//m^3)
Mitigated Sequenced Project Construction	4.6	<0.01	0.05
Mitigated Simultaneous Project Construction	5.4	0.01	0.08
BAAQMD Construction Threshold	10	1.0	0.3
Potential Significant Impact?	No	No	No

NOTE: **Bolded** figures indicate values exceed significance threshold.

SOURCE: Illingworth and Rodkin, Inc., 2019 (Appendix B)

Non-Cancer Health Hazard Associated with Existing Receptors

Both acute (short-term) and chronic (long-term) adverse health impacts unrelated to cancer are measured against a hazard index (HI), which is defined as the ratio of the predicted incremental DPM exposure concentration from the Project to a reference exposure level (REL) that could cause adverse health effects. The impact is considered to be significant if the overall HI for the highest-impacted organ system is greater than 1.0.

As shown in Table 4.2-7 above, the unmitigated chronic HI related to Project activities would be 0.03 or 0.06, below the Project-level threshold of 1.0. The impact of the proposed Project would therefore be less than significant with regard to chronic exposure to DPM.

$PM_{2.5}$ Concentration

The Project's unmitigated $PM_{2.5}$ concentration at the construction MEI of 0.30 or 0.48 shown in Table 4.2-7 exceeds the BAAQMD single-source threshold of 0.3 µg/m^3 for $PM_{2.5}$ concentrations and would be potentially significant. Implementation of Mitigation Measure AIR-1, Exhaust Emission Reduction Measures, would address this impact. As shown in Table 4.2-8, with the implementation of Mitigation Measure AIR-1, the Project's mitigated annual $PM_{2.5}$ concentration at the MEI from construction activities would be 0.05 or 0.08 µg/m^3. Thus, the annual $PM_{2.5}$ concentration due to Project construction would be below the BAAQMD threshold of 0.3 µg/m^3 and would be considered less than significant with mitigation.

Conclusion

With the implementation of Mitigation Measure AIR-1, the maximum increased lifetime residential cancer risk and $PM_{2.5}$ exposure from construction, assuming infant exposure, would

not exceed BAAQMD thresholds. As a result, impacts would be reduced to less-than-significant with respect to community risk caused by construction activities in either construction scenario.

Mitigation Measure AIR-1: Exhaust Emissions Reduction Measures. The Project applicant shall develop a plan demonstrating that the off-road equipment used on-site to construct the Project would achieve a fleet-wide average 77- to 81-percent reduction of DPM, considered as PM_{10} exhaust. One feasible plan to achieve this reduction would include the following:

1. All diesel-powered off-road equipment, larger than 25 horsepower, operating on the site for more than two days continuously shall, at a minimum, meet U.S. EPA particulate matter emissions standards for Tier 3 engines and this equipment shall include CARB-certified Level 3 Diesel Particulate Filters or equivalent. Equipment that meets U.S. EPA Tier 4 standards for particulate matter emissions or use of equipment that is electrically powered or uses non-diesel fuels would also meet this requirement;
2. Use electric-powered building cranes;
3. Use electric-powered portable equipment, which shall include air compressors and welders; and
4. Minimize diesel generator use by providing line power to the construction sites prior to building construction.

Note that the construction contractor could use other measures to minimize construction period DPM emission to reduce the estimated cancer risk below the thresholds. The use of equipment that includes Tier 2 engines and CARB-certified Level 3 Diesel Particulate Filters or alternatively-fueled equipment (i.e., non-diesel) could meet this requirement. Alternatively, a combination of measures may be implemented, provided that these measures are approved by the City and demonstrated to reduce community risk impacts to below performance standards of an increased cancer risk of 10 in one million and a localized $PM_{2.5}$ concentration of 0.3 $\mu g/m^3$.

In the event that conditions near the site have changed prior to construction, the construction approach or timeframe changes, a new Health Risk Assessment could be prepared to reevaluate this impact and refine the mitigation requirements. Any updated analysis would need to be reviewed and approved by the City prior to construction and meet the above stated performance standards.

Significance after Mitigation: Less Than Significant.

Impact AIR-5: The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. (Criterion d.) ***(Less than Significant, No Mitigation Required)***

Typical odor sources of concern include wastewater treatment plants, sanitary landfills, transfer stations, composting facilities, petroleum refineries, asphalt batch plants, chemical manufacturing facilities, fiberglass manufacturing facilities, auto body shops, rendering plants, and coffee roasting facilities. None of these sources are proposed as part of the Project. The Project would not

otherwise involve the development of the types of land uses typically associated with odor issues, such as landfills or composting facilities, and thereby not create a new source of odors. During construction, diesel exhaust from construction equipment would generate some odors. However, construction-related odors would be temporary and would not persist upon Project completion. Therefore, odor impacts from operation and construction would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

Geographic Context

The cumulative geographic context for cumulative air quality impacts is the regional Bay Area Air Basin, which is considered a nonattainment area for both State and federal ambient air quality standards for ozone and particulate matter. Cumulative air quality impacts are evaluated based on 1) consistency of the Project with local and regional air quality plans (i.e., the 2030 General Plan and the 2017 Clean Air Plan), and 2) a quantification of Project-related air quality impacts. More specifically, the cumulative geographic context for cumulative air quality impacts consists of the Project site in addition to the surrounding areas including the Whisman/Moffett Planning Area and other areas of the City.

This analysis considers cumulative development (past, present, existing, approved, pending, and reasonably foreseeable future projects, as described in Section 4.0, *Environmental Analysis*), in combination with the Project, to determine if their effects would combine to result in cumulative air quality impacts.

Impact C-AIR-1: The Project, in combination with past, present, and reasonably foreseeable future development of cumulative projects would not contribute to cumulative regional air quality impacts. (Criterion c.) (*Less than Significant, No Mitigation Required*)

Criteria Pollutants

Regional air quality impacts are by their nature cumulative impacts. Emissions from past, present, and future projects contribute to adverse regional air quality impacts on a cumulative basis. According to the BAAQMD, in the case of criteria pollutants, no single project would be sufficient in size, by itself, to result in emissions that are considered significant (BAAQMD, 2017a). Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. As such, significance thresholds for regional air quality impacts are designed to establish cumulatively considerable contributions. Therefore, if a project exceeds the identified significance thresholds for criteria pollutants, its emissions would be cumulatively considerable and would result in significant adverse impacts to the region's existing air quality conditions. Conversely, if a project does not exceed the identified significance thresholds for criteria pollutants, its emissions would not be cumulatively considerable.

As described above under Impact AIR-2 and Impact AIR-3, emissions of oxides of ROG, NOx, PM_{10} and $PM_{2.5}$ due to the construction and operation of the proposed Project would be below BAAQMD CEQA thresholds of significance, with compliance with City Standard Conditions of Approval. Consequently, although the region is in non-attainment for pollutants including ozone, PM_{10} and $PM_{2.5}$, because the Project would not exceed the applicable CEQA thresholds with respect to criteria pollutants, according to the BAAQMD, the Project would not make a considerable contribution to cumulative air quality impacts with the implementation of mitigation, and the cumulative impact of the Project would be less than significant.

Consistency with the Clean Air Plan

As described above under Impact AIR-1, if approval of a project would not result in significant and unavoidable air quality impacts, after the application of all feasible mitigation, the project may be considered consistent with the 2017 CAP. As discussed above, emissions of oxides of criteria pollutants due to the construction and operation of the proposed Project would be below BAAQMD CEQA thresholds of significance. Additionally, existing mechanisms or those included in the Project would be consistent with all of the relevant control measures of the 2017 CAP. Therefore, the Project would not result in a cumulative impact in relation to consistency with the 2017 CAP.

Significance: Less Than Significant.

Mitigation: None required.

Impact C-AIR-2: The Project, in combination with past, present, and reasonably foreseeable future development of cumulative projects could contribute to cumulative health risk impacts on sensitive receptors. (Criterion c.) (*Potentially Significant*)

Cumulative Health Risk

Table 4.0-1 identifies cumulative projects and plans within the City. The BAAQMD considers the relevant zone of influence for an assessment of air quality health risks to be within 1,000 feet of a project site. Of the cumulative projects and plans identified in Table 4.0-1, two – 1185 Terra Bella Avenue and 1075 Terra Bella Avenue – would be located within 1,000 feet of the Project site. The Project could potentially be constructed at the same time as several of the projects in the cumulative scenario; thus, there is the potential for cumulative construction air quality impacts. The cumulative projects would, however, have differing schedules for active ground-disturbing construction, which lessens the potential for cumulative impacts because construction-related air-quality impacts are generally localized. The Project would implement BAAQMD Basic Construction Mitigation Measures per the City's Standard Conditions of Approval and cumulative projects in the vicinity would also be required to implement similar measures to reduce air quality impacts. As a result, the Project, along with other cumulative projects, would not result in a significant short-term cumulative construction air quality impact.

According to the BAAQMD Guidelines, a project would have a cumulative significant impact if the aggregate total of all past, present, and foreseeable future sources within a 1,000-foot radius (or beyond where appropriate) from the fence line of a source, or from the location of a receptor, plus the contribution from the project were to exceed 100 in one million for cancer risk, a chronic hazard index greater than 10, or 0.8 $\mu g/m^3$ annual average $PM_{2.5}$. The MEI modeled for the Project is the residence located approximately 200 feet southeast of the Project site on Linda Vista Avenue, which is proposed for demolition by the cumulative project located at 1075 Terra Bella Avenue. The construction schedule for this project is currently unknown; thus, the residence has the potential to be occupied during Project construction. Therefore, cumulative risk from the Project that considers this receptor would be considered very conservative if the receptor was removed prior to Project construction.

U.S. 101 is a high volume roadway located within 1,000 feet of the Project site and the MEI thus, is included in the consideration of cumulative health impacts. The BAAQMD Guidelines also require the inclusion of mobile emissions from surface streets within 1,000 feet of the proposed Project site with annual average daily traffic of 10,000 or greater. According to the City's General Plan, N Shoreline Boulevard and E Middlefield Road meet this criterion (City of Mountain View, 2012a). As discussed earlier in this section, stationary sources of TACs include: two gas stations and a microwave technology manufacturer. Cumulative risk calculation details are provided in Appendix C.

The cumulative impacts of TAC and fine particulate matter emissions from the construction of the Project, traffic on U.S. 101, traffic on area roads, and stationary sources on the construction MEI are summarized in **Table 4.2-9**.

As shown in Table 4.2-9, with the implementation of **Mitigation Measure AIR-1**, the maximum cancer risk, health hazard index, and $PM_{2.5}$ concentrations from Project construction would be below the BAAQMD thresholds for cumulative impacts. Consequently, the Project would be expected to have a less-than-significant cumulative impact with regard to exposing sensitive receptors to increased health risk from construction activities.

Overall, the Project, as mitigated, combined with other past, present, or reasonably foreseeable future projects, would not result in a cumulative impact to which the proposed Project would have a cumulatively considerably contribution.

Mitigation: Mitigation Measure AIR-1.

Significance after Mitigation: Less Than Significant.

TABLE 4.2-9
ESTIMATED CUMULATIVE HEALTH IMPACTS FOR EXISTING RECEPTORS

	Increased Cancer Risk (per million)	Hazard Impact (acute/chronic)	Exhaust $PM_{2.5}$ ($\mu g//m^3$)
Mitigated Project Construction[a]	5.4	0.01	0.08
Highways and Major Roadways			
U.S. 101	20.91	0.5	0.171
N Shoreline Boulevard	1.93	0	0.044
E Middlefield Road	1.12	0	0.020
Stationary Sources			
Shoreline Shell (Facility #112348)	0.4	<0.01	0
Chevron (Facility #103690)	0.5	<0.01	0
Teledyne Microwave (Facility #1127)	31.6	<0.01	0
Total	**61.86**	**0.51**	**0.32**
BAAQMD Cumulative Threshold	100	10	0.8
Potential Significant Impact?	No	No	No

NOTES:
[a] The simultaneous Project construction scenario shown in Table 4.2-8 was used to demonstrate the most conservative construction scenario.

SOURCE: Illingworth and Rodkin, Inc., 2019 (Appendix B) and ESA, 2019 (Appendix C)

4.2.5 Summary of Air Quality Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact AIR-1: The Project could conflict with or obstruct implementation of the applicable air quality plan.	Potentially Significant	Mitigation Measure AIR-1: Exhaust Emissions Reduction Measures	Less than Significant
Impact AIR-2: Project construction would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard.	Less than Significant	None required	-
Impact AIR-3: Project operation would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or State ambient air quality standard.	Less than Significant	None required	-
Impact AIR-4: Construction of the Project could expose sensitive receptors to substantial pollutant concentrations including toxic air contaminants (TACs) and fine particulate matter.	Potentially Significant	Mitigation Measure AIR-1: Exhaust Emissions Reduction Measures	Less than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact AIR-5: The Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.	Less than Significant	None required	-
Impact C-AIR-1: The Project, in combination with past, present, and reasonably foreseeable future development of cumulative projects would not contribute to cumulative regional air quality impacts.	Less than Significant	None required	-
Impact C-AIR-2: The Project, in combination with past, present, and reasonably foreseeable future development of cumulative projects could contribute to cumulative health risk impacts on sensitive receptors.	Potentially Significant	Mitigation Measure AIR-1: Exhaust Emissions Reduction Measures	Less than Significant

4.2.6 References – Air Quality

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4.3 Biological Resources

4.3.1 Introduction

This section assesses the potential for the Project to result in significant adverse environmental impacts to terrestrial biological resources. Most if not all direct and indirect Project effects are likely to be isolated within the Project site, especially within the footprint of development.

For the purposes of this EIR, terrestrial resources include terrestrial habitats, including non-tidal wetlands, and terrestrial species including waterfowl and seabirds, which require terrestrial habitat for reproduction. Habitat quality and species distribution were also considered in evaluating the likelihood of special-status species occurrence in the Study Area, defined as the 7.5-minute United States Geological Survey (USGS) topographic quadrangles that occur within or adjacent to the Project site. The San Francisco Bay Estuary is located more than 2 miles north of the Study Area, and no impacts to this sensitive community would result from the Project due to distance and physical barriers presented by existing development; therefore, impacts to shoreline and aquatic communities are not discussed in this section.

This section refers to information included in the *International Society of Arboriculture (ISA) Certified Arborist's Report with Tree Inventory* prepared by Ray Morneau, ISA Certified Arborist, in July 2018, which is presented as an appendix to this EIR (**Appendix D**).

4.3.2 Environmental Setting

Existing Project site characteristics, such as habitat types and plant and animal species present or potentially present, are described based on site-specific information, relevant published information, technical articles, and agency reports as indicated in source citations. In addition, the results of a previous biological reconnaissance survey conducted by Environmental Science Associates (ESA) in December, 2014 are incorporated into the discussion below.

The primary sources of information referenced in this section are:

- California Department of Fish and Wildlife (CDFW) November 2018 "Special Animals" list (CDFW, 2018b);
- CDFW California Natural Diversity Database (CNDDB) (Mountain View quadrangle as well as surrounding eight quadrangles; CDFW, 2019);
- California Native Plant Society (CNPS) online database (CNPS, 2019); and
- U.S. Fish and Wildlife Service Endangered Species List Generator (USFWS, 2019).

4.3.2.1 Regional Setting

The City of Mountain View is located in the Southwestern portion of the San Francisco Bay Area-Delta Bioregion, as defined by the State of California Department of Fish and Wildlife's

Natural Community Conservation Program.[1] This bioregion consists of a variety of natural communities, including shoreline areas that range from the open waters of the San Francisco Bay and Delta to salt and brackish marshes, as well as upland habitats that include grassland, chaparral, and oak woodlands. The area has a Mediterranean climate with dry, hot summers and cool, wet winters. The high diversity of vegetation and wildlife found in the region is a result of soil, topographic, and microclimate variations that combine to promote relatively high levels of endemism.[2] This, in combination with a long history of uses that have altered the natural environment and the increasingly rapid pace of development, has resulted in some flora and fauna becoming threatened or endangered.

4.3.2.2 Vegetation Communities and Habitat Types

Natural communities are assemblages of plant species that occur together in the same area and are defined by species composition and relative abundance. The natural communities classification presented herein is based on field observations and CDFW's standard "Preliminary Descriptions of the Terrestrial Natural Communities of California" (Holland, 1986). Plant communities generally correlate with wildlife habitat types. No rare natural communities identified in the nine quadrangles occur within or adjacent to the Study Area, most likely due to the historic high level of human disturbance in this area.

The Project site was heavily disturbed during recent redevelopment from 2015 to 2017 involving conversion from commercial and light-industrial uses to an office development. The Project site is currently developed with an office building, surface parking lots, landscaping, and basketball and volleyball courts. Surrounding properties are also developed and include predominantly industrial and office uses with buildings and paved surfaces, similar to the Project site. Vegetation on the Project site consists of ornamental trees and shrubs. Approximately 341 trees are currently associated with the Project site, either as site trees, adjacent off-site street trees in close proximity, or overhanging neighbors' trees, as described in the *ISA Certified Arborist's Report with Tree Inventory* (Appendix D). Frequent species observed on-site include Chinese elm (*Ulmus parvifolia*), London planetree (*Platanus acerifolia*), Brisbane box (*Lophostemon confertus*), xylosma (*Xylosma congestum*), sweetgum (*Liquidambar styraciflua*), Carolina poplar (*Populus x canadensis*), southern live oak (*Quercus virginiana*), and fern pine (*Podocarpus gracilior*). A dozen coast redwood (*Sequoia sempervirens*) trees were also observed on-site, located on the parcel at the northern end of the Project site, flanking the southbound on-ramp to U.S. Highway 101 (U.S. 101). Of the 341 trees, 32 meet the City's criteria for Heritage Trees, as shown in **Figure 4.3-1**, **Tree Disposition Plan**. The trees on or adjacent to the Project site could provide nesting substrate for numerous bird species. No wetlands, streams, or other aquatic features are present in the Project site.

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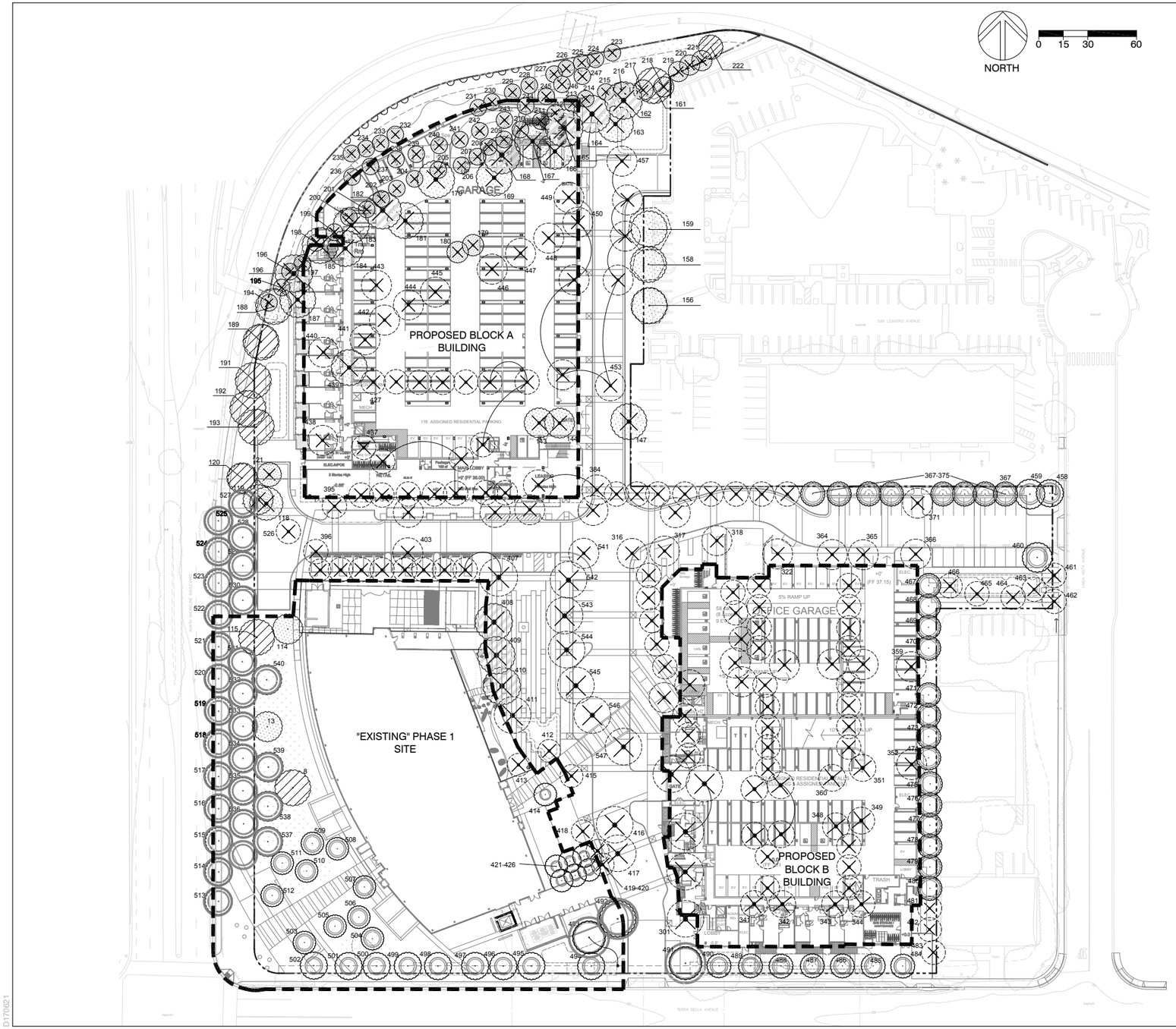
1 A bioregion is an area defined by a combination of ecological, geographic, and social criteria and consists of a system of related interconnected ecosystems. The Bay-Delta bioregion is considered the immediate watershed of the Bay Area and the Delta, not including the major rivers that flow into the Delta. It is bounded on the north by the northern edge of Sonoma and Napa Counties and the Delta and extends east to the edge of the valley floor; on the south, it is bounded by the southern edge of San Joaquin County, the eastern edge of the Diablo Range, and the southern edge of Santa Clara and San Mateo Counties.

2 *Endemism* refers to the degree to which organisms or taxa are restricted to a geographical region or locality and thus are individually characterized as endemic to that area.



TREE DISPOSITION LEGEND

KEY	DESCRIPTION	QUANTITY
TREE PROTECTION FENCING	EXISTING TREE TO REMAIN	6
	PHASE 1 TREES TO REMAIN* *Dependent upon condition of tree at construction time	88
	PHASE 1 TREES TO TRANSPLANT	1
	EXISTING HERITAGE TREE TREE TO REMAIN	9
	HERITAGE TREES TO BE REMOVED	23
	PHASE 1 TREES TO BE REMOVED	157
	EXISTING TREE TO BE REMOVED	58
	NEW TREES TO BE PLANTED (SITE & PODIUM)	178
	TOTAL TREES ESTIMATED TO BE ON SITE AT TIME OF PROJECT COMPLETION	276

Note: See Arborist Report for Existing Tree Numbers

D170621

SOURCE: Studio T Square, 2019

Residences @ Shoreline Gateway Project

Figure 4.3-1
Tree Disposition Plan

ESA

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A previous biological reconnaissance survey conducted by Environmental Science Associates (ESA) on December 10, 2014 identified several birds foraging in project site vegetation and perching in trees throughout the site during the reconnaissance visit. These species are common to urban environments and included native house finch (*Haemorhous mexicanus*), American crow (*Corvus brachyrhynchos*), Anna's hummingbird (*Calypte anna*), American robin (*Turdus migratorius*), white-crowned sparrow (*Zonotrichia leucophrys*), yellow-rumped warbler (*Setophaga coronata*), and Bewick's wren (*Thryomanes bewickii*). Birds commonly found in similar areas include native species mentioned above in addition to lesser goldfinch (*Spinus psaltria*), and Brewer's blackbird (*Euphagus cyanocephalus*), as well as non-native species such as house sparrow (*Passer domesticus*) and European starling (*Sturnus vulgaris*). (City of Mountain View, 2015).

4.3.2.3 Special-Status Species

A number of species known to occur in the region are protected pursuant to federal and State endangered species laws, or have been designated species of special concern by the CDFW. In addition, Section 15380(b) of the CEQA *Guidelines* provides a definition of rare, endangered, or threatened species that are not included in any listing, but whose "survival and reproduction in the wild are in immediate jeopardy" (endangered) or which are "in such small numbers throughout all or a significant portion of its range that it may become endangered if its environment worsens" or "is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered 'threatened' as that term is used in the federal Endangered Species Act."[3] Taken as a whole, all of these species are described as "special-status" for the purposes of the EIR analysis.

For the purpose of this evaluation, special-status species include:

1. Species listed or proposed or are candidate species for listing as threatened or endangered by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act (50 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 the federal Endangered Species Act (61 FR 40, February 28, 1996);
3. Species listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (14 Cal. Code Regs. 670.5);
4. Species formerly designated by the USFWS as species of concern or species designated by the CDFW as species of special concern;[4]

[3] For example, vascular plants listed as rare or endangered or as List 1 or 2 by CRPR are considered to meet Section 15380(b).

[4] A California species of special concern is one that: has been extirpated from the State; meets the State definition of threatened or endangered but has not been formally listed; is undergoing or has experienced serious population declines or range restrictions that put it at risk of becoming threatened or endangered; and/or has naturally small populations susceptible to high risk from any factor that could lead to declines that would qualify it for threatened or endangered status.

5. Species designated by the State as "special animals;"[5]
6. Species designated by the State as "fully protected" (there are 37 species designated by the State as fully protected, most of which are also listed as either endangered or threatened);[6]
7. Raptors (birds of prey), which are specifically protected by California Fish and Game Code Section 3503.5, thus prohibiting the take, possession, or killing of raptors and owls, their nests, and their eggs;
8. Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code, Section 1900 et seq.);
9. Species that meet the definitions of rare and endangered under CEQA. CEQA *Guidelines* Section 15380 provides that a plant or animal species may be treated as rare, threatened, or endangered even if not on one of the official lists (CEQA *Guidelines*, Section 15380); and,
10. Plants considered by the CNPS to be "rare, threatened or endangered in California" under the California Rare Plant Ranking system which include Rank 1A, 1B, 2A, and 2B as well as Rank 3 and 4 plant species.[7]

A list of special-status species with the potential to occur within or in the vicinity of the Study Area was compiled based on a nine-quad search of the CNDDB and CNPS Rare Plant Inventory (CNPS, 2019); a search of the Project site location from the USFWS endangered species database (USFWS, 2019); and biological literature of the region for the following 7.5-minute USGS topographic quadrangles: Milpitas, San Jose West, Mountain View, Palo Alto, Mindego Hill, Cupertino, Niles, Redwood Point, and Newark (CDFW, 2019).

From the full list of species, each was then individually assessed based on habitat requirements (such as elevation) and distribution relative to vegetation communities that occur within and around the Study Area. **Appendix E** presents and describes special-status species, their status and habitat requirements, and plant blooming periods, and considers the potential for each species to occur within the Project site and vicinity. Based on a review of the biological literature of the region, information presented in previously prepared environmental documentation, and an evaluation of the habitat conditions of the Project site and vicinity, a species was designated as "absent" if: (1) the species' specific habitat requirements (e.g., serpentine grasslands, as opposed to grasslands occurring on other soils) are not present, or (2) the species is presumed, based on the best scientific information available, to be extirpated from the Project site or region. A species was designated as having a "low potential" for occurrence if: (1) its known current distribution or range is outside of the Project site and vicinity or (2) only limited or marginally suitable habitat is present within the Project site and vicinity. A species was designated as having a "moderate potential" for occurrence if: (1) there is low to moderate quality habitat present within the Project site or immediately adjacent areas or (2) the Project site is within the known range of the species,

5 Species listed on the current CDFW "special animals" list (CDFW, 2017b)
6 The "fully protected" designation can be found in the Fish and Game Code.
7 Rank 3 plants may be analyzed under CEQA *Guidelines* Section 15380 if sufficient information is available to assess potential impacts to such plants. Factors such as regional rarity vs. Statewide rarity should be considered in determining whether cumulative impacts to a Rank 4 plant are significant even if individual project impacts are not. CRPR Rank 3 and 4 plants may be considered regionally significant if, e.g., the occurrence is located at the periphery of the species' range, or exhibits unusual morphology, or occurs in an unusual habitat/substrate. For these reasons, CRPR Rank 3 and 4 plants should be included in the special-status species analysis. Rank 3 and 4 plants are also included in the CNDDB Special Vascular Plants, Bryophytes, and Lichens List (CDFW, 2017c).

even though the species was not observed during biological surveys. A species was designated as having a "high potential" for occurrence if: (1) moderate to high quality habitat is present within the Project site, and (2) the Project site is within the known range of the species. Only species with a moderate or high potential for occurrence are discussed further in this section. Several of these species which require specialized habitat not found within the Project site, including all special-status fish and branchiopod species, were eliminated from further discussion.

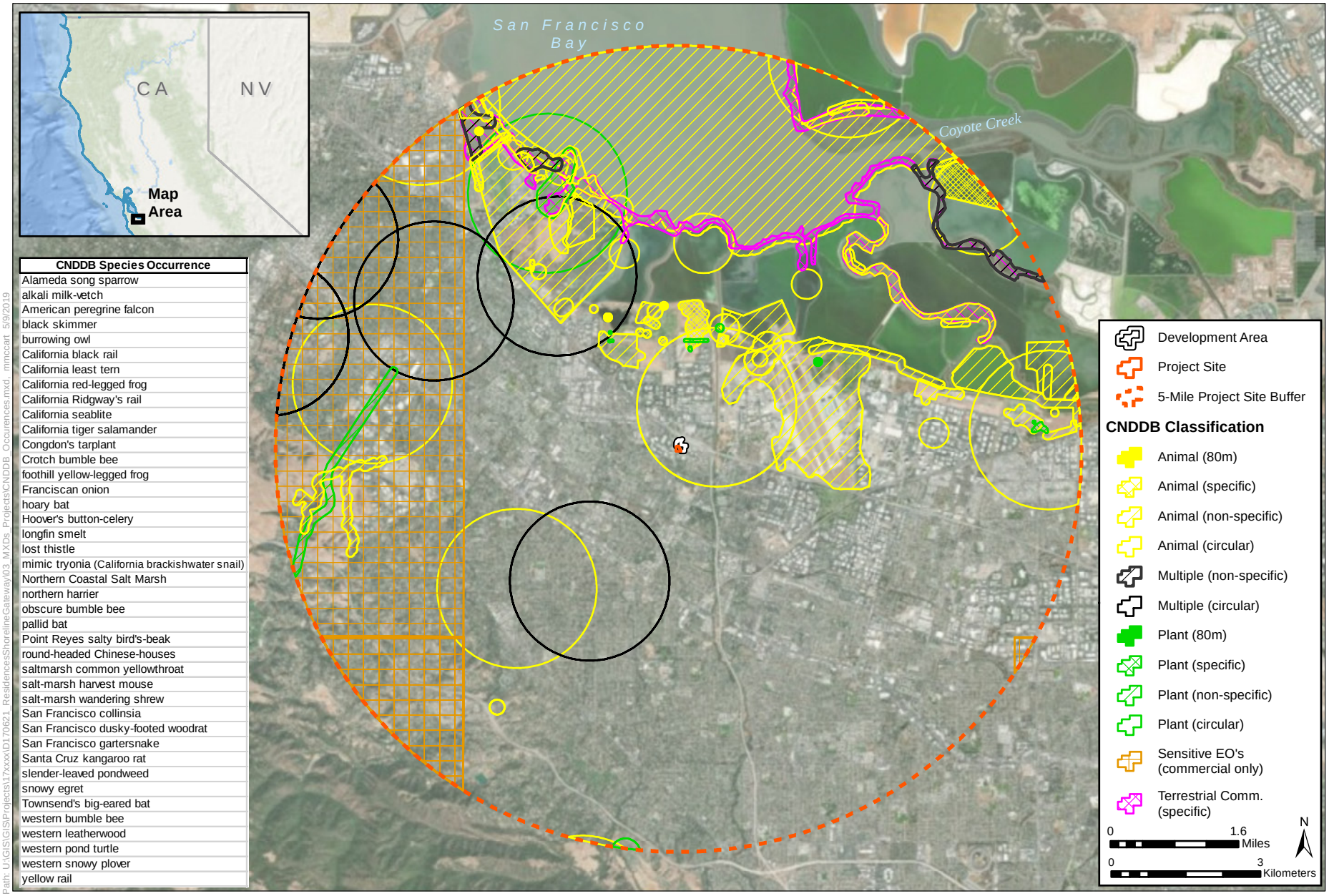
See **Figure 4.3-2** for a map of CNDDB special-status species occurrences that have been recorded within 5 miles of the Study Area. In addition to common migratory birds and raptors that are protected by the Migratory Bird Treaty Act (MBTA) and Section 3503.5 of the California Fish and Game Code (including red-shouldered hawk [*Buteo jamaicencis]* and red-tailed hawk [*Buteo lineatus*]), the only bird species presumed to have a moderate potential to occur within or near the Study Area is Cooper's hawk (*Accipiter cooperi*), which is a CDFW Watch List species. Bat species, including pallid bat (*Antrozous pallidus*), Townsend's big-eared bat (*Corynorhinus townsendii*), hoary bat (*Lasiurus cinereus*), and yuma myotis (*Myotis yumanensis*), also have a moderate potential to occur within or near the Study Area. Pallid bat and Townsend's big-eared bat are California Species of Special Concern, and hoary bat and Yuma myotis are California Special Animals. All other special-status species are unlikely to occur within the Study Area due to lack of suitable habitat and the highly disturbed nature of the Study Area (Appendix E). Additionally, no special-status species were observed during the previous biological resources reconnaissance survey (City of Mountain View, 2015).

Special-Status Plants

All of the special-status plant species listed in Appendix E are considered to have a low potential to occur in the Study Area due to the absence of suitable habitat, and were eliminated from further evaluation. Within the Study Area, the Project site is isolated, previously disturbed by development, and does not support intact natural communities. Furthermore, no special-status plant species were observed during the previous biological resources reconnaissance survey, although the survey did not constitute a detailed botanical inventory of the Project site (City of Mountain View, 2015).

Special-Status Animals

Of the special-status animals listed in Appendix E, only species known to be present within the Project site or classified as having a moderate potential for occurrence in the Project site or vicinity were considered in the impact analysis and described in further detail, below. Species for which generally suitable habitat occurs but which were determined to have low potential to occur within the Project site and vicinity are also listed in Appendix E. This appendix also provides the rationale for each "potential-to-occur" determination.



Source: DigitalGlobe, 2016; CDFW, 2017; ESA, 2019

Residences @ Shoreline Gateway Project

Figure 4.3-2

CNDDB Occurrences within 5 Miles of the Project Study Area

ESA

Birds

Cooper's hawk (*Accipiter cooperi*). Cooper's hawks range over most of North America and may be seen throughout California, most commonly as a winter migrant. Nesting pairs have declined throughout the lower-elevation, more populated parts of the State. Cooper's hawk generally forage in open woodlands and wooded margins and nest in tall trees, often in riparian areas, and could frequent the mature trees on the Project site. Cooper's hawks are on the CDFW Watch List and are protected under the MBTA and Section 3503.5 of the California Fish and Game Code.

Red-tailed hawk (*Buteo jamaicencis)*. Red-tailed hawks are commonly found in woodlands and open country with scattered trees. These large hawks feed primarily on small mammals, but will also prey on other small vertebrates, such as snakes and lizards, as well as small birds and invertebrates. Red-tailed hawks nest in a variety of trees in urban, woodland, and agricultural areas. Red-tailed hawks may forage within the Study Area and could potentially nest within mature trees on the Project site.

Red-shouldered hawk (*Buteo lineatus*). Red-shouldered hawks are another common raptor species typically found in a variety of woodlands with nearby open areas for foraging. This species has a highly varied diet of small mammals, snakes, lizards, amphibians, small or young birds, and large insects. Red-shouldered hawks build large stick nests in mature trees, including riparian woodland trees and large eucalyptus groves. Red-shoulder hawks have potential to nest within the mature trees on the Project site.

Other Breeding and Migratory Birds

As discussed below in Section 4.3.3, *Regulatory Setting*, most native migratory birds are protected from harm by the federal MBTA, and most breeding birds in California are protected under the California Fish and Game Code (Section 3503).

Special-Status and Otherwise Protected Bats

Pallid bat (*Antrozous pallidus*). Pallid bats occur throughout most of California, inhabiting a variety of habitats, including grasslands, shrublands, woodlands, and forests; however, the species is most abundant in open, dry habitats with rocky areas for roosting. Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g., basal hollows of coast redwoods, bole cavities of oaks, exfoliating valley oak bark, and deciduous trees in riparian areas), and various human structures such as bridges, barns, porches, bat boxes, and human-occupied as well as vacant buildings (WBWG, 2019). Pallid bats have been documented southwest of the Project site (CDFW, 2019). Trees within the Project site could provide roosting habitat for this species. Pallid bats are considered a California Species of Special Concern by the CDFW, and a high-priority species by the Western Bat Working Group (WBWG).

Townsend's big-eared bat (*Corynorhinus townsendii*). Townsend's big-eared bats occur throughout California, with their distribution being strongly correlated with the availability of caves and cave-like roosting habitat, including abandoned mines. This species has also been reported to utilize buildings, bridges, rock crevices, and hollow trees as roost sites (WBWG, 2019). Trees within the Project site could provide roosting habitat for this species. Townsend's

big-eared bats are considered a California Species of Special Concern by the CDFW, and a high-priority species by the WBWG.

Hoary bat (*Lasiurus cinereus*). Hoary bats occur throughout California, and roost primarily in foliage of both coniferous and deciduous trees (WBWG, 2019). Trees within the Project site could provide roosting habitat for this species. Hoary bats are listed on CDFW's Special Animals List, and considered a medium-priority species by the WBWG.

Yuma myotis (*Myotis yumanensis*). Yuma myotis ranges across California, occurring in a variety of habitats including riparian, arid scrublands and deserts, and forests. This species roosts in bridges, buildings, cliff crevices, caves, mines, and trees (WBWG, 2019). Trees within the Project site could provide roosting habitat for this species. Yuma myotis are listed on CDFW's Special Animals List, and considered a low to medium-priority species by the WBWG.

4.3.2.4 Critical Habitat – Terrestrial Resources

Critical habitat describes areas considered essential for the conservation of a species listed as endangered or threatened under the federal Endangered Species Act. Critical habitats are specific geographic areas that contain features essential for conservation of listed species and may require special management and protection. Critical habitat may include an area not currently used by an endangered or threatened species, but that will be needed for species recovery. Projects involving a federal agency or federal funding are required to consult with the USFWS to ensure that Project actions will not destroy or adversely modify critical habitat. No critical habitat is present in the Study Area.

4.3.2.5 Sensitive Natural Communities

A sensitive natural community is a biological community that is regionally rare, provides important habitat opportunities for wildlife, is structurally complex, or is in other ways of special concern to local, State, or federal agencies. Most sensitive natural communities are given special consideration because they perform important ecological functions, such as maintaining water quality and providing essential habitat for plants and wildlife. Some plant communities support a unique or diverse assemblage of plant species and therefore are considered sensitive from a botanical standpoint. The most current version of the CDFW's *List of California Terrestrial Natural Communities* (CDFW, 2018b), available through the CNDDB, indicates which natural communities are of special status given the current state of the California classification.

The CNDDB reports three sensitive terrestrial natural community occurrences within the nine-quadrangle area of the Project site. No sensitive natural communities are present in the Study Area.

4.3.2.6 Wetlands and Other Waters of the United States

Wetlands are ecologically complex habitats that support a variety of both plant and animal life. Section 404 of the Clean Water Act defines wetlands for purposes of federal jurisdiction as "areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support (and do support, under normal circumstances) a prevalence of vegetation typically

adapted for life in saturated soil conditions" (33 CFR 328.3[b] and 40 CFR 230.3). Under normal circumstances, the federal definition of wetlands requires three wetland identification parameters be present: wetland hydrology, hydric soils, and hydrophytic vegetation. Examples of wetlands include freshwater marsh, seasonal wetlands, and vernal pool complexes that have a hydrologic link to other waters of the U.S (see definition below for "other waters of the U.S."). The U.S. Army Corps of Engineers (USACE) is the responsible agency for regulating wetlands under Section 404 of the Clean Water Act (Act), while the U.S. Environmental Protection Agency (USEPA) has overall responsibility for the Act. CDFW does not normally have direct jurisdiction over wetlands unless they are subject to jurisdiction under Streambed Alteration Agreements or they support State-listed endangered species; however, CDFW has trust responsibility for wildlife and habitats pursuant to California law.

"Other waters of the U.S." refers to those hydric features that are regulated by the Clean Water Act but are not wetlands (33 CFR 328.4). To be considered jurisdictional, these features must exhibit a defined bed and bank and an ordinary high-water mark. Examples of other waters of the U.S. include rivers, creeks, intermittent and ephemeral channels, ponds, and lakes. No wetlands or other waters of the U.S. are present in the Study Area.

4.3.2.7 Wildlife Movement Corridors

Wildlife movement corridors are considered an important ecological resource by CDFW and USFWS and under CEQA and NEPA. 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. No important wildlife movement corridors are present in the Study Area.

4.3.3 Regulatory Setting

4.3.3.1 Federal

Federal Endangered Species Act

Pursuant to the requirements of federal Endangered Species Act (FESA), a federal agency reviewing a proposed project within its jurisdiction must determine whether any federally listed threatened or endangered species may be present in the project area and determine whether the

proposed project may affect or "take" such species.[8] In addition, the agency is required to consult with the USFWS and/or the National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) to determine whether the project is likely to jeopardize the continued existence of any species listed under FESA or result in the destruction or adverse modification of critical habitat (see below) designated for such species (16 USC 1536(3)). Consultation with the USFWS would be required for the Project if the USACE would need to issue a permit for the Project. During consultation, the potential for take would be determined and, if take is expected to occur, the necessary conditions to allow the issuance of an incidental take permit would be imposed.

Areas of habitat considered essential to the conservation of a listed endangered or threatened species may be designated as Critical Habitat (referred to above), which is protected under FESA.

Migratory Bird Treaty Act

The federal MBTA (United States Code, Title 16, Section 703, Supplement I, 1989) prohibits taking, killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs. This would include the protection of nests for all bird species of birds that are on the List of Migratory Birds, published in the Federal Register in 1995.

Federal Regulation of Wetlands and Other Waters

Section 404 of the federal Clean Water Act (CWA) (33 U.S.C. 1251–1376) prohibits the discharge of dredged or fill material into waters of the U.S., including wetlands, without a permit from the USACE. Section 401 of the CWA requires that USACE permitting applicants also obtain state certification that the activity associated with the permit will comply with applicable state effluent limitations and water quality standards.

4.3.3.2 State

California Endangered Species Act

Under the California Endangered Species Act (CESA), CDFW maintains a list of threatened species and endangered species (California Fish and Game Code Section 2070). CDFW also maintains a list of "candidate species," which are species that CDFW has formally recognized as being under review for addition to either the list of endangered species or the list of threatened species, in addition to a list of "species of special concern." Pursuant to the requirements of CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any State-listed endangered or threatened species may be present in the project area and determine whether the proposed project will have a potentially significant impact on such species. In addition, CDFW encourages informal consultation on any proposed project that may affect a candidate species. During consultation, the potential for take would be determined and, if take is expected to occur, the necessary conditions to allow the issuance of an incidental take permit would be imposed.

[8] The definition of "take" is to "harass, harm, pursue, hunt, shoot, wound, trap, capture, or collect, or to attempt to engage in any such conduct. The USFWS has also interpreted "harm" to include significant habitat modification that could result in take.

California Fish and Game Code

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 this code or any regulation made pursuant thereto. Section 3503.5 of the California Fish and Game Code prohibits take, possession, or destruction of any raptor (birds of prey) in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Any loss of fertile eggs or nesting raptors, or any activities resulting in nest abandonment, would constitute a significant impact.

CDFW Fully Protected Species may not be taken or possessed at any time without a permit from CDFW (Section 3511 Birds, Section 4150 Nongame Mammals, Section 4700 Mammals, and Section 5050 Reptiles and Amphibians).

Under Sections 1600–1616 of the California Fish and Game Code, CDFW regulates activities that would substantially divert, obstruct the natural flow of, or substantially change rivers, streams, and lakes. The jurisdictional limits of the CDFW are defined in Section 1602 of the Fish and Game Code as the "bed, channel, or bank of any river, stream, or lake." Activities that would "deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake" are prohibited by the CDFW unless a Streambed Alteration Agreement is issued.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (CNPPA), which directed the CDFW to carry out the legislature's intent to "preserve, protect, and enhance endangered plants in this state." The CNPPA 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. As of January 2015, CDFW has the authority to permit take of State-listed rare plants under CNPPA, similar to how it has historically regulated State endangered and threatened plants. This new regulation elevates the protection of rare plants, potentially requiring the need to obtain a permit from CDFW to remove rare plants, contingent upon impacts addressed in the project's CEQA process. The CESA expanded on the original CNPPA and enhanced legal protection for plants. The 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.

Porter-Cologne Water Quality Control Act

The State's authority in regulating activities in wetlands and waters in a project area resides primarily with the State Water Resources Control Board (SWRCB), pursuant to the Porter-Cologne Water Quality Control Act. The SWRCB, acting through the San Francisco Regional Water Quality Control Board (SFRWQCB), must certify that a USACE permit action meets State water quality objectives (CWA Section 401). Any condition of water quality certification is then incorporated into the USACE Section 404 permit authorized for the project. The SFRWQCB ensures no net loss of wetlands and typically requires mitigation for loss of wetlands before the agency issues a water quality certification. Activities such as filling or excavation of isolated

waters constitutes a discharge of waste to waters of the State, and prospective dischargers are required to submit a report of waste discharge to the SFRWQCB.

4.3.3.3 Local Regulations and Policies

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (SCV Habitat Plan), which encompasses a study area of 519,506 acres (or approximately 62 percent of Santa Clara County), was adopted by participating agencies in January, 2013 and took effect in October 2013. The newly created Santa Clara Valley Habitat Agency is charged with implementing the plan. The area for which development activities are covered by the plan is located south and east of Mountain View, primarily within the Llagas/Uvas/Pajaro, Coyote Creek, and Guadalupe Watersheds. The SCV Habitat Plan was developed through a partnership between Santa Clara County, the Cities of San José, Morgan Hill, and Gilroy, the Santa Clara Valley Water District, and the Santa Clara Valley Transportation Authority (collectively termed the 'Local Partners'), the U.S. Fish and Wildlife Service and the California Department of Fish and Wildlife.

The SCV Habitat Plan is a conservation program to promote the recovery of endangered species in portions of Santa Clara County while accommodating planned development, infrastructure and maintenance activities. The species of concern identified in the SCV Habitat Plan include, but are not limited to, the California tiger salamander, California red-legged frog, western burrowing owl, Bay Checkerspot butterfly, and a number of species endemic to serpentine grassland and scrub. Projects and activities of the jurisdictions in Santa Clara County which are not Permittees, such as the City of Mountain View, are not covered under the SCV Habitat Plan.

Mountain View 2030 General Plan

The City of Mountain View adopted the 2030 General Plan in July 2012 (City of Mountain View, 2012). The plan provides the City with goals and policies that accurately reflect shared community values, potential change areas, and compliance with State law and county ordinances. The General Plan provides a guide for future land use decisions in the City.

Goals, policies, and actions in the 2030 General Plan related to biological resources include:

Goal INC-16: A diverse area of complementary land uses and open space resources.

Policy INC 16.3: Habitat. Protect and enhance nesting, foraging and other habitat for special-status species and other wildlife.

Action 16.1.2: Burrowing owl avoidance/protection during development. Require preconstruction surveys and protection measures for burrowing owls prior to any North Bayshore development activities on parcels that a qualified biologist has determined provide suitable underground retreats (e.g., ground squirrel burrows, debris piles, storm drain inlets) that could be occupied by either breeding or wintering owls. Consultation with the California Department of Fish and Wildlife

shall be required for any site on which burrowing owls are found during the preconstruction survey.[9]

Action 16.1.3: Special-status plant surveys. Require preconstruction surveys for Congdon's tarplant and other special-status plant species prior to development of any ruderal or grassland habitat in the North Bayshore area in accordance with CDFG protocols.[10]

Policy LUD 10.2: Low-impact development. Encourage development to minimize or avoid disturbing natural resources and ecologically significant land features.

Action LUD 10.2.2: Bird safe design. Consider and require the inclusion of bird safe design measures when evaluating new development in the North Bayshore Area, including project and site-specific measures such as:

- Glass and façade treatments; and
- Lighting design and operation.

City of Mountain View Municipal Ordinances

Street trees are defined by Mountain View's City Code Chapter 32 Article II, Section 32.2 are those trees or shrubs adopted by the Parks and Recreation Commission as a part of the Master Street Tree Plan. Official street trees are protected under Section 32.6 and may only be removed under a permit issued by the Director of Parks and Recreation. The permit may condition the tree be replaced by an approved tree in conformity with the City's Master Tree Plan.

Heritage trees are defined by Mountain View's City Code Chapter 32, Article II. Pursuant to Section A36.32.090, and the removal of Heritage trees shall be done in compliance with a permit application. The Heritage Tree Removal Permit allows for Heritage trees to be removed within two years of permit approval and requires the owner to either plant two new 24-inch box trees (at minimum) for every one Heritage tree removed. These funds are used to plant new trees in City parks, medians and public areas. The applicant may choose the replacement species and planting location for the new trees, so long as it's deemed appropriate by the City Arborist. It is against the City ordinance to willfully injure, damage, destroy, move or remove a Heritage tree unless granted a removal permit by the City. A Heritage tree is defined as any one of the following:

- A tree which has a trunk with a circumference of 48 inches or more measured at 54 inches above natural grade.
- A multi-branched tree which has major branches below 54 inches above the natural grade with a circumference of 48 inches measured just below the first major trunk fork.
- Any *Quercus* (oak), *Sequoia* (redwood), or *Cedrus* (cedar) tree with a circumference of 12 inches or more when measured at 54 inches above natural grade;

9 California Department of Fish and Game, 2008. Guidance for Burrowing Owl Conservation. Habitat Conservation Branch, Wildlife Branch, Bay Delta Region. Sacramento, California. April 14.

10 California Department of Fish and Game, 2009. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities. California Natural Resources Agency. November 24.

- A tree or grove of trees designated by resolution of the city council to be of special historical value or of significant community benefit.

4.3.4 Biological Resources Impacts

4.3.4.1 Significance Criteria

Consistent with Appendix G of the State CEQA *Guidelines*, the Project would cause significant adverse impacts to biological resources if it would:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

c) 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;

d) 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;

e) Conflict with any local policies or ordinances protecting biological resources, such as tree preservation policy or ordinance; or

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional or State habitat conservation plan.

4.3.4.2 Approach to Analysis

Project components were evaluated using the above significance criteria. For purposes of this EIR, three principal components were considered:

- Magnitude of the impact (e.g., substantial/not substantial),
- Uniqueness of the affected resource (rarity), and
- Susceptibility of the affected resource to perturbation (sensitivity).

The evaluation of significance considers the interrelationship of these three components. For example, a relatively small magnitude impact to a State or federally listed species could be considered significant because the species is very rare and is believed to be very susceptible to disturbance. Conversely, a plant community such as California annual grassland is not necessarily rare or sensitive to disturbance. Therefore, a much larger magnitude of impact would be required to result in a significant impact. Impacts are generally considered less than significant if the habitats and species affected are common and widespread in the region and the State. Impacts are

considered beneficial if the action causes no detrimental impacts and results in an increase of habitat quantity and quality.

4.3.4.3 Topics with No Impact or Otherwise Not Addressed in this EIR

Due to the nature of the Project and its physical setting, the Project would not result in impacts related to Criterion b) (effects on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations…) listed above. No identified riparian or other sensitive natural community identified by local or regional plans, policies or regulations was identified within the vicinity of the site, and no riparian or sensitive natural community would be substantially adversely affected by the Project.

The Project would not result in impacts related to Criterion c) (a substantial adverse effect on State or federally protected wetlands) listed above. The Project site is completely developed, and no wetlands, streams, or other aquatic features are present on the Project site. Thus, implementation of the Project would not have an adverse effect on State or federally protected wetlands.

Additionally, the Project would not result in impacts related to Criterion d) (effects on the movement of any native resident or migratory fish or wildlife species, on wildlife corridors, or the use of native wildlife nursery sites) listed above. The project site is located in an area where habitat has been highly fragmented by intensive residential and commercial development, and is adjacent to U.S. 101. Due to the lack of suitable habitat, small size, lack of connectivity with other habitat areas, and location within a developed area, the Project site does not serve as a regional wildlife movement or dispersal corridor. Thus, no impact would occur.

The Project would also not result in impacts related to Criterion f) (conflict with an adopted local, regional, or State habitat conservation plan) listed above. The Project site is not located in the SCV Habitat Plan area, and does not provide suitable habitat for the species of concern identified in the SCV Habitat Plan (County of Santa Clara et al., 2012; Appendix E). Thus, no impact would occur.

4.3.4.4 Discussion of Impacts and Mitigation Measures

Impact BIO-1: Development of the Project could have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the United States Fish and Wildlife Service. (Criterion a.) (*Potentially Significant*)

The Project site is largely developed and its undeveloped surfaces are either landscaped or highly disturbed. Specialized supportive vegetation communities required by special-status plants are not present at the Project site and therefore special-status plants are not expected to occur.

Wildlife species considered special-status and analyzed in this EIR that have a moderate potential to occur *and* to be exposed to impacts resulting from development of the Project are as follows (see Appendix C for the full list of species considered):

State or Federally Threatened or Endangered and State Fully Protected Species

- Cooper's hawk (CDFW Watch List)

Other Special-Status and Otherwise Protected Species

- Breeding birds and their nests protected under the MBTA and California Fish and Game Code, including: red-tailed hawk and red-shouldered hawk.
- Pallid bat
- Townsend's big-eared bat
- Hoary bat
- Yuma myotis

Migratory and resident birds which breed locally in Mountain View have the potential to nest in tree and shrub vegetation observed within the Study Area.

Impacts on Special-Status and Nesting Birds

As noted in the Section 4.3.2, *Environmental Setting* above, vegetation present in the Study Area may offer nesting, roosting, and foraging habitat for raptors and other birds. Special-status and migratory birds which breed locally in Mountain View could nest in the mature trees and landscaped vegetation that is prevalent throughout the Project site during breeding bird season, cautiously interpreted as the period between February 1 and August 31 by CDFW. Construction activities, especially those that involve heavy machinery, could adversely affect birds attempting to nest on or nearby the Project site directly through such activities as tree and vegetation removal, and indirectly through noise disturbance associated with new construction. The loss of an active bird nest that is attributable to Project activities would be considered a significant impact under CEQA, if that nest was occupied by a bird species protected by the MBTA or other regulations. Disruption of nesting migratory or native birds is not permitted under the federal MBTA or the California Fish and Game Code, as it could constitute unauthorized take. Thus, the loss of any active nest by, for example, removing a tree containing a nest, must be avoided under federal and California law. However, the City would apply the following City of Mountain View Standard Condition of Approval concerning nesting birds, which includes restricting certain construction activities during breeding bird season, requiring preconstruction surveys, and implementing avoidance measures if active nests are located:

> ***Standard Condition PL-121 (Preconstruction Nesting Bird Survey):*** To the extent practicable, vegetation removal and construction activities shall be performed from September 1 through January 31 to avoid the general nesting period for birds. If construction or vegetation removal cannot be performed during this period, preconstruction surveys will be performed no more than two days prior to construction activities to locate any active nests as follows:
>
> The applicant shall be responsible for the retention of a qualified biologist to conduct a survey of the project site and surrounding 500' for active nests—with particular emphasis on nests of migratory birds—if construction (including site preparation) will begin during the bird nesting season, from February 1 through August 31. If active nests are observed on either the Project site or the surrounding area, the project applicant, in coordination with the appropriate City staff, shall establish no-disturbance buffer zones around the nests, with the size to be determined in consultation with the California Department of Fish and Wildlife

(usually 100' for perching birds and 300' for raptors). The no-disturbance buffer will remain in place until the biologist determines the nest is no longer active or the nesting season ends. If construction ceases for two days or more and then resumes during the nesting season, an additional survey will be necessary to avoid impacts on active bird nests that may be present.

Additionally, the construction of multi-story residential buildings on the Project site could represent potential strike hazards to birds in the Project area. However, the City would apply the following Standard Condition of Approval requiring a bird strike management plan:

Standard Condition PL-122 (Bird Strike Management Plan): A bird strike management plan, which provides project design features to reduce bird strikes, and a bird strike monitoring plan post-construction shall be submitted as part of the building permit submittal with recommended provisions included in the building permit plans.

Adherence to the measures outlined in the City's Standard Conditions of Approval would reduce impacts to special-status and nesting birds to a less than significant level.

Impacts on Special-Status Bats

The CNDDB documents occurrences of several special status bats, including pallid bat, Townsend's big-eared bat, and hoary bat, in urban area within 5 miles of the Project site. Yuma myotis also has the potential to occur on the Project site. Suitable roosting habitat for these bats includes tree foliage, underneath the exfoliating bark of trees, and in tree cavities. Bats could also be present seasonally in tree foliage, in tree cavities, or under the loose, peeling bark of trees at or in proximity to the Project site.

The Project has the potential to adversely affect special-status bats which may roost in and around the Project site through the removal of trees during construction. Direct mortality of special-status bats would be a significant impact. Potential Project-related impacts to special-status bats would be minimized to a less-than-significant level with the implementation of **Mitigation Measure BIO-1**, which would require preconstruction survey for special-status bats and other avoidance measures during construction. With incorporation of this mitigation measure, construction-related impacts to special-status bats roosting in and around the Project site would be minimized and the impact would be less than significant.

Mitigation Measure BIO-1: Special-Status Bat Protection Measures. In coordination with the City, a preconstruction survey for special-status bats shall be conducted by a qualified biologist in advance of tree and structure removal within the Project site to characterize potential bat habitat and identify active roost sites. Should potential roosting habitat or active bat roosts be found in trees and/or structures to be removed under the Project, the following measures shall be implemented:

- Removal of trees shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 16 – August 14) and outside the months of winter torpor (approximately October 16 – February 28), to the extent feasible.
- If removal of trees during the periods when bats are active 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 building 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 a qualified biologist. A 100-foot no-disturbance buffer is a typical protective buffer distance; however, this may be modified by the qualified biologist depending on existing screening around the roost site (such as dense vegetation) as well as the type of construction activity which would occur around the roost site.

- The qualified biologist shall be present during tree removal if potential bat roosting habitat or active bat roosts are present. Trees with active roosts shall only be removed when no rain is occurring or is forecast to occur for 3 days and when daytime temperatures are at least 50°F.
- Removal of trees with potential bat roosting habitat or active bat roost sites shall follow a two-step removal process:
  - 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.
  - 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).

Significance After Mitigation: Less Than Significant.

Impact BIO-2: Implementation of the Project would not conflict with any local policies or ordinances protecting biological resources. (Criterion e.). (*Less than Significant, No Mitigation Required*)

As discussed above under *Local Regulations and Policies*, the City of Mountain View City Code contains protections for Heritage trees and street trees throughout the City. The Mountain View City Code defines "Heritage tree" to be any tree 48-inch circumference (15.3-inch diameter) at 54-inches above grade, plus any oak, redwood, or cedar that has a 12-inch circumference (3.8-inch diameter). Street trees are defined as trees located in the public right-of-way, which is typically defined as 5 feet from the back edge of the sidewalk or 10 feet from the beginning of the curb edge.

A total of 341 trees are present within the Project site including 32 protected Heritage trees. Of those 32 Heritage trees, 9 are currently slated to be retained in place, 15 can be categorized as likely successes for recycling/transplant/relocation, and 8 are not recommended for relocation due to structural challenges, species problems, and/or overall tree health, and therefore are recommended for removal. No protected street trees were identified on the Project site (Appendix D). Under the Project, a total of 238 trees (including 23 Heritage trees) would be removed from the site.

The remaining 103 trees located within the Project site (including 9 Heritage trees) would be preserved in place. The landscaping plan developed for the Project (see Figure 3-7) would introduce 178 trees to the Project site, which would be installed in compliance with the City of Mountain View Community Development Department and Public Works Departments planting guidelines,

for a total of 276 total trees estimated to be on-site at the time of Project completion. As required by the City of Mountain View, the Project would need to provide mitigation for loss of heritage trees at a 2:1 ratio (46 trees at a minimum size of 24-inch box). The Project proposes to provide 50 new heritage trees in total, which would comply with the City's standard requirements and would avoid impacts under the City of Mountain View's Heritage Tree Ordinance.

Permits to remove, relocate, or otherwise alter Heritage trees cannot be implemented until a building permit is secured and the Project is pursued. The project applicant would be required to request a Heritage Tree Removal Permit, which is subject to City review and approval. The permit would include conditions for protection, relocation, and replacement, in accordance with City standards. As long as tree removal is consistent with all permitting conditions, Project removal of Heritage trees would not conflict with local ordinances or policies. The City's Standard Condition of Approval includes the following:

> ***Standard Condition PL-90 (Replacement)*:** The applicant shall offset the loss of each Heritage tree with a total of two replacement trees. Each replacement tree shall be no smaller than 24-inch box specimens and shall be noted on the landscape plan as Heritage replacement trees.
>
> ***Standard Condition PL-92 (Tree Protection Measures)*:** The tree protection measures listed in the arborist's report prepared by Certified Arborist, Ray Morneau, dated July 16, 2018 shall be included as notes on the title sheet of all grading and landscape plans. These measures shall include, but may not be limited to, six-inch chain link fencing at the drip line, a continuous maintenance and care program, and protective grading techniques. Also, no materials may be stored within the drip line of any tree on the project site.
>
> ***Standard Condition PL-93 (Tree Mitigation and Preservation Plan)*:** The applicant shall develop a tree mitigation and preservation plan to avoid impacts on regulated trees and mitigate for the loss of trees that cannot be avoided. Routine monitoring for the first five years and corrective actions for trees that consistently fail the performance standards will be included in the tree mitigation and preservation plan. The tree mitigation and preservation plan will be developed in accordance with Chapter 32, Articles I and II, of the City Code, and subject to approval of the Zoning Administrator prior to removal or disturbance of any Heritage trees resulting from project activities, including site preparation activities.

With approval of the Heritage Tree Removal permit and implementation of permit conditions, the Project would not conflict with any local policies or ordinances protecting biological resources, including the City's Heritage Tree protection ordinance. No other local policies or ordinances related to biological resources would conflict with the Project. Therefore, the impact would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

This analysis evaluates whether the impacts of the Project, together with the impacts of cumulative development, would result in a cumulatively significant impact on special-status species, or other biological resources protected by federal, State, or local regulations or policies (based on the significance criteria and thresholds presented earlier). This analysis then considers whether the incremental contribution of the Project to this cumulative impact would be considerable. Both conditions must apply in order for a project's cumulative effects to rise to the level of significance.

Geographic Context

The geographic context for potential cumulative impacts on biological resources encompasses the sensitive natural communities, species occurrences, and habitats within the Project site as well as biologically linked areas. Past projects within this context, including the development of residential neighborhoods, commercial and industrial areas, and infrastructure, have already caused substantial adverse cumulative changes to biological resources within the Project site and adjacent areas. The cumulative impact analysis assumes that construction and operations of other projects in the geographical area would have to comply with the same regulatory requirements as the Project, which would serve to avoid and reduce many impacts to less-than-significant levels on a project-by-project basis. The temporal scope of cumulative effects on biological resources encompasses the duration of all construction, and operation and maintenance activities. The analysis then considers whether or not there would be a significant, adverse cumulative impact associated with Project implementation in combination with past, present, and probable future projects in the geographical area, and if so, whether or not the Project's incremental contribution to the cumulative impact would be considerable. Both conditions must apply in order for a project's cumulative effects to rise to the level of significance.

Table 4.0-1 in Section 4.0 provides a description of projects considered in the cumulative analysis. From this list, several current and reasonably foreseeable projects may result in impacts to biological resources generally located within the Moffett/Whisman Planning Area and are considered in this analysis of the Project's cumulative impacts. Many of the development projects identified are within urban areas which support few terrestrial biological resources, similar to the Project site. Other projects containing more diverse habitat (e.g., riparian) with higher potential for special-status species presence than the Project are not considered in the cumulative analysis as the Project would not contribute to cumulative impacts on such biological resources.

Impact C-BIO-1: The Project, in conjunction with other past, current, or foreseeable development in Mountain View, could result in cumulative impacts on special-status species, local ordinances protecting biological resources, and an adopted local habitat conservation plan. (*Potentially Significant*)

As discussed in Section 4.3.4.3 above, the Project would have no impact with regard to riparian habitats or other sensitive natural communities, State or federally protected wetlands, and wildlife corridors, and would therefore not contribute to a significant impact related to these topics.

Special-Status Species

The majority of projects considered for the cumulative scenario described in Section 4.0, *Introduction to the Environmental Analysis*, of this EIR, including the adjacent projects at 1185 Terra Bella Avenue and 1075 Terra Bella Avenue, and other projects within the City's Moffett/Whisman Planning Area involve the land-based redevelopment of previously developed areas. Many of these areas have limited habitat value for wildlife as they are already primarily or fully developed, in disturbed areas, or surrounded by disturbed lands. However, removal of existing vegetation associated with these projects could lead to significant cumulative impacts on nesting birds and roosting bats. The Project could affect birds and bats that use not only the Project site's foraging and nesting habitats but also other habitats distant from the Project site.

With the implementation of **Mitigation Measure BIO-1** and the City of Mountain View Standard Condition of Approval for nesting birds, the impact analysis in this section has shown that the Project would result in less than significant impacts on biological resources within and in the vicinity of the Project site. When considered in the context of past, present and reasonably foreseeable similar projects, the Project would add only a minor, incremental contribution to habitat loss or degradation, and direct and indirect impacts to special-status species, nesting birds or roosting bats. The Project's contribution would not be considered cumulatively considerable because the Project would, like other projects that are part of the cumulative scenario, implement adopted mitigation measures and be required to comply with an established regulatory framework. Additionally, although some future projects may be approved even though they would have significant, unavoidable impacts on biological resources, in general, future projects would be required to demonstrate that they would not have significant effects on these biological resources and would contain all feasible mitigation measures to reduce potential impacts to biological resources, as applicable.

City of Mountain View Heritage Tree Ordinance

Other reasonably foreseeable projects could result in the removal of existing trees, including Heritage trees. A tree removal permit is required from the City for the removal of any Heritage trees. Projects constructed in Mountain View are required to mitigate for the removal of Heritage trees, and protect any trees that remain in place from potential construction damage. The Project's contribution would not be considered cumulatively considerable because the Project would, like other projects that are part of the cumulative scenario, be required to perform tree removal consistent with all Heritage Tree permitting conditions, and would not conflict with the City's Heritage Tree protection ordinance.

SCV Habitat Plan

Modeling completed as a part of the development of the SCV Habitat Plan identifies cumulative effects to serpentine habitats and serpentine species on Coyote Ridge and other areas in central and southern Santa Clara County. Nitrogen deposition on the affected serpentine habitats from areas of Santa Clara County not covered by the SCV Habitat Plan is about 17 percent. The Project would represent an extremely small portion of these emissions. Conservation strategies included in the adopted SCV Habitat Plan account for the indirect impacts of nitrogen deposition (existing and future) and identify measures to conserve and manage serpentine areas over the term of the

SCV Habitat Plan such that cumulative impacts to this habitat and Bay Checkerspot butterfly would not be significant and adverse.

A mitigation program for indirect impacts on Bay Checkerspot butterfly habitat is being implemented independently by others (i.e., the SCV Habitat Agency) and there is no requirement for an individual project outside of the area covered by the SCV Habitat Plan to pay impact fees to this mitigation program. As the Project lies outside of this HCP, no impacts would occur.

Summary

Overall, in combination with past, present, and reasonably foreseeable future projects within the geographic context for this analysis, the Project would not result in a cumulatively considerable contribution to a cumulative impact on biological resources.

Mitigation: Mitigation Measure BIO-1.

Significance After Mitigation: Less Than Significant.

4.3.5 Summary of Biological Resources Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact BIO-1: Development of the Project could have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the United States Fish and Wildlife Service.	Potentially Significant	Mitigation Measure BIO-1: Special-Status Bat Protection Measures	Less than Significant
Impact BIO-2: Implementation of the Project would not conflict with any local policies or ordinances protecting biological resources.	Less than Significant	None required	-
Impact C-BIO-1: The proposed Project, in conjunction with other past, current, or foreseeable development in Mountain View, could result in cumulative impacts on special-status species, local ordinances protecting biological resources, and an adopted local habitat conservation plan.	Potentially Significant	Mitigation Measure BIO-1: Special-Status Bat Protection Measures	Less than Significant

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4.3.6 References – Biological Resources

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4.4 Cultural and Tribal Cultural Resources

4.4.1 Introduction

This section describes the cultural resources and tribal cultural resources in and on the Project site, summarizes the regulatory setting relevant to the Project, and evaluates the potential for the Project to result in impacts to cultural resources and tribal cultural resources during Project implementation.

For the purposes of this analysis, the term *cultural resource* consists of pre-contact and historic-era sites, structures, districts, and landscapes; and other evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious, or other reason. Such resources encompass the following types of CEQA-defined resources: historical resources, archaeological resources, human remains, and tribal cultural resources.

The term *indigenous*, rather than *prehistoric*, is used as a synonym for Native American-related (except when quoting), while *pre-contact* is used as a chronological adjective to refer to the period prior to Euromerican arrival in the subject area. Indigenous and pre-contact are often, but not always, synonymous, since the former refers to a cultural affiliation and the latter chronological.

This section relies upon the information and findings presented in the following technical letter report prepared for the Project:

- Hoffman, Robin, *Subject: Residences @ Shoreline Gateway Project – Cultural Resources Survey and Inventory*, Letter report, Prepared by Environmental Science Associates, Oakland, CA, Prepared for Clarissa Burke, City of Mountain View, April 18, 2019.

Additional details on background context, Native American correspondence, and cultural resources identified are presented in the technical report, which is provided in **Appendix F**.

Comments received on the Notice of Preparation (NOP) requested preparation of a cultural resources survey and Native American consultation. All of these issues are discussed in this section.

4.4.2 Background

4.4.2.1 Definitions

Architectural Resource

An architectural resource is a building, structure, object, or historic district. Residences, cabins, barns, lighthouses, military-related features, industrial buildings, and bridges are examples of architectural resources.

Archaeological Resource

Archaeological resources consist of pre-contact and/or historic-era archaeological resources. Pre-contact archaeological resources consist of village sites, temporary camps, lithic scatters, roasting pits/hearths, milling features, petroglyphs, rock features, and burials. Associated artifacts 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 resources include townsites, homesteads, agricultural or ranching features, mining-related features, refuse concentrations, and features or artifacts associated with early military and industrial land uses. Associated artifacts include stone, concrete, or adobe footings and walls; artifact filled wells or privies; and deposits of metal, glass, and/or ceramic refuse.

CEQA Area of Potential Effects

The definition of the CEQA Area of Potential Effects (C-APE) is modeled after the federal Area of Potential Effects, as defined in the Code of Federal Regulations Title 36 Section 800.16(d), which is used for compliance with the National Historic Preservation Act. The C-APE is the geographic area or areas within which a project may directly or indirectly cause alterations in the character or use of historical resources (i.e., resources that meet the criteria for listing in the California Register of Historical Resources [California Register]), if any such resources are present. The C-APE is influenced by the scale and nature of a Project and may be delineated differently for direct physical effects and for indirect effects (such as changes in the historical setting or introduction of intrusive noise) that may result from the Project.

For the Project, a single C-APE has been defined to account for impacts to archaeological, architectural, and tribal cultural resources. The C-APE is comprised of all areas in the Project site where the Project proposes ground-disturbing activities and encompasses the depths of excavation (i.e., vertical C-APE), including all construction areas and staging areas. The C-APE consists of all areas in which ground-disturbing construction activities related to the construction of Block A, Block B, and the parking garage adjacent to Block B would occur, including: demolition of the existing parking lot and associated landscaping features, grading, tree removal, general site preparation followed by construction of the buildings and associated structure, landscaping, and trenching for domestic water lines, fire water and wastewater lines, and other improvements as needed to tie Project infrastructure into the existing and/or proposed new infrastructure. Project ground disturbance would be limited to grading, foundation pad construction, and trenching for utility installation. The Project site, which encompasses all parcels included in the Project, encompasses 7.81 acres, while the C-APE, consisting of the Project footprint and work area, encompasses 5.84 acres. The C-APE extends vertically to 3 feet below ground surface for all Project components other than utility trenching, where the C-APE extends to 8 feet below ground surface.

Tribal Cultural Resource

Tribal cultural resources are sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are listed, or determined to be

eligible for listing, on the National Register of Historic Places (National Register), California Register, or local register of historical resources (PRC Section 21074[a][1]).

4.4.3 Background Setting

The Project site encompasses approximately 7.81 acres in size and is located at the corner of North Shoreline Boulevard and Terra Bella Avenue in the City of Mountain View. The Project site is relatively flat, with elevations ranging from approximately 30 to 37 feet above mean sea level, at a southeast aspect. Project development activities, however, would only occur within approximately 5.84 acres of the Project site, designated the C-APE. The site currently contains one 111,443 square-foot (sf) four-story office building, which would be retained on the Project site, and surface parking lots, outdoor volleyball and basketball courts, and landscaping, which would be removed as a part of the Project.

4.4.3.1 Geologic Context

Geologic mapping indicates that the Project site is underlain by Holocene-age alluvium, mostly clays, to depths of at least 100 feet, while the surficial soil layer consists of 1-2 feet of undocumented fill (USGS and CGS, 2006; see Section 4.6, *Geology, Soils, and Paleontological Resources*).

4.4.3.2 Pre-contact Background

Categorizing the indigenous pre-contact period into cultural stages allows researchers to describe a range of archaeological resources with similar cultural patterns and components during a given time frame, creating a regional chronology. Milliken et al. (2007) provide a temporal framework for the interpretation of the San Francisco Bay Area, by dividing the human history prior to European contact and colonization in California into three periods: *Early Period*, *Middle Period*, and *Late Period.* Economic patterns, stylistic aspects, and regional phases further subdivide cultural periods into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

The Early Period (Lower Archaic, 10,000-5500 years Before Present [BP]) in the San Francisco Bay Area is characterized by geographic mobility, millingslab and handstone technology for grinding acorns and seeds, and large wide-stemmed and leaf-shaped projectile points. The first cut shell beads, and the mortar and pestle, are first documented in burials during the Early Period (Middle Archaic, 5500-2500 BP), indicating the beginning of a shift to sedentism. During the Middle Period, which includes the Lower Middle Period (Initial Upper Archaic, 2500-1550 BP), and Upper Middle Period (Late Upper Archaic, 1550-950 BP), geographic mobility may have continued, although groups began to establish longer term base camps in localities from which a more diverse range of resources could be exploited. The first rich black middens are recorded from this period. The addition of milling tools, obsidian, and chert concave-base projectile points, as well as the occurrence of sites in a wider range of environments, suggest that the economic base was more diverse. By the Upper Middle Period, mobility was being replaced by the

development of numerous small villages. Around 1550 BP, a dramatic cultural disruption occurred as evidenced by the sudden collapse of the *Olivella* saucer bead trade network. During the Initial Late Period (Lower Emergent, 950-450 BP), social complexity developed toward lifeways of large, central villages with resident political leaders and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments.

4.4.3.3 Ethnographic Context

Based on a compilation of ethnographic, historic, and archaeological data, Milliken (1995) describes a group known as the Ohlone, who once occupied the general vicinity of the C-APE. Levy (1978) describes the language group spoken by the Ohlone, known as Costanoan, which is a linguistic term used currently to reference a larger language family that consisted of at least eight spoken languages (as different as Spanish is from French). The languages of the Costanoan language family were spoken by numerous distinct sociopolitical groups of Ohlone peoples. Traditional anthropological literature portrayed the Ohlone peoples as having a static culture, but today it is better understood that many variations of culture and ideology existed within and between villages. The Project would occur within the former territory of the *Puichon* people, an Ohlone village group who spoke the *Tamyen* dialect of the Costanoan language family (Levy, 1978; Milliken 1995:3, 36, 65; Milliken et al., 2009). During and after European contact, Ohlone society was severely disrupted by missionization, disease, and displacement. Today, the Ohlone still have a strong presence in the San Francisco Bay Area, and are highly interested in their historic and pre-contact past.

4.4.3.4 Historic Context

In 1770, the Pedro Fages Party made the earliest documented European expedition into Santa Clara Valley, in which the C-APE is located. Seven years later, in 1777, Spanish missionaries established Mission Santa Clara de Asís (Mission Santa Clara) southwest of Puichon territory. Later in the same year, citizen-settlers established the pueblo of San José de Gaudalupe (San Jose). Over the next 33 years, at least 4,470 Ohlone from the Santa Clara Valley region were baptized at Mission Santa Clara, and settled in communities in and around the central mission quadrangle (Milliken 1995:66-67, 274; Milliken et al., 2009:140-141). The Ohlone population at Mission Santa Clara declined due to disease, poor living conditions, and harsh working conditions, but many Ohlone remained in the Santa Clara Valley after the mission was secularized. Following the independence of Mexico, the mission's property was divided into ranchos and distributed to private citizens, and some Ohlone. The C-APE is immediately east of the Mexican land grant known as Rancho Pastoria de las Borregas, a 9,066-acre land grant deeded to Francisco Estrada in 1842.

Following the U.S. annexation of California, the C-APE became part of a 160-acre farm owned by Conrad Stierlin, a Swiss immigrant who arrived in Mountain View in 1852. By 1940, the majority of this portion of north Mountain View was still largely in agricultural use, primarily fruit trees, with limited rural residential development. The Bayshore Freeway, just to the north of the C-APE, was completed through Mountain View in 1937, and later widened to four lanes in

the late 1950s to become Highway 101. Aerial photography and topographic maps from the 1940s and 1950s identify approximately ten, identically-shaped small residences fronting Stierlin Road (now Shoreline Boulevard), and surrounded by fruit trees on both sides of the road. These small buildings may have housed farm workers at one time. Between the late 1950s and the end of the 1980s all but two of the homes and agricultural fields near the C-APE were replaced by commercial and industrial uses as the area experienced rapid development during the post-World War II period.

As a part of the 2015 Office Project, nine buildings on the Project site were demolished, and replaced with a single four-story office building, which would be retained on the Project site. The surface parking lots, outdoor volleyball and basketball courts, and landscaping associated with the 2015 Office Project would be removed as a part of the current Project.

4.4.4 Research Methods and Results

4.4.4.1 Records Search

On January 18, 2019, ESA conducted an in-person record search at the Northwest Information Center (NWIC) of the CHRIS, at Sonoma State University, Rohnert Park (File # 18-1361). The NWIC maintains the official CHRIS records of previous cultural resources studies and recorded cultural resources for the C-APE and vicinity. The purpose of the records search was to: 1) determine whether known cultural resources have previously been recorded in or within 0.5 mile of the C-APE; 2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby 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:

- **NWIC base maps:** *Mountain View, California* (USGS 7.5-minute topographic map)
- **Resource Inventories:** *National Register, California Inventory of Historical Resources (California Register). California Historical Landmarks, California Points of Historical Interest, Historic Properties Directory Listing*

Previously Recorded Resources

The NWIC has record of two previously recorded cultural resources (P-43-003149, -003150) in the C-APE, and two cultural resources (P-43-003148, -003151) immediately adjacent to the C-APE. The four resources in and immediately adjacent to the C-APE are historic-era buildings and were each evaluated as ineligible for the California Register by ESA architectural historian Brad Brewster (Koenig and Brewster, 2014). The NWIC also has record of 13 additional cultural resources within 0.5 mile of the C-APE, all of which are buildings, and none of which are in proximity to the C-APE. The California Office of Historic Preservation's Historic Properties Directory for Santa Clara County does not list any buildings or structures in the C-APE or immediate vicinity. Similarly, the City of Mountain View's register of historic resources does not include any buildings in or near the C-APE. **Table 4.4-1** summarizes the previously recorded resources identified during the records search.

TABLE 4.4-1
PREVIOUSLY RECORDED CULTURAL RESOURCES IN OR WITHIN 0.5 MILE OF C-APE

Primary (P-43-)	Trinomial (CA-SCL-)	Type	Age/ Affiliation	Name/Description	Recorder(s)	Recorded Distance from C-APE	Note
003149	[none]	Architectural	Historic	House at 1062 Linda Vista Avenue. Demolished post 2014	Brewster (2014)	Within	Demolished; Evaluated as Not eligible for California Register
003150	[none]	Architectural	Historic	House at 1062 Linda Vista Avenue. Demolished post 2014	Brewster (2014)	Within	Demolished; Evaluated as Not eligible for California Register
003148	[none]	Architectural	Historic	House at 1015 North Shoreline Boulevard. Demolished post 2014	Brewster (2014)	Adjacent (in Project site)	Demolished; Evaluated as Not eligible for California Register
003151	[none]	Architectural	Historic	Building at 1160 Terra Bella Avenue. Demolished post 2014	Brewster (2014)	Adjacent (in Project site)	Demolished; Evaluated as Not eligible for California Register
001514	[none]	Architectural	Historic	House at 955 San Rafael Avenue	Miller et al. (1999)	~1,200 ft E	
001515	[none]	Architectural	Historic	House at 943 San Rafael Avenue	Miller et al. (1999)	~1,000 ft SE	
001516	[none]	Architectural	Historic	House at 990 Terra Bella Avenue	Miller et al. (1999)	~1,000 ft E	
001517	[none]	Architectural	Historic	House at 1020 Terra Bella Avenue	Miller et al. (1999)	~750 ft E	
001518	[none]	Architectural	Historic	House at 1718 Spring Street	Miller et al. (1999)	~2,200 ft NW	
001519	[none]	Architectural	Historic	House at 1726 Spring Street	Miller et al. (1999)	~2,300 ft NW	
001520	[none]	Architectural	Historic	House at 1742 Spring Street	Miller et al. (1999)	~2,400 ft NW	
001579	[none]	Architectural	Historic	House at 1734 Spring Street	Miller et al. (1999)	~2,400 ft NW	
001580	[none]	Architectural	Historic	House at 1758 Spring Street	Miller et al. (1999)	~2,500 ft NW	
001582	[none]	Architectural	Historic	House at 1770 Spring Street	Miller et al. (1999)	~2,400 ft NW	
001836	[none]	Architectural	Historic	Jones Hall or Mountain View USAR Center	PAR Environmental Services, Inc. (2006)	~2,600 ft NW	
003123	[none]	Architectural	Historic	Gaber Residence	Gallup (1987)	Within 0.5 mile	
003124	[none]	Architectural	Historic	House at 950 San Leandro	Gallup (1987)	~1,700 ft SE	

Previous Cultural Resources Studies

The NWIC has record of 27 previous cultural resources studies conducted within 0.5 mile of the C-APE, five of which include portions of the current C-APE. One previous study (S-45758 [Koenig and Brewster, 2014]) was conducted for the 2015 Office Project on the same parcels as the current Project. That study resulted in the original recordation of the four historic-era buildings (P-43-003148, -003149, -003150, -003151) previously recorded in the C-APE, and also evaluated the four buildings as not eligible for the California Register (Koenig and Brewster, 2014). The 2015 Office Project resulted in the demolition of P-43-003148, -003149, -003150, and -003151. **Table 4.4-2** summarizes the previous cultural resources studies that have been conducted in or within 0.5 mile of the APE.

TABLE 4.4-2
PREVIOUS CULTURAL RESOURCES STUDIES IN OR WITHIN 0.5 MILE OF C-APE

Study	Title	Author (Date)	In C-APE
1137	Cultural Resources Along the Sacramento River from Keswick Dam to Sacramento	Johnson and Johnson (1974)	Yes
3134	An Archaeological Assessment within Reclamation District 1500 and the Tisdale Bypass, Sutter County, California Part of the Cultural Resources Inventory and Evaluation for U.S. Army Corps of Engineers, Sacramento District, PL 84-99 Levee Rehabilitation	Shapiro and Syda (1997)	Yes
8345	Archaeological Survey Report, 04-SCL-101, Portions of P.M. 38.3/52.5, Improvements to Route 101 Between Route 17 in San Jose and Embarcadero Road in Palo Alto, Santa Clara County, 04393-389131, 04393-396171	Melandry (1980)	Yes
18367	Historic Property Survey Report and Finding of No Effect for the Proposed Ramp Metering and HOV Ramp Project, 4-SCL-101 PM 40.0/52.5, EA 132451	Hylkema (1995)	Yes
25529	Historic Property Survey Report for the U.S. 101/S.R. 85 Interchange Improvement Project, 04-SCL-101/ K.P. 75.26 to 79.59 (P.M. 47.4 to 48.7), Mountain View, Santa Clara County, California (EA 43880K)	Miller (2001)	Yes
43191	Historic Property Survey Report, State Route 85 Express Lanes Project, Santa Clara County, California, EA 4A7900, EFIS 0400001163, US 101 PM 23.1-28.6, SR 85 PM 0.0-24.1, US 101 PM 47.9-52.0	Kubal and Rehor (2013)	Yes
45758	Cultural Resources Study for the 1001 N. Shoreline Project (letter report)	Koenig and Brewster (2014)	Yes
4175	Archaeological Evaluation of the Kaiser Truck Parking Facility, Mountain View, California	Edwards (2000)	No
4492	An archaeological field reconnaissance of both banks of Stevens Creek between the bay and Homestead Boulevard in Mountain View, California (letter report)	Holman (1978)	No
4766	Archaeological Resources of the Proposed Mountain View Water Main, Project #76-54, EDA #07-51-01907	Winter (1977)	No
8371	Cultural Resources Evaluations for the Proposed Navy Housing Locations at Moffett Field, Santa Clara County, California	NA (1981)	No
9440	Archaeological Survey Report for the Proposed Improvements to the Routes 85, 101, 237 Triangle and Route 85 from Stevens Creek Blvd. to Route 101 in Santa Clara County, 4-SCL-85 PM 17.7/23.9, 4-SCL-101 PM 44.9/49.5, 4-SCL-237 PM 0.4/3.8, EA 04282-437060	Kelly (1987)	No
18286	Historic Property Survey Report, Improvement of a Portion of Route 85, 04-SCL-85 P.M. R35.6/R38.3 04-234-43820K	Chavez (1996)	No
33061	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California	Sikes et al. (2006)	No

TABLE 4.4-2 (CONTINUED)
PREVIOUS CULTURAL RESOURCES STUDIES IN OR WITHIN 0.5 MILE OF C-APE

Study	Title	Author (Date)	In C-APE
33596	Cultural Resource Inventory and Evaluation of United States Army Reserve 63D Regional Readiness Command Facilities; Contract No. W912C8-05-P-0052	Maniery and Baker (2007)	No
33697	Palo Alto Regional Water Quality Control Plant Reuse Pipeline, Santa Clara County, California: Cultural Resources Inventory	Martorana (2007)	No
37075	Historic Resources Compliance Report for the U.S. 101 Auxiliary Lanes (Route 85 to Embarcadero Road) Project, Santa Clara County, California 04-SCL-101 PM 52.17-48.97 EA 04-4A330	Whitaker (2008)	No
38808	Extended Phase I Geoarchaeological Study for the State Route 85 Proposed Freeway Performance Initiative Project, Santa Clara County, California, EA 15420, EFIS 04000020481, 04-SR-85 PM R 18.45/23.87	Scher (2012)	No
39663	Cultural Resources Records Search and Site Visit Results for T-Mobile West LLC Candidate SFO4556 (La Avenida Street), 1280 La Avenida Street, Mountain View, Santa Clara County, California (letter report)	Kubal and Rehor (2013)	No
44017	Cultural Resources Inventory and Evaluation of the United States Army Reserve, Jones Hall USAR Center, Mountain View, California, P-43-001836, 63D Regional Readiness Command Facility CA031, Contract No. W912C8-05-0052	PAR Environmental Services Inc. (2007)	No
44025	Cultural Resources Study of the Mountain View ODAS Project, Nodes P3N1A, P3N5A, P3N9A, P3N11A, P3N23A, P3N24A, P3N28A, P3N30A, P3N33B, P3N37A, P3N37A, P3N38A, P3N49A, Mountain View and Los Altos, Santa Clara County, California	Historic Resource Association (2012)	No
45670	Historic Property Survey Report, US 101 Express Lanes Project, Santa Clara County, California, Project No. 0412000459/EA 2G7100, 04-SCL-101 PM 16.00/52.55, 04-SCL-85 PM 23.0/24.1	Kubal (2014)	No
46675	Phase I / Extended Phase 1 Archaeological Survey of Approximately 30 Acres at Mountain View, 63D Regional Support Command, Headquarters, Santa Clara County, California, Contract No: W91278-14-D-0064	Heffiner and Allen (2015)	No
4175	Archaeological Evaluation of the Kaiser Truck Parking Facility, Mountain View, California	Edwards (2000)	No
4492	An archaeological field reconnaissance of both banks of Stevens Creek between the bay and Homestead Boulevard in Mountain View, California (letter report)	Holman (1978)	No

Archaeological Sensitivity

The goal of this archaeological sensitivity analysis is to identify the relative potential of encountering previously unrecorded buried archaeological resources within the C-APE, with attention given to the relationship between the general potential for the presence of archaeological deposits and the potential significance of any buried cultural resources that might be encountered. The general potential for the presence of buried archaeological resources is determined by assessing the age of surficial and subsurface geology and soil units, the proximity of perennial freshwater sources, the density of nearby previously recorded archaeological resources, the regional context in which archaeological resources are often encountered, and the proximity of known ethnohistoric indigenous sites or historic-era resources that could have left archaeological traces. The potential significance of possible buried cultural resources is based upon an informed estimate of the likelihood of encountering relatively undisturbed archaeological deposits that are likely to yielded, or have the potential to yield, information important to the pre-contact

archaeology or history of the local area, California, or the nation; such that the archaeological deposit has the potential to be eligible for the California Register. The "level" of sensitivity (e.g., low, moderate, high) represents the relationship between the general potential for buried archaeological resources and an estimation of the likelihood of encountering potentially significant archaeological deposits.

The C-APE is underlain by Holocene-age alluvial fan deposits. Active alluvial deposits are generally less than 5,000 years old and overlie older land surfaces (including stabilized or abandoned Pleistocene-age surfaces). In many places, the interface between older land surfaces and Holocene-age alluvial deposits is marked by a well-developed buried soil profile (paleosol). Paleosols preserve the composition and character of the earth's surface prior to subsequent sediment deposition; thus, paleosols have the potential to preserve archaeological resources if the area was occupied by humans (Rosenthal and Meyer, 2004). There are also two freshwater sources relatively close to the C-APE. The seasonal Permanente Creek is approximately 0.5 mile to the west and the perennial Stevens Creek is 0.4 mile to the east. In addition, numerous deeply buried sites have been uncovered in the Santa Clara Valley, at depths varying between 1 foot and more than 10 feet below the ground surface. In fact, more than 60 percent of recorded archaeological sites in this region have been found in a buried context (Meyer and Rosenthal, 2007). The soil type and age, nearby freshwater sources, and the buried context in which many Santa Clara Valley archaeological sites are encountered all indicate a moderately-high potential for the presence of archaeological deposits in the C-APE.

Conversely, while the C-APE is within the ethnohistorical territory of the *Puichon*, there are no known ethnographic sites nearby. There are also no previously recorded indigenous or historic-era archaeological sites within 0.5 mile of the C-APE, and the surrounding area was predominately agricultural land until the early-twentieth century. Finally, the previous development and agricultural uses in the C-APE likely resulted in a fair amount of ground disturbance, making it unlikely that the C-APE contains undisturbed archaeological resources, at least at shallow depths.

The Holocene age of the surrounding alluvial soils, and the presence of nearby natural freshwater sources, and discovery of numerous buried archaeological resources in the region all indicate a moderately-high general potential for the presence of buried archaeological resources in the C-APE, but the absence of known nearby indigenous or historic-era archaeological resources lowers the general potential, and the history of ground disturbance in the C-APE and vicinity indicates a low potential for encountering intact significant archaeological resources in the C-APE. Therefore, overall, the C-APE has a moderate archaeological sensitivity.

Native American Heritage Commission Outreach

ESA contacted the California Native American Heritage Commission (NAHC) on January 25, 2018 via email to request a search of the NAHC's Sacred Lands File (SLF) and a list of Native American representatives who may have interest in the Project. The NAHC replied to ESA by email on January 26, 2018. The NAHC reply indicated that the SLF has no record of any cultural resources in the C-APE, and also included a list of Native American representatives who may be interested in the Project. On November 7, 2018 the City sent a letter with a description of the

Project and an attached map to each of the six Native American representatives listed on the NAHC reply. To date there have been no responses to the letters by any of the Native American representatives contacted. **Appendix F** provides documentation of Native American correspondence conducted for the Project.

Pedestrian Survey

On January 26, 2019, ESA conducted a pedestrian survey of the C-APE. The C-APE is currently a parking lot, therefore modified pedestrian survey methods were used, consisting of intensively examining areas of visible ground and observing the overall condition of the C-APE. Digital photographs were taken to document survey conditions. Ground conditions in the C-APE consisted of two asphalt paved parking lots with landscaping in adjacent planters. Ground visibility during the pedestrian survey was very poor due to the paved surface of the parking lot, and was consistently below 10 percent.

No cultural resources were identified in the C-APE, including no evidence of the two previously recorded demolished historic-era buildings.

4.4.5 Regulatory Setting

4.4.5.1 State

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a proposed project would have a significant effect on the environment, including significant effects on historical or unique archaeological or paleontological resources. Under CEQA (Section 21084.1), a project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. The CEQA threshold of significance for a significant impact to paleontological resources is reached when a project is determined to "directly or indirectly destroy a significant paleontological resource or unique geologic feature."

The State implements provisions in CEQA through its statewide comprehensive cultural resources surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, oversees adherence to CEQA regulations. The OHP also maintains the California Historic Resource Inventory. The State Historic Preservation Officer (SHPO) is an appointed official who implements historic preservation programs within the State's jurisdiction. Typically, a resource must be more than 50 years old to be considered as a potential historical resource. The OHP advises recordation of any resource 45 years or older, since there is commonly a five-year lag between resource identification and the date that planning decisions are made.

Historical Resources

CEQA *Guidelines* recognize that a historical resource includes: (1) a resource in the California Register; (2) a resource included in a local register of historical resources, as defined in California

Public Resources Code (PRC) Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); and (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:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- 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 resource or historical 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]).

Tribal Cultural Resources

California State Assembly Bill (AB) 52, enacted in September 2014, recognizes that California Native American tribes have expertise with regard to their tribal history and practices. The bill established a new category of cultural resources known as tribal cultural resources to consider tribal cultural values when determining impacts on cultural resources (PRC Sections 21080.3.1, 21084.2, and 21084.3). PRC Section 21074(a) defines a tribal cultural resource as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  - included or determined to be eligible for inclusion in the California Register; or
  - included in a local register of historical resources, as defined in PRC Section 5020.1(k).
- 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 these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

A cultural landscape that meets the criteria of PRC Section 21074(a) is also a tribal cultural resource if the landscape is geographically defined in terms of the size and scope. Also, an historical resource as described in PRC Section 21084.1, a unique archaeological resource as defined in PRC Section 21083.2, or a non-unique archaeological resource as defined in PRC Section 21083.2 may also be a tribal cultural resource if it meets the criteria of PRC Section 21074(a).

AB 52 requires lead agencies to analyze project impacts on tribal cultural resources, separately from archaeological resources (PRC Sections 21074 and 21083.09), in recognition that archaeological resources have cultural values beyond their ability to yield data important to prehistory or history. AB 52 also defines tribal cultural resources in a new section of the PRC (Section 21074, see above), and requires lead agencies to engage in additional consultation procedures with respect to California Native American tribes (PRC Sections 21080.3.1, 21080.3.2, and 21082.3). The provisions of AB 52 apply to projects that have a notice of preparation or notice of negative declaration/mitigated negative declaration filed on or after July 1, 2015. As such, AB 52 applies to the current Project.

Senate Bill 18

California Senate Bill (SB) 18 requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting tribal cultural resources. SB 18 requires cities and counties to send any proposals for revisions or amendments to general plans and specific plans to those California Native American Tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. Cities and counties must also conduct consultations with these tribes prior to adopting or amending their general plans or specific plans. Because it requires a General Plan Land Use Map amendment, SB 18 applies to the Project.

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]). 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 local, State, and/or federal 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. Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed in the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historic resources;
- Historic resources contributing to historic districts; and
- Historic resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

California Public Resources Code Section 5097

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 Native American artifacts or human remains is guilty of a felony, which is punishable by imprisonment. Any person who removes, without authority of law, any such items with an intent to sell or dissect or with malice or wantonness is also guilty of a felony which is punishable by imprisonment.

California Native American Historic Resource Protection Act

The California Native American Historic Resources Protection Act of 2002 imposes civil penalties, including imprisonment and fines up to $50,000 per violation, for persons who unlawfully and maliciously excavates upon, removes, destroys, injures, or defaces a Native American historic, cultural, or sacred site that is listed or may be listed in the California Register.

California Health and Safety Code Section 7050.5

Section 7050.5 of the California Health and Safety Code protects human remains by prohibiting the disinterring, disturbing, or removing of human remains from any location other than a dedicated cemetery. PRC Section 5097.98 (and reiterated in CEQA *Guidelines* Section 15064.59[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.

California Code of Regulations Section 4307

Title 14, Section 4307 of the California Code of Regulations prohibits any person from removing, inuring, defacing, or destroying any object of paleontological, archaeological, or historical interest or value.

4.4.5.2 Local

City of Mountain View General Plan

The City has established goals and policies in the 2030 General Plan in regards to cultural resources. Goals and policies as outlined in the Land Use and Design Element that would apply to the proposed Project are listed as follows:

Goal LUD-11: Preserved and protected important historic and cultural resources.

Policy LUD 11.1: Historical Preservation. Support the preservation and restoration of structures and cultural resources listed in the Mountain View Register of Historic Resources, the California Register of Historic Places or National Register of Historic Places.

Policy LUD 11.5: Archaeological and Paleontological Site Protection. Require all new development to meet state codes regarding the identification and protection of archaeological and paleontological deposits.

Policy LUD 11.6: Human remains. Require all new development to meet state codes regarding the identification and protection of human remains

4.4.6 Cultural and Tribal Cultural Resources Impacts

4.4.6.1 Significance Criteria

Consistent with Appendix G of the CEQA *Guidelines*, the Project would cause adverse impacts to cultural resources and tribal cultural resources if it would:

a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA *Guidelines* Section 15064.5;

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA *Guidelines* Section 15064.5;

c) Disturb any human remains, including those interred outside of dedicated cemeteries;

d) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074.

4.4.6.2 Methods of Analysis

Historical Resources

Impacts to historical resources were assessed by identifying any activities such as new construction, demolition, or substantial alteration that would affect resources that have been identified as historical. Individual properties and districts identified as historical resources under CEQA include those that are significant because of their association with important events, people, or architectural styles or master architects, or for their informational value (California Register Criteria 1, 2, 3, and 4) and that retain sufficient historic integrity to convey their significance. Criterion 4 is typically applied to the evaluation of archaeological resources and not to architectural resources. Note, historical resources may include architectural resources, archaeological resources, and tribal cultural resources.

Once a resource has been identified as significant, it must be determined whether the impacts of the project would "cause a substantial adverse change in the significance" of the resource (CEQA *Guidelines* Section 15064.5[b]). A substantial adverse change in the significance of a historical resource means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of [the] historical resource would be materially impaired" (CEQA *Guidelines* Section 15064.5[b][1]). A historical resource is materially impaired through the demolition or alteration of the resource's physical characteristics that convey its historical significance and that justify its inclusion in (or eligibility for inclusion in) the California Register or a qualified local register (CEQA *Guidelines* Section 15064.5[b][2]). Therefore, material impairment of historical resources constitutes a significant impact.

Archaeological Resources

The significance of most indigenous and historic-era archaeological sites is typically assessed under California Register Criterion 4. This criterion stresses the importance of the information potential contained within a site, rather than its significance as a surviving example of a type or its association with an important person or event. Archaeological resources may qualify as historical resources under the definition provided in CEQA *Guidelines* Section 15064.5(a), or they may be assessed under CEQA as unique archaeological resources, defined as archaeological artifacts, objects, or sites that contain information needed to answer important scientific research questions (PRC Section 21083.2). A substantial adverse change in the significance of an archaeological resource is assessed similarly to other historical resources; that is, if the physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings occurs such that the significance of [the] historical resource would be materially impaired (CEQA *Guidelines* Section 15064.5[b][1]). As previously stated, a historical resource is materially impaired through the demolition or alteration of the resource's physical characteristics that convey its historical significance and that justify its inclusion in (or eligibility for inclusion in) the California Register or a qualified local register (CEQA *Guidelines* Section 15064.5[b][2]). Therefore, material impairment of archaeological resources considered historical resources or unique archaeological resources constitutes a significant impact.

Archaeological resources, both as historical resources, according to CEQA *Guidelines* Section 15064.5, as well as unique archaeological resources, as defined in PRC Section 21083.2(g) are discussed in Impact CUL-2.

Human Remains

Human remains, including those buried outside of formal cemeteries, are protected under several state laws, including PRC Section 5097.98 and Health and Safety Code Section 7050.5. These laws are identified above in State Regulations. For the purposes of this analysis, intentional disturbance, mutilation, or removal of interred human remains constitutes a significant impact.

Tribal Cultural Resources

The significance of a tribal cultural resource is assessed by evaluating: 1) its eligibility for listing on the California Register; 2) its eligibility as a unique archaeological resource pursuant to PRC Section 21083.2; and, 3) its listing status on the NAHC's SLF. Additionally, a lead agency can independently determine a resource to be a tribal cultural resource. Because California Native American tribes are considered experts with respect to tribal cultural resources, the analysis of whether project impacts may result in a substantial adverse change to the significance of a tribal cultural resource is heavily dependent on consultation efforts conducted between the lead agency and relevant California Native American tribes during the CEQA process.

4.4.6.3 Topics with No Impact or Otherwise Not Addressed in This EIR

Review and comparison of the setting circumstances and Project characteristics with the significance criteria stated above clearly indicate that no impacts would be associated with Criterion a) (cause a substantial adverse change in the significance of a historical resource). This criterion addresses impacts to historical resources as defined by only historic-era architectural resources, including buildings, structures, and objects. Based on the results of the background research and field surveys, no architectural resources older than 50 years of age have been identified in the C-APE. As such, there are no known historical resources, as defined in CEQA *Guidelines* Section 15064.5, in the C-APE. Therefore, the Project would not cause a substantial adverse change in the significance of any historical resources, and no impact would occur.

4.4.6.4 Discussion of Impacts and Mitigation Measures

Impact CUL-1: Project construction could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA *Guidelines* Section 15064.5 (Criterion b.) (*Potentially Significant*)

Archaeological resources, both as historical resources, according to CEQA *Guidelines* Section 15064.5, as well as unique archaeological resources, as defined in PRC Section 21083.2(g).

No evidence of archaeological resources in the C-APE was identified by the background research, records search, or pedestrian survey conducted for the Project. Based on the archaeological sensitivity analysis conducted for this investigation, the C-APE has a moderate archaeological

sensitivity. In summary, there are no known archaeological resources in the C-APE and, therefore, the Project is not anticipated to result in impacts to any archaeological resources.

However, the discovery of previously unknown archaeological resources or human remains is always possible in the alluvial Holocene-age soils of the Santa Clara Valley, such as those present in the C-APE. If previously unrecorded archaeological deposits are present in the C-APE, and if they are found to qualify as archaeological resources, pursuant to CEQA *Guidelines* Section 15064, impacts to the resources resulting from the Project would be potentially significant.

The City's Standard Condition of Approval regarding the discovery of archaeological resources, provided below, would reduce this potential significant impact:

> ***Standard Condition PL-118 (Discovery of Archaeological Resources)*:** If prehistoric or historic-period cultural materials are unearthed during ground-disturbing activities, it is recommended that all work within 100' of the find be halted until a qualified archaeologist and Native American representative can assess the significance of the find. Prehistoric materials might include obsidian and chert-flaked stone tools (e.g., projectile points, knives, scrapers) or tool-making debris; culturally darkened soil ("midden") containing heat-affected rocks and artifacts; stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered-stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. If the find is determined to be potentially significant, the archaeologist, in consultation with the Native American representative, will develop a treatment plan that could include site avoidance, capping, or data recovery.

Mitigation Measure CUL-1, reiterates some of the Standard Condition and provides additional, detailed steps to take in the event of the inadvertent discovery of potential archaeological resources during Project implementation, including timing for the inspection of finds by a qualified archaeologist, examples of indigenous archaeological and historic-area materials, and steps to take incase avoidance of the resource is not feasible. Implementation of Mitigation Measure CUL-1 would reduce this potential significant impact to a less-than-significant level.

> **Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources.** If indigenous or historic-era archaeological resources are encountered during Project construction activities, all activity within 100 feet of the find shall cease and the find shall be flagged for avoidance. The City and a qualified archaeologist, defined as one meeting the U.S. Secretary of the Interior's Professional Qualifications Standards for Archeology, shall be immediately informed of the discovery. The qualified archaeologist shall inspect the find within 24 hours of discovery and notify the City of their initial assessment. Indigenous 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 building or structure footings and walls, and deposits of metal, glass, and/or ceramic refuse.
>
> If the City determines, based on recommendations from the qualified archaeologist, that the resource may qualify as a historical resource or unique archaeological resource (as

defined in CEQA *Guidelines* Section 15064.5), or a tribal cultural resource (as defined in PRC Section 21074), the resource shall be avoided if feasible. Avoidance means that no activities associated with the Project that may affect cultural resources shall occur within the boundaries of the resource or any defined buffer zones. If avoidance is not feasible, the City of Mountain View shall consult with appropriate Native American tribes (if the resource is indigenous), and other appropriate interested parties to determine treatment measures to avoid, minimize, or mitigate any potential impacts to the resource pursuant to PRC Section 21083.2 and CEQA *Guidelines* Section 15126.4. This shall include documentation of the resource and may include data recovery or other measures. Treatment for most resources would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource. The resource and treatment method shall be documented in a professional-level technical report to be filed with the California Historical Resources Information System. Work in the area may commence upon completion of approved treatment and under the direction of the qualified archaeologist.

Significance After Mitigation: Less Than Significant.

Impact CUL-2: Project construction would not disturb human remains, including those interred outside of formal cemeteries. (Criterion c.) (*Less than Significant, No Mitigation Required*)

No human remains have been identified at the C-APE through archival research, field surveys, or Native American consultation. Also, the land use designations for the C-APE do not include cemetery uses, and no known human remains exist within the C-APE. Therefore, the Project is not anticipated to disturb any human remains.

However, since the nature of the Project would involve ground-disturbing activities, it is possible that such actions could unearth, expose, or disturb previously unknown human remains. If any previously unknown human remains are present in the C-APE, impacts to them from the Project would be potentially significant.

The City's Standard Condition of Approval regarding Discovery of Human Remains, provided below, would reduce this potential impact to a less-than-significant level, and no mitigation is required.

***Standard Condition PL-119 (Discovery of Human Remains)*:** In the event of the discovery of human remains during construction or demolition, there shall be no further excavation or disturbance of the site within a 50-foot radius of the location of such discovery, or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his/her authority, he/she shall notify the Native American Heritage Commission, which shall attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the landowner shall reinter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance. A final report shall be submitted to the City's Community Development Director prior to

release of a Certificate of Occupancy. This report shall contain a description of the mitigation programs and its results, including a description of the monitoring and testing resources analysis methodology and conclusions, and a description of the disposition/curation of the resources. The report shall verify completion of the mitigation program to the satisfaction of the City's Community Development Director.

Significance: Less Than Significant.

Mitigation: None required.

Impact CUL-3: Project construction could cause a substantial adverse change in the significance of a tribal cultural resource. (Criterion d.) (*Potentially Significant*)

Through background research, field survey, and outreach to the NAHC and Native American tribes, no tribal cultural resources, as defined in PRC Section 21074, have been identified in the C-APE or vicinity. Therefore, the Project is not anticipated to impact any tribal cultural resources, as defined in PRC Section 21074.

However, as previously mentioned, there remains the potential that previously unrecorded archaeological resource or unknown human remains could be encountered during Project implementation. If any previously unrecorded archaeological resources and/or human remains are present in the C-APE, were encountered during Project construction, and found to be a tribal cultural resource, impacts to the resource resulting from the Project would be potentially significant.

The City's Standard Condition of Approval regarding Discovery of Archaeological Resources, and Standard Condition of Approval regarding Discovery of Human Remains, provided above, would reduce this potential significant impact. However, implementation of **Mitigation Measure CUL-1**, provided above, which reiterates some of the Standard Conditions and provides additional steps to take in the event of the inadvertent discovery of potential archaeological resources during Project implementation, would reduce this potential significant impact to a less-than-significant level.

Mitigation: Implementation of **Mitigation Measure CUL-1**.

Significance After Mitigation: Less Than Significant.

Cumulative Impacts

Development of the Project would contribute to cumulative impacts on cultural resources if the Project and other projects in the vicinity significantly impact the same cultural resources.

Geographic Context

The geographic scope for cumulative Project impacts on cultural resources includes potential cultural resources within the Project site, in the vicinity of the Project site (within approximately 500 feet), and in the City of Mountain View and the Moffett/Whisman Planning Area.

Impact C-CUL-1: Project construction, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, could contribute to an adverse cumulative impact to cultural resources and tribal cultural resources. (*Potentially Significant*)

As discussed in Section 4.4.6.3, the Project would not impact any historical resources. Thus, development of the Project site would not contribute to a potential cumulative impact on historical resources, and no cumulative impact has been identified.

As discussed above under Impacts CUL-1, CUL-2, and CUL-3, excavation associated with the Project could encounter previously unrecorded archaeological resources and/or human remains, including potential tribal cultural resources. However, as discussed under Impacts CUL-1, CUL-2, and CUL-3, such potential impacts a would be reduced to less-than-significant levels with implementation of the City's Standard Conditions of Approval and Mitigation Measure CUL-1. Compliance with the City's Standard Conditions of Approval and Mitigation Measure CUL-1 would effectively avoid damage to or loss of resources, and little to no residual impact would remain after mitigation.

Therefore, the Project's contribution to this cumulative impact would not be cumulatively considerable and thus would be less than significant.

Mitigation: Implementation of **Mitigation Measure CUL-1**.

Significance After Mitigation: Less Than Significant.

4.4.7 Summary of Cultural and Tribal Cultural Resources Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact CUL-1: Project construction could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA *Guidelines* Section 15064.5.	Potentially Significant	Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources	Less than Significant
Impact CUL-2: Project construction would not disturb human remains, including those interred outside of formal cemeteries.	Less than Significant	None required	—
Impact CUL-3: Project construction could cause a substantial adverse change in the significance of a tribal cultural resource.	Potentially Significant	Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources	Less than Significant
Impact C-CUL-1: Project construction, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, could contribute to an adverse cumulative impact to cultural resources.	Potentially Significant	Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources	Less than Significant

4.4.8 References – Cultural and Tribal Cultural Resources

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4.5 Energy

4.5.1 Introduction

Public Resources Code section 21100(b) requires an EIR to discuss and consider mitigation measures for the potential energy impacts of proposed projects, with emphasis on avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy. This section examines the Project's energy characteristics to determine whether the Project could result in any significant environmental impacts relating to energy during construction, operation and maintenance, or decommissioning activities.

This section incorporates information and analysis from a construction air quality analysis that was prepared for the Project site dated April 25, 2019, by Illingworth & Rodkin, Inc. (**Appendix B**).

4.5.2 Existing Setting

4.5.2.1 State

Energy Profile

Total energy usage in California was 7,830 trillion British Thermal Units (Btus) in 2016 (the most recent year for which this specific data is available), which equates to an average of 199 million Btu per capita. These figures place California 2nd 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, 24 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, whereas petroleum-based fuel consumption is generally accounted for by transportation-related energy use (EIA, 2019).

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. Approximately 71 percent of the electrical power needed to meet California's demand is produced in the State; the balance, approximately 29 percent, is imported from the Pacific Northwest and the Southwest. In 2017, California's in-State electricity was derived from natural gas (33 percent), coal (4 percent), large hydroelectric resources (15 percent), nuclear sources (9 percent), and renewable resources that include geothermal, biomass, small hydroelectric resources, wind, and solar (29 percent) (CEC, 2018a).

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 California Energy Commission (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

3.4 million barrels in 2017. California is the third largest consumer of gasoline in the world, behind the U.S. (as a whole) and China (EIA, 2017).

Supply

California is nearly self-sufficient with regard to the gasoline and diesel fuel supply, obtaining almost all of the supply to meet local demand from the California refineries (CEC, 2014). Refineries in California often operate at or near maximum capacity because of the high demand for petroleum products. When unplanned refinery outages occur, replacement supplies must be brought in by marine tanker from refineries in the state of Washington or on the U.S. Gulf Coast. California requires that all motorists use, at a minimum, a specific blend of motor gasoline called CaRFG (California Reformulated Gasoline) as part of an overall program to reduce emissions from motor vehicles. Refineries in several other countries can also supply CaRFG. However, locating and transporting replacement motor gasoline that conforms to California's strict fuel specifications from overseas can take several weeks (EIA, 2018). As a result, unplanned outages often result in a reduction in supply that causes prices to increase, sometimes dramatically. The severity and duration of these price spikes depend on how quickly the refinery issue can be resolved and how soon supply from alternative sources can reach the affected market (EIA, 2015).

Most petroleum supply disruptions or shortage events are resolved by the energy industry before they become significant. However, there are instances where the severity and scope of disasters require additional actions by government to help facilitate and coordinate response and recovery efforts (NASEO, 2018).

Consumption and Distribution

Gasoline is the most used transportation fuel in California, with 97 percent of all gasoline being consumed by light-duty cars, pickup trucks, and sport utility vehicles (CEC, 2019a). Diesel fuel is the second largest transportation fuel used in California, representing 17 percent of total fuel sales behind gasoline. Nearly all heavy duty-trucks, delivery vehicles, buses, trains, ships, boats and barges, farm, construction and heavy duty military vehicles and equipment have diesel engines. Diesel is the fuel of choice because it has 12 percent more energy per gallon than gasoline and has fuel properties that prolong engine life making it ideal for heavy duty vehicle applications (CEC, 2019b).

In 2018, taxable gasoline sales (including aviation gasoline) in California accounted for approximately 15.5 billion gallons of gasoline (CBE, 2019a), and taxable diesel fuel sales accounted for approximately 3.1 billion gallons of diesel fuel (CBE, 2019b). Statewide there was an overall decrease in gasoline and diesel consumption from 2007 to 2011 due to the economic recession, but consumption has increased since then.

4.5.2.2 Regional and Local Setting

Pacific Gas and Electric Company (PG&E) is an investor-owned utility company that provides electricity and natural gas supplies and services throughout a 70,000 square-mile service area that extends from Eureka in the north, to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada mountains in the east. The nine-county Bay Area is within PG&E’s service area for both electricity and natural gas. Operating characteristics of PG&E’s electricity

and natural gas supply and distribution systems are provided below. Also discussed are Silicon Valley Clean Energy, and regional consumption of transportation fuels.

PG&E Electric Utility Operations

PG&E provides "bundled" services (i.e., electricity, transmission and distribution services) to most of the six million customers in its service territory, including residential, commercial, industrial and agricultural consumers. Customers also can obtain electricity from alternative providers such as municipalities or Customer Choice Aggregators (CCAs), as well as from distributed-generation resources, such as rooftop solar installations.

In recent years, PG&E has improved its electric transmission and distribution systems to accommodate the integration of new renewable energy resources, distributed generation resources, and energy storage facilities, and to help create a platform for the development of new Smart Grid technologies (PG&E, 2019).

In 2018, PG&E generated and/or procured a total of 48,832 gigawatt hours (GWh) of electricity[1]. Of this total, PG&E owns approximately 7,686 megawatts (MW) of generating capacity, itemized below (see **Table 4.5-1**). The remaining electrical power is purchased from other sources in and outside of California.

TABLE 4.5-1
PG&E-OWNED ELECTRICITY GENERATING SOURCES (2018)

Source	Generating Capacity (Megawatts MW)
Nuclear (Diablo Canyon-2 reactors)	2,240
Hydroelectric	3,891
Fossil Fuel-Fired	1,400
Fuel Cell	3
Solar Photovoltaic (13 units-12 in Fresno County, 1 in Kings County)	152
Total	7,686

SOURCE: PG&E, 2019 (2018 Annual Report)

Renewable Energy Resources

California law requires load-serving entities, such as PG&E, to gradually increase the amount of renewable energy they deliver to their customers to at least 33 percent of their total annual retail sales by 2020. This program, known as the Renewables Portfolio Standard (RPS) program, became effective in December 2011, and established three multi-year compliance periods that have gradually increasing RPS targets: 2011 through 2013, 2014 through 2016, and 2017 through 2020. After 2020, the RPS compliance periods will be annual.

[1] This amount excludes electricity provided to direct access customers and CCAs who procure their own supplies of electricity.

Renewable generation resources, for purposes of the RPS program, include bioenergy such as biogas and biomass, certain hydroelectric facilities (30 MW or less), wind, solar, and geothermal energy. As shown in **Table 4.5-2**, during 2018, 38.9 percent of PG&E's energy deliveries were from renewable energy sources, exceeding the annual RPS target of 28.0 percent (PG&E, 2019).

TABLE 4.5-2
PG&E 2018 RENEWABLE ENERGY SOURCES

Source	Percent of Total Energy Portfolio
Bioenergy	4.4
Geothermal	3.7
Wind	10.0
RPS-Eligible Hydroelectric	2.7
Solar	18.1
Total	**38.9**

SOURCE: PG&E, 2019 (2018 Annual Report)

Electricity Consumption

Table 4.5-3 shows electricity consumption by sector in the PG&E service area based on the latest available data from the CEC. As shown in the table, PG&E delivered approximately 82 billion kilowatt-hours (kWh) in 2017, of which approximately 29.9 billion kWh were consumed by residential uses and 30.4 billion kWh were consumed by commercial building uses.

TABLE 4.5-3
ELECTRICITY CONSUMPTION IN PG&E SERVICE AREA (2017)

Agricultural and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Streetlight	Total Usage
All Usage Expressed in Millions of kWh (GWh)							
5,050	30,447	4,310	10,410	1,747	29,920	341	82,224

SOURCE: CEC, 2019a

In Santa Clara County, approximately 17.2 billion kWh of electricity was consumed in 2017, with approximately 4.1 billion kWh consumed by residential uses and 13.1 billion kWh by non-residential uses (CEC, 2019a).

PG&E Natural Gas Operations

PG&E provides natural gas transportation services to "core" customers and to "non-core" customers (i.e., industrial, large commercial, and natural gas-fired electric generation facilities) that are connected to its gas system in its service territory. Core customers can purchase natural gas from either PG&E or non-utility third-party gas procurement service providers. PG&E offers

backbone gas transmission, gas delivery (local transmission and distribution), and gas storage services as separate and distinct services to its non-core customers. Access to PG&E's backbone gas transmission system is available for all natural gas marketers and shippers, as well as non-core customers. PG&E also delivers gas to some customers outside of PG&E's service territory and to third-party natural gas storage customers. In 2018, total sales of natural gas were 219,061 million cubic feet (MMcf) (PG&E, 2019).

Natural Gas Supplies

PG&E can receive natural gas from all the major natural gas basins in western North America, including basins in western Canada, the Rocky Mountains, and the southwestern United States. PG&E also is supplied by natural gas fields in California. PG&E purchases natural gas to serve its core customers directly from producers and marketers in both Canada and the United States. The contract lengths and natural gas sources of PG&E's portfolio of natural gas purchase contracts have fluctuated generally based on market conditions. During 2018, PG&E purchased approximately 287,000 MMcf of natural gas (net of the sale of excess supply of gas). Most of this natural gas was purchased under contracts with a term of one year or less. PG&E's largest individual supplier represented approximately 15 percent of the total natural gas volume that PG&E purchased during 2018 (PG&E, 2019).

Natural Gas Consumption

Table 4.5-4 shows the natural gas consumption by sector in the PG&E service area with the latest data available from CEC.

TABLE 4.5-4
NATURAL GAS CONSUMPTION IN PG&E SERVICE AREA (2017)

Agricultural and Water Pump	Commercial Building	Commercial Other	Industry	Mining and Construction	Residential	Total Usage
All Usage Expressed in Millions of Therms						
36.4	864.8	68.0	1,701.3	170.8	1,873.3	4,714.7

SOURCE: CEC, 2019a.

As shown in the table above, PG&E produced approximately 4.7 billion therms in 2017, of which approximately 1.9 billion therms were consumed by residential uses and 865 million therms were consumed by commercial building uses.

In Santa Clara County, approximately 445 million therms of natural gas was consumed in 2017, with approximately 239 million therms consumed by residential uses and 206 million therms consumed by non-residential uses (CEC, 2019a).

Silicon Valley Clean Energy

Silicon Valley Clean Energy (SVCE) is a community-governed, local power supplier that provides renewable and carbon-free electricity to Mountain View residents and businesses under Silicon Valley's community choice energy (CCE) program, at rates that are lower or comparable

to PG&E's rates. The State of California passed legislation in 2002 (Assembly Bill 117) that permits local agencies to form CCE programs for their communities. Under a CCE program, the utility company (in this case PG&E) continues to deliver and service the electricity through its existing utility lines, and provide billing and customer service. SVCE offers 100 percent carbon-free electricity at about the same price as PG&E's standard grid offering. Customers are automatically enrolled in the program, but have the option to opt out and use traditional PG&E service[2] (SVCE, 2019).

PG&E Local Energy Infrastructure

Electrical power and natural gas is delivered to the area of the Project site from various PG&E infrastructure. Existing electrical infrastructure on the Project site includes underground power lines that serve the existing office building and lighting for surface parking lots. An existing natural gas transmission line currently enters the site from N Shoreline Boulevard and serves the existing office building.

Gasoline and Diesel

The CEC estimates that 685 million gallons of gasoline and 36 million gallons of diesel were sold in 2017 in Santa Clara County. It is also estimated that there were 399 gasoline stations in Santa Clara County in 2017 (CEC, 2018b).

4.5.3 Regulatory Setting

4.5.3.1 Federal

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. Initiatives in these areas continue today.

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 current 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; and constructing energy-efficient buildings. Additionally, tax credits are available for the installation of qualified fuel cells, stationary microturbine power plants, and solar power equipment.

[2] Only a small percentage of customers opt out of SVCE, amounting to 1.8 percent of combined residential and commercial accounts (City of Mountain View, 2018).

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 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), signed in 2009.

Energy and Independence Security Act of 2007 and Corporate Average Fuel Economy Standards

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 by setting automobile efficiency standards, and increase in alternative fuel use. This act also amends portions of the NECPA, as described above. Section 4.7, *Greenhouse Gas Emissions*, details Federally established fuel economy standards by the United States Environmental Protection Agency (U.S. EPA) and National Highway Traffic Safety Administration (NHTSA). In the course of more than 30 years, this regulatory program has resulted in improved fuel economy throughout the United States' vehicle fleet (NHTSA, 2014; 2018).

4.5.3.2 State

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the CEC. The Act established a State policy to reduce wasteful, uneconomical and unnecessary uses of energy by employing a range of measures. The Act also requires EIRs to consider wasteful, inefficient, and unnecessary consumption of energy and was the driving force behind the creation of Appendix F to the *CEQA Guidelines*.

California Energy Action Plan

California's *2008 Energy Action Plan Update* updates 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 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., reducing 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

In 2002, the Legislature passed Senate Bill 1389, which required the CEC to develop an integrated energy plan biannually for electricity, natural gas, and transportation fuels, for the California Energy Report. SB 1389 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 greenhouse gas (GHG) reduction measures.

The most recent update to the IEPR (2018) 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, Statues 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 policies and trends in integrated resource planning, distributed energy resources, transportation electrification, barriers faced by disadvantaged communities, demand response, transmission and landscape-scale planning, the California Energy Demand Preliminary Forecast, the preliminary transportation energy demand forecast, renewable gas (in response to Senate Bill 1383), the natural gas outlook, and solutions to increase resiliency in the electricity sector. The key strategies identified in the most recent, 2018 IEPR Update are summarized below (CEC, 2018c).

Decarbonizing the Electricity Sector

Decarbonizing the electricity sector is part of an integrated approach to reducing emissions from energy use. The 2018 IEPR emphasizes the current challenge the State faces in increasing the State's ability to integrate more renewable energy into the grid. There is an increasing need for energy storage that can balance supply and demand by absorbing excess energy and reinjecting it into the grid when demand increases. There is also a need for transmission investments to link our extensive renewable resources to load centers throughout the grid. The challenges are compounded by increasing numbers of Californians who are generating, and in some cases, storing their own electricity or purchasing electricity from CCAs.

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 (IOUs), publicly owned utilities (POUs), and other stakeholders through a public process. As described 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 standard, described below), require, for the first time, PV installations on new homes. However, outstanding issues remain, including how ZNE should be defined, and the need to identify compliance pathways when on-site renewable generation is

not feasible, as well as the appropriate role for natural gas in ZNE buildings. The primary challenge is to build a technical and regulatory foundation for orchestration of energy efficiency and all other feasible distributed and customer-sited clean energy resources.

Transportation Electrification

California is working to transform the transportation sector away from petroleum to near-zero emission vehicles operating with low-carbon fuels and zero-emissions vehicles (ZEVs) that run on electricity from batteries or hydrogen fuel cells. Including emissions from refineries, the transportation sector accounted for more than 50 percent of the State's GHG emissions as of 2016. 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 (CEC, 2016). The next update to the Title 24 energy efficiency standards (2019 standards) go 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 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 2016 to include new mandatory measures for residential and nonresidential uses; the new measures took effect on January 1, 2017 (CBSC, 2016). Most changes are related to the definitions and to the clarification or addition of referenced manuals, handbooks, and standards.

Executive Order S-14-08 and S-21-09

In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the State's RPS to 33 percent renewable power by 2020. In September 2009, then-

Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs the California Air Resources Board under its Assembly Bill (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 California'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 also creates new standards for the RPS goals that were established by SB 350 in 2015. Specifically, the bill increases 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.

Transportation Energy

AB 1007 (Pavley)-Alternative Fuel Standards and AB 1493

AB 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 the California Air Resources Board 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.

In response to the transportation sector accounting for more than half of California's carbon dioxide (CO2) emissions, AB 1493 (commonly referred to as California Air Resources Board (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.

Executive Order B-16-12 - 2025 Goal for Zero Emission Vehicles (ZEVs)

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 (CARB, 2017). The program requires a greater number of zero-emission vehicle 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 ZEV's (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.

4.5.3.3 Local

Mountain View 2030 General Plan and Greenhouse Gas Reduction Program

As discussed in Section 4.7, *Greenhouse Gas Emissions*, the City of Mountain View certified the General Plan Program EIR and adopted the *Mountain View 2030 General Plan* and *Greenhouse Gas Reduction Program* (GGRP) in July 2012. The GGRP is a separate but complementary document to the *Mountain View 2030 General Plan* (General Plan) that implements the GHG emissions reduction

goals of the General Plan. The GGRP includes energy conservation requirements and programs with a dual benefit of achieving GHG emission reductions (City of Mountain View, 2012).

City of Mountain View Climate Protection Roadmap

The City of Mountain View adopted the *City of Mountain View Climate Protection Roadmap* (CPR) in September 2015 to address climate change through 2050 and the feasibility of achieving the adopted targets in the GGRP. The CPR seeks to evaluate mechanisms through which the community could achieve the 2050 emission reduction target and identify various roles the City might play in facilitating such reductions (City of Mountain View, 2015).

Mountain View Green Building Code

The Mountain View Green Building Code (MVGBC) amends the State-mandated CALGreen Code to include local green building standards and requirements for private development. The MVGBC applies green building requirements per building type and threshold to new construction, residential additions and commercial/industrial tenant improvements. All residential construction of five units or more must: 1) comply with the mandatory measures of the CALGreen Code and any Mountain View amendments; 2) meet the intent of 70 GreenPoint Rated points[3]; and 3) demonstrate energy compliance to meet or exceed Title 24 standards. All non-residential new construction less than 5,000 square feet must: 1) meet the mandatory measures of the CALGreen Code and any Mountain View amendments; and 2) demonstrate energy compliance to meet or exceed Title 24 standards. All new mixed-use construction projects must comply with Mountain View's green building requirements and meet the requirements applicable to each primary occupancy component.

Mountain View Water Conservation in Landscaping Regulations

The City's water conservation in landscaping regulations (Chapter 36, Article XI, Division 3, Section 36.34.30) further the city's current water conservation efforts, reduce future water demands, and comply with State water conservation requirements. New and/or rehabilitated landscaping must comply with the provisions of the water conservation in landscaping regulations.

4.5.4 Energy Impacts

4.5.4.1 Significance Criteria

Significance criteria used in this analysis are based on CEQA *Guidelines* Appendices G and F. Specifically, a significant energy impact would occur if implementation of the Project were to:

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation;

b) Conflict with or obstruct a State or local plan for renewable energy or energy efficiency;

[3] Refers to a residential green building rating system developed by Build It Green. Projects can use any of the adopted GPR checklists that most appropriately apply to the project type proposed.

4.5.4.2 Approach to Analysis

This impact analysis evaluates the potential for the proposed Project to result in a substantial increase in energy demand, consistent with Public Resources Code 21100(b)(3), and/or wasteful use of energy during Project construction and operation. The impact analysis is informed by Appendix F of the *CEQA Guidelines*. Though the analysis provides construction and operational energy use estimates for the Project, the impacts are analyzed based on an evaluation of whether this energy use would be considered excessive, wasteful or inefficient taking into account energy efficiency features, as well as required compliance with applicable standards and policies aimed to reduce energy consumption including the City's GGRP and the State's Title 24 Energy Efficiency Standards. Energy emissions detail supporting the Project estimates presented in this section are also presented in Section 4.7, *Climate Change and Greenhouse Gas Emissions*.

4.5.4.3 Discussion of Impacts and Mitigation Measures

Impact ENE-1: The Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. (Criterion a) (*Less Than Significant, No Mitigation Required*)

Construction Energy Use

The analysis in this section utilizes the GHG emissions estimates identified in Appendix B, to estimate gasoline and diesel fuel consumption volumes for construction-related equipment and vehicles. The fuel use calculations are also provided in **Appendix G**, *1001 N Shoreline Boulevard Project Fuel Use*, and are summarized below. Project construction would require the use of construction equipment for grading, hauling, building construction activities, and paving as well as vehicle use from construction workers and vendors traveling to and from the Project site. Because the CalEEMod program used does not display the amount and fuel type for construction-related sources, additional calculations were conducted.

Project construction is expected to consume a total of approximately 100,129 gallons of diesel fuel from construction equipment, vendor truck trips, and haul truck trips. Approximately 29,795 gallons of gasoline from construction worker vehicle trips would also be consumed during Project construction. For reference, approximately 685 million gallons of gasoline and 36 million gallons of diesel were sold in Santa Clara County in 2017 (CEC, 2018b).

Construction activities and corresponding fuel energy consumption would be temporary and localized, as the use of diesel fuel and heavy-duty equipment would not be a typical condition of the Project. In addition, there are no unusual Project characteristics that would cause the use of construction equipment that would be less energy efficient compared with the other similar construction projects.

Additionally, the Project includes measures that would increase equipment fuel efficiency and ensure that fuel is not being wasted. For example, as described in Section 4.2 *Air Quality*, the Project would include a City Standard Condition of Approval (Air Quality Construction Measures) which would minimize construction equipment idling times by shutting off equipment when not in use and reducing the maximum idling time to 5 minutes. All construction equipment

would also be maintained, properly tuned, and checked by a certified mechanic and determined to be running in proper condition prior to operation.

These measures would increase equipment fuel efficiency and ensure that fuel is not being wasted. As a result, construction-related fuel consumption by the Project would not result in inefficient, wasteful, or unnecessary energy use compared with the energy use for other construction projects in the region. This construction-related energy use impact would be less than significant.

Operational Energy Use

Once operational, the Project would involve energy demand for electricity, natural gas, as well as gasoline for motor vehicle trips attributed to the Project. The overall energy usage at the Project site would increase with the proposed residential and retail uses compared to existing office uses on the Project site. Project annual operational energy use is presented in **Table 4.5-5**.

TABLE 4.5-5
ANNUAL OPERATIONAL ENERGY CONSUMPTION

Fuel Type	Energy Consumption	Units
Electricity		
Building[a]	2,469,639	kWh/year
Water[b]	128,695	kWh/year
Total Electricity	2,598,334	kWh/year
Natural Gas		
Building[a]	2,624,865	kBTU/year
Gasoline[c]		
Mobile	204,132	Gallons/year

NOTES:
[a] The building-related electricity and natural gas usage is based on CalEEMod estimates.
[b] Based on the CalEEMod default energy intensity for supply, distribution, and treatment of water and the Project's annual water consumption based on the Utility Impact Study (**Appendix L**) prepared for the Project for building water usage and CalEEMod defaults for outdoor water usage.
[c] Gasoline powered vehicles assumed during operation. Per CARB, less than 1 percent of light duty auto trips in the Bay Area are diesel.

SOURCE: ESA, 2019 (Appendix C)

Operation – Building

Energy service to the Project would be provided by PG&E, which currently serves the area. CalEEMod estimates were used to determine the electricity demand from the Project. The electricity demand from the Project was estimated to be 2,470 MWhr per year, which includes energy use from Project buildings, parking garages, and outdoor parking lighting. Electricity associated with Project water consumption was estimated to be 129 MWh per year, for a total energy demand of approximately 2,598 MWhr per year total when combined with building electricity demand. For reference, the Project's annual electricity demand represents approximately 0.004 percent of the residential and commercial building electricity consumed in the PG&E service area in 2017, and 0.06 percent of residential electricity consumed in Santa Clara County in 2017 (CEC, 2019a). Additionally, Project natural gas consumption was estimated

in CalEEMod to be approximately 2,624,865 kBTUs or approximately 26,249 therms per year. The natural gas demand would represent less than 0.001 percent of the natural gas use from residential and commercial buildings in PG&E's service area in 2017 and approximately 0.001 percent of residential natural gas consumed in Santa Clara County in 2017 (CEC, 2019a).

Additionally, the Project would seek GreenPoint Rated Gold level certification, and would comply with the CALGreen Code, MVGBC, and Title 24 building energy and water efficiency requirements. The Project would also be required to comply with the City's water conservation in landscaping regulations which would reduce Project outdoor water demand and thus energy associated with water demand. The Project sponsor has committed to include energy saving measures such as high-efficacy lighting, energy efficient appliances, and solar hot water systems to preheat domestic hot water, which would ensure that operation of the Project building would not result in inefficient, wasteful, or unnecessary energy use.

Operation – Mobile

Project operation would also involve energy demand from gasoline fuel used by residents and retail customers and employees traveling to and from the Project site. Using the total CalEEMod mobile emissions rates (see Appendix C) during operations yields a conservative estimate of 204,132 gallons of gasoline required annually during Project operation. The gasoline consumption by Project residents and retail customers and employees during operation would represent approximately 0.03 percent of Santa Clara County's gasoline sales in 2017 (CEC, 2018b). In addition, the Project includes a project-specific TDM plan that includes strategies aimed at reducing trips associated with the Project, which was not quantified in the greenhouse gas analysis. Further, the Project would be required to provide EV charging spaces on-site in proposed parking garages, per CALGreen and MVGBC requirements, which require at least 10 percent EV spaces installed with electric vehicle supply equipment (EVSE). Further, the Project would include mixed-use, higher density construction and promote the use of alternative transportation, including through implementation of the TDM. This reduction in trips and inclusion of EV infrastructure would reduce the amount of gasoline consumed during Project operation. Therefore, the energy demand from the operation of the Project would not result in wasteful, inefficient and unnecessary use of energy. This impact would be less than significant.

Summary

Although the Project would result in the consumption of energy, the consumption would be substantially less than for a project of this size under previous regulatory environments. Construction activities and corresponding fuel energy consumption would be temporary, and therefore would not represent a substantial demand on energy resources. In addition, the Project incorporates measures that would increase fuel efficiency and ensure that energy resources are not being wasted during construction.

Project operations would not involve higher than typical energy demands, as the Project would be designed to a GreenPoint Rated standard. Further, the Project would be subject to the MVGBC, Title 24, and CALGreen standards, and potentially more stringent fuel efficiency regulations in the future that would continue to reduce the energy demand from the Project. Therefore, the energy demand from the construction and operation of the Project would not result in wasteful,

inefficient and unnecessary use of energy. This energy consumption impact would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact ENE-2: Construction and operation of the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. (Criterion b) (*Less Than Significant, No Mitigation Required*)

The Project would be required to comply with the MVGBC and current Title 24 standards which would promote energy efficiency. As described under Impact ENE-1 above, the Project would seek GreenPoint Rated Gold level certification, and the Project sponsor has committed to include energy saving measures such as high-efficacy lighting, energy efficient appliances, and solar hot water systems to preheat domestic hot water. Energy prerequisites for GreenPoint Rated include either building performance that exceeds 2016 Title 24, Part 6, by 10 percent or 20 percent reduction of the whole building energy use (Build It Green, 2019).

The Project would be consistent with the CEC's IEPR primary goal of achieving the Statewide GHG reduction targets, while improving overall energy efficiency, and would be generally consistent with the City's GGRP and CRP measures and strategies related to energy efficiency (see Section 4.7, *Greenhouse Gas Emissions*, Impact GHG-2). The Project would not conflict with the National Energy Policy Act of 2005, as it would support the construction of energy efficient buildings. Project residences and businesses would also automatically be enrolled in SCVE's renewable and carbon-free electricity CCE program, which would support plans and policies related to GHG emissions reduction and renewable energy.

In terms of light-duty vehicle energy usage, as described in Section 4.5.3, *Regulatory Setting*, above, in the course of more than 30 years, the NECPA regulatory program has resulted in improved fuel economy throughout the United States' vehicle fleet, and has also protected against inefficient, wasteful, and unnecessary use of energy. Regardless of the uncertainty for fleet-wide emissions past 2021, the projected fleet-wide miles per gallon (mpg) for light-duty vehicles is expected to reach 41.7 mpg by 2020 (U.S. EPA, 2012). Vehicles used by Project construction workers and during operation would already incorporate these standards; therefore, the Project would not impede the efficient use of fuel for light-duty vehicles.

Additionally, as discussed in Section 4.5.3, *Regulatory Setting*, above, California is working to transform the transportation sector away from petroleum to near-zero emission vehicles operating with low-carbon fuels and ZEVs, as well as increase fuel efficiency for the transportation sector. CARB's Advanced Clean Cars program includes LEV regulations to increase fuel efficiency in light- and medium-duty vehicles; and ZEV regulations to require manufactures to produce an increasing number of battery and fuel cell electric vehicles with the provision to produce PHEV between 2018 and 2025. Per CALGreen and MVGBC requirements, which require at least 10

percent EV spaces installed with EVSE, the Project would be required to provide EV charging spaces on-site in proposed parking garages which would support these Statewide goals.

As described in Section 4.14, *Transportation*, alternative transit options are available to and from the Project site including bus routes, shuttle routes, and bicycle facilities. The project site is also located within 1 mile of the Mountain View Caltrain and light-rail transit (LRT) stations at the Mountain View Transit Center. These alternative transit options, along with the Project's TDM would promote the use of alternative modes of transit and reduce the consumption of transportation fuel required during Project operation, while supporting CARB's Mobile Source Strategy.

Since the Project would be designed to a GreenPoint Rated standard, and would comply with fuel and energy efficiency regulations, it would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency, and impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

This analysis evaluates whether the impacts of the Project, together with the impacts of cumulative development, would result in a cumulatively significant impact related to energy usage and resources (based on the significance criteria and thresholds presented earlier). This analysis then considers whether the incremental contribution of the Project to this cumulative impact would be considerable. Both conditions must apply in order for a project's cumulative effects to rise to the level of significance.

Impact C-ENE-1: The proposed Project, in conjunction with other past, current, or foreseeable development in the City, would not conflict with adopted energy conservation plans, violate energy standards, or result in wasteful, inefficient and unnecessary use of energy, such that a cumulative impact would occur. (*Less Than Significant, No Mitigation Required*)

The geographic context for potential cumulative impacts related to electricity and natural gas is within PG&E's service area. For potential cumulative impacts related equipment and vehicle fuel use, the geographic context is within the Project's construction workers' commute radius (assumed to be an average of approximately 10.8 miles, as identified in Appendix B to this document). These are the areas within which energy resources would be demanded by and supplied to the Project.

As described under Impact ENE-1, the Project's electricity and natural gas use would represent a small fraction of the electricity and natural gas usage attributed to residential commercial buildings in the PG&E service area, as well as residential uses in Santa Clara County. Moreover, the project's electricity demand would be provided through PG&E which is successfully implementing its RPS program to ensure ever-increasing percentage of renewable energy sources.

Therefore, the Project's less than significant impact relating to the wasteful, inefficient and unnecessary use of electricity or natural gas would not be cumulatively considerable.

The Project would use fuel resources during construction and operation; therefore, it could contribute to potential cumulative impacts during construction and operation, as well. The Project would result in an increase in fuel consumption during construction and operation that would result from additional construction worker and operational commuter vehicle trips. However, as described under Impact ENE-1, these would be marginal increases in fuel consumption, when compared to County gasoline and diesel sales.

Regarding the efficiency of fuel use, there is no existing significant adverse condition (such as a shortage) that would be worsened or intensified by the Project. Past, present, and reasonably foreseeable future projects within the Project vicinity could require gasoline or diesel fuel, but these fuel demands would not combine with the fuel demands of the Project to cause a significant adverse cumulative impact relating to the wasteful, inefficient, or unnecessary consumption or use of fuel. In the event of a future fuel shortage, higher prices at the pump would curtail non-essential trips that could be termed "wasteful" and would moderate choices regarding vehicles, equipment, and fuel efficiency. In addition, the Project site is within 1 mile of the Mountain View Caltrain and LRT stations at the Mountain View Transit Center, which would allow construction workers flexibility in their chosen modes of travel. During Project operation, a TDM program would be implemented which includes strategies aimed at reducing vehicle trips, and encourages the use of alternative transportation options. Under these conditions, the Project's less-than-significant impact relating to wasteful, inefficient, or unnecessary consumption or use of fuel would not be cumulatively considerable.

Additionally, as described under Impact ENE-2, the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency, nor would it cause a significant environmental effect due to compliance with fuel and energy efficiency regulations, and a GreenPoint Rated building design. Therefore, the Project's less than significant impact relating to conflict with or obstruction of a State or local plan for renewable energy or energy efficiency would not be cumulatively considerable.

Significance: Less Than Significant.

Mitigation: None required.

4.5.5 Summary of Energy Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact ENE-1: The Project would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	Less than Significant	None required	-
Impact ENE-2: Construction and operation of the Project would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency.	Less than Significant	None required	-
Impact C-ENE-1: The proposed Project, in conjunction with other past, current, or foreseeable development in the City, would not conflict with adopted energy conservation plans, violate energy standards, or result in wasteful, inefficient and unnecessary use of energy, such that a cumulative impact would occur.	Less than Significant	None required	-

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4.6 Geology, Soils, and Paleontological Resources

4.6.1 Introduction

This section identifies the existing setting and evaluates potential impacts related to geology, soils, seismic conditions, and mineral resources that could result from development of the proposed Project. Existing conditions are based on regional geology and seismicity as well as geotechnical investigations of the Project site. The regulatory framework section discusses federal, State, and local policies and regulations that pertain to geologic hazards, seismic hazards, and protection of soil resources. This analysis is based in part on a previous geotechnical investigation that was prepared for the Project dated July 13, 2018, by Rockridge Geotechnical (**Appendix H**).

CEQA requires the analysis of potential adverse effects of a project on the environment. The potential effects of the environment on a project are arguably not required to be analyzed or mitigated under CEQA. Nevertheless, in order to provide information to the public and decision-makers this section analyzes potential effects of geology and soils on the Project as set forth in CEQA *Guidelines*, Appendix G, Significance Criteria. As such, the potential adverse effect of existing risk levels for expansive soils or landslides on the Project site is analyzed below.

4.6.2 Existing Setting

4.6.2.1 Regional Setting

The Project site lies within the geologically complex region of California referred to as the Coast Ranges geomorphic province.[1] The Coast Ranges province lies between the Pacific Ocean and the Great Valley (Sacramento and San Joaquin valleys) provinces and stretches from the Oregon border to the Santa Ynez Mountains near Santa Barbara. Much of the Coast Ranges province is composed of marine sedimentary deposits and volcanic rocks that form northwest trending mountain ridges and valleys, running subparallel to the San Andreas Fault Zone.

The Northern Coast Ranges are composed largely of the Franciscan Complex or Assemblage, which consists primarily of graywacke, shale, greenstone (altered volcanic rocks), basalt, chert (ancient silica-rich ocean deposits), and sandstone that originated as ancient sea floor sediments. Franciscan rocks are overlain by volcanic cones and flows of the Quien Sabe, Sonoma and Clear Lake volcanic fields (CGS, 2002).

4.6.2.2 Geology and Soils

The Project site is located in the alluvial basin known as Santa Clara Valley which is bounded by the Santa Cruz Mountains to the west, the Diablo Range to the east, and the San Francisco Bay to the north. The San Francisco Bay Area is a structural depression formed through seismic forces of the active San Andreas Fault system which represents the tectonic boundary between the northward moving Pacific Plate (west of the fault) and the North American Plate (east of the

[1] A geomorphic province is an area that possesses similar bedrock, structure, history, and age.

fault). This movement is distributed across a complex system of northwest trending faults that are found throughout the Bay Area region.

The Project site is relatively flat with a gentle slope towards the north and sits at an elevation of approximately 30 to 35 feet above mean sea level. The Project site is currently developed with a four-story office building, surface parking lots, outdoor volleyball and basketball courts, and landscaping.

The United States Geological Survey (USGS)-provided soil type map overlays for Santa Clara County indicates that the Project site is underlain by Holocene Alluvium (USGS and CGS, 2006). The geotechnical investigation prepared for the Project found that the site is underlain by alluvium consisting of interbedded layers of sand and gravel with varying fines content and clay with variable amounts of sand and gravel to the maximum depth explored of 121 feet below ground surface. In the upper approximately 65 feet, the sand and gravel is generally medium dense to dense and the clay is generally medium stiff to very stiff. Below a depth of about 65 feet, the sand and gravel become dense to very dense and the clay and silt becomes very stiff to hard. The surficial clay deposits are highly expansive, and are subject to large volume changes with changes in moisture content (Appendix H).

4.6.2.3 Faults and Seismicity

The Project site lies within a region of California that contains many active and potentially active faults and is considered an area of high seismic activity.[2] Using information from recent earthquakes, improved mapping of active faults, and a new model for estimating earthquake probabilities, the USGS along with the California Geological Survey (CGS) and the Southern California Earthquake Center formed the 2014 Working Group on California Earthquake Probabilities and provided an updated 30-year earthquake forecast for California, reporting that there is a 72 percent probability of at least one earthquake of magnitude 6.7 or greater occurring somewhere in the San Francisco Bay region before 2043 (USGS, 2016).

There are four known major faults in the general Project vicinity: the Monte Vista-Shannon Fault, located approximately 5 miles to the southwest; the San Andreas Fault located approximately 8 miles to the southwest; the Hayward Fault, located approximately 11 miles to the northeast; and the Calaveras Fault, located approximately 14 miles to the northeast. The Monte Vista-Shannon Fault is a lesser known, smaller fault. The San Andres Fault has a 22 percent likelihood of one or more magnitude 6.7 or greater quakes by 2043, the Hayward Fault has a 33 percent probability of one or more magnitude 6.7 or greater quakes by 2043, and the Calaveras Fault has a 26 percent probability of one or more magnitude 6.7 or greater quakes by 2043 (USGS, 2016).

[2] An active fault is defined by the State of California as a fault that has had surface displacement within Holocene time (approximately the last 11,700 years). Faults are classified by the CGS into three categories on the basis of the absolute age of their most recent movement: Holocene-active faults (moved during past 11,700 years), Pre-Holocene faults (have not moved in the past 11,700 years), and Age-undetermined faults (last fault movement has not been determined). Pre-Holocene faults may be still capable of surface rupture, but are not regulated under the Alquist-Priolo Act (CGS, 2018).

Seismic Hazards

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. Ground rupture is considered more likely along active faults.

The Project site is not within an Alquist-Priolo Fault Rupture Hazard Zone, as designated through the Alquist-Priolo Earthquake Fault Zoning Act, and no mapped active faults are known to pass through the Project site.

Ground Shaking

Strong ground shaking from earthquakes generated by active faults in the Bay Area is a significant hazard to the Project site and could affect the site during the next 30 years. During the life of the Project, proposed improvements are likely to be subjected to at least one moderate to severe earthquake that would cause strong ground shaking.

The severity of ground shaking at the Project site resulting from a specific earthquake would depend on the characteristics of the generating fault, distance to the energy source, the magnitude of the event, and the site-specific geologic conditions.

Subsidence

Subsidence is the gradual lowering of the land surface due to compaction of underlying materials. Subsidence can occur as a result of the extraction of groundwater and oil, which can cause subsurface clay layers to compress and lower the overlying land surface. The subsidence occurs because the presence of water in the pore spaces in between grains helps to support the skeletal structure of the geologic unit. If the water is removed, the structure becomes weaker and can subside.

Liquefaction

Liquefaction is the sudden temporary loss of shear strength in saturated, loose to medium-density granular sediments subjected to ground shaking. It generally occurs when seismically-induced ground shaking causes the pressure of the water between granules to increase to a point equal to the pressure of the soil overburden. When this occurs, the soil can move like a fluid, hence the term liquefaction. Liquefaction can cause foundation failure of buildings and other facilities due to the reduction of foundation bearing strength.

The potential for liquefaction depends on the duration and intensity of ground shaking, particle size distribution of the soil, density of the soil, and elevation of the groundwater. Areas at risk due to the effects of liquefaction are typified by a high groundwater table and underlying loose to medium-density granular sediments, particularly younger alluvium and artificial fill sediments and other reclaimed areas along the margin of San Francisco Bay.

According to maps compiled by the Association of Bay Area Governments (ABAG), the Project site is considered to have a moderate potential for liquefaction (ABAG, 2018). The geotechnical investigation found that the Project site was within a potentially liquefiable area and encountered relatively thin soil layers between depths of approximately 6 and 55 feet below the ground surface that are susceptible to liquefaction during a major earthquake. Groundwater at the site is relatively shallow and the site is located in the CGS's Seismic Hazard Zone for liquefaction (Appendix H).

Differential Settlement

Earthquake shaking can produce compaction and densification of dry, uniformly graded, granular, and loose soil material. The amount of compaction across an area can vary due to differences in soil types, producing differential settlement. Artificial fill may also be susceptible to differential settlement. Differential settlement can affect existing and proposed foundations, slabs, and pavements. The geotechnical investigation found that the Project site has the potential to experience differential settlement related to liquefaction (Appendix H).

Other Geologic Hazards

Expansive Soil

Expansive soils exhibit a "shrink-swell" behavior. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may result over an extended period of time, usually as the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Typically, soils that exhibit expansive characteristics comprise the upper 5 feet of the surface. The effects of expansive soils could damage foundations of above-ground structures, paved roads and streets, and concrete slabs. Expansion and contraction of soils, depending on the season and the amount of surface water infiltration, could exert enough pressure on structures to result in cracking, settlement, and uplift. The geotechnical investigation found that the existing near-surface clay encountered at the Project site is highly expansive (Appendix H).

Settlement

Settlement can occur from immediate settlement, consolidation, shrinkage of expansive soil, and liquefaction. Immediate, or static, settlement occurs when a load from a structure or placement of new fill material is applied, causing distortion in the underlying materials. This settlement occurs quickly and is typically complete after placement of the final load. Consolidation settlement occurs in saturated clay from the volume change caused by squeezing out water from the pore spaces. Consolidation occurs over a period of time and is followed by secondary compression, which is a continued change in void ratio under the continued application of the load. Soils tend to settle at different rates and by varying amounts depending on the load weight or changes in properties over an area, which is referred to as differential settlement. The geotechnical investigation found that foundation settlement due to compression of the underlying clay soils could occur on the Project site, as some of the underlying clay soils are lightly to moderately over-consolidated (Appendix H).

Soil Erosion

Soil erosion is the process whereby soil materials are worn away and transported to another area either by wind or water. Rates of erosion can vary depending on the soil material and structure, soil placement, and human activity. Excessive soil erosion can eventually lead to damage of building foundations and other improvements. Erosion is most likely on sloped areas with exposed soil, especially when unnatural slopes are created by cut and fill activities. Soil erosion rates can therefore be higher during the construction phase. Typically, soil erosion potential during construction is reduced by using modern construction practices. Once an area is graded and covered with concrete, structures, asphalt, or vegetation; the soil erosion potential is nearly eliminated.

Landslides/Slope Failure

Landslide risk includes mudflows, earth slumps, rock falls and other types of slope failure, and is dependent on the slope and geology of an area as well as the amount of rainfall, excavation, and seismic activity. A landslide, or slope failure, is a mass of rock, soil, and debris displaced downslope by sliding, flowing, or falling. Steep slopes and downslope creep of surface materials characterize landslide-susceptible areas. As the Project site is relatively flat, and located within a developed area, the risk of landslides on the Project site would be low.

4.6.2.4 Paleontological Resources

Paleontological resources are the fossilized remains of plants and animals, including vertebrates (animals with backbones), invertebrates (e.g., starfish, clams, ammonites, and marine coral), microscopic plants and animals (microfossils), and trace fossils (footprints, burrows, etc.). The age and abundance of fossils depend on the location, topographic setting, and particular geologic formation in which they are found. Fossil discoveries not only provide a historical record of past plant and animal life but can assist geologists in dating rock formations. Fossil discoveries can expand understanding of the time periods and the geographic range of existing and extinct flora and fauna.

Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils—particularly vertebrate fossils—are considered to be nonrenewable resources. Because of their rarity, and the scientific information they can provide, fossils are highly significant records of ancient life. The Society of Vertebrate Paleontology (SVP) established guidelines for the identification, assessment, and mitigation of adverse impacts on nonrenewable paleontological resources (SVP, 2010). Most practicing paleontologists in the United States adhere closely to the SVP's assessment, mitigation, and monitoring requirements as outlined in these guidelines, which were approved through a consensus of professional paleontologists. Many federal, State, county, and city agencies have either formally or informally adopted the SVP's standard guidelines for the mitigation of adverse construction-related impacts on paleontological resources. The SVP has helped define the value of paleontological resources and, in particular, indicates that geologic units of *high* paleontological potential are those from which vertebrate or significant invertebrate or plant fossils have been recovered in the past (i.e.,

are represented in institutional collections). Geologic units of *low* paleontological potential are those that are not known to have produced a substantial body of significant paleontological material. As such, the sensitivity of an area with respect to paleontological resources hinges on its geologic setting and whether significant fossils have been discovered in the area or in similar geologic units.

The SVP further states the following:

- Vertebrate fossils and fossiliferous deposits are considered significant nonrenewable paleontological resources, and are afforded protection by federal, State, and local environmental laws and guidelines.
- A paleontological resource is considered to be older than recorded history or 5,000 years before present and should not be confused with archaeological resource sites.
- Certain plant or invertebrate fossils may be designated as significant by a Project paleontologist, special interest group, lead agency, or local government.

With these principles, the SVP has outlined criteria for screening the paleontological potential of rock units and established assessment and mitigation procedures tailored to such potential (SVP, 2010). **Table 4.6-1** lists the criteria for high-potential, undetermined, and low-potential rock units.

TABLE 4.6-1
PALEONTOLOGICAL POTENTIAL CRITERIA

Paleontological Potential	Description
High	Rock units from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered are considered to have high potential. Rocks units classified as having high potential for producing paleontological resources include, but are not limited to, sedimentary formations and some volcanoclastic formations (e.g., ashes or tephras), and some low-grade metamorphic rocks which contain significant paleontological resources anywhere within their geographical extent, and sedimentary rock units temporally or lithologically suitable for the preservation of fossils (e.g., middle Holocene and older, fine-grained fluvial sandstones, argillaceous and carbonate-rich paleosols, cross-bedded point bar sandstones, fine-grained marine sandstones, etc.). Paleontological potential consists of both (a) the potential for yielding abundant or significant vertebrate fossils or for yielding a few significant fossils, large or small, vertebrate, invertebrate, plant, or trace fossils and (b) the importance of recovered evidence for new and significant taxonomic, phylogenetic, paleoecologic, taphonomic, biochronologic, or stratigraphic data. Rock units which contain potentially datable organic remains older than late Holocene, including deposits associated with animal nests or middens, and rock units which may contain new vertebrate deposits, traces, or trackways are also classified as having high potential.
Undetermined	Rock units for which little information is available concerning their paleontological content, geologic age, and depositional environment are considered to have undetermined potential. Further study is necessary to determine if these rock units have high or low potential to contain significant paleontological resources. A field survey by a qualified professional paleontologist to specifically determine the paleontological resource potential of these rock units is required before a paleontological resource impact mitigation program can be developed.
Low	Geologic units that are not known to have produced a substantial body of significant paleontological material, as demonstrated by paleontological literature and prior field surveys, and which are poorly represented in institutional collections, or based on general scientific consensus only preserve fossils in rare circumstances and the presence of fossils is the exception not the rule, e. g. basalt flows or recent colluvium, and considered to have low potential.

SOURCE: SVP, 2010

It is important to note that while paleontological potential as defined above can provide a rough idea of whether subsurface fossils may exist, the criteria prescribe a very low threshold for identifying a rock unit as high potential. It would include most sedimentary rock units older than recent, and any other rock types (i.e., volcanoclastic formation and low-grade metamorphic rocks) that have yielded a vertebrate or significant invertebrate or plant fossils anywhere within their geographic extents. This low threshold is reasonable; however, as they are buried resources, the uniqueness or significance of a fossil locality is unknown until it is identified to a reasonably precise level (Scott and Springer, 2003). As such, any fossil discovery should be treated as potentially unique or significant until determined otherwise by a professional paleontologist.

Paleontological Findings

Rock formations that are considered to have paleontological sensitivity are those rock units that have yielded significant vertebrate or invertebrate fossil remains. This includes, but is not limited to, sedimentary rock units that contain significant paleontological resources anywhere within its geographic extent. The Project site is underlain by Holocene-age alluvial fan deposits (Appendix H). The SVP defines paleontological resources as being older than the middle Holocene, or about 5,000 years (SVP, 2010). Therefore, younger Holocene alluvium is considered to have low paleontological potential at the surface, with increasing potential in deeper (and older) layers in the subsurface.

4.6.3 Regulatory Setting

4.6.3.1 Federal

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1977 to “reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program.” To accomplish this, the Act established the National Earthquake Hazards Reduction Program (NEHRP). Congress has periodically reviewed and reauthorized NEHRP (1980, 1981, 1983, 1984, 1985, 1988, 1990, 1994, 1997, 2000, and 2004.)

NEHRP’s mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it with several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards.

4.6.3.2 State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was signed into State law in 1972. Its primary purpose is to mitigate the hazard of fault rupture by prohibiting the location of structures for human occupancy across the trace of an active fault. The Act requires the State Geologist to delineate "Earthquake Fault Zones" along faults that are "sufficiently active" and "well defined." The Act also requires that cities and counties withhold development permits for sites within an Earthquake Fault Zone until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting. Pursuant to this Act, structures for human occupancy are not allowed within 50 feet of the trace of an active fault. Therefore, if a project site is located in an Earthquake Fault Zone, the City must withhold development permits for sites within the fault zones until geologic investigations demonstrate that the sites are not threatened by surface displacement from future faulting.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act of 1990 is intended to reduce building damage from earthquakes. The Seismic Hazards Mapping Act directs the CGS to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. It also requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the identified hazard is present and requires the inclusion of measures to reduce earthquake-related hazards.

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations (CCR) as Title 24, Part 2. 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 purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2016 CBC is based on the 2015 International Building Code (IBC) published by the International Code Conference. In addition, the CBC contains necessary California amendments, which are based on reference standards obtained from various technical committees and organizations such as the American Society of Civil Engineers (ASCE), the American Institute of Steel Construction (AISC), and the American Concrete Institute (ACI). ASCE Minimum Design Standards 7-05 provides requirements for general structural design and includes means for determining earthquake loads as well as other loads (e.g., flood, snow, wind, etc.) for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements take into account the occupancy category of the structure, site class, soil classifications, and various seismic coefficients, which are used to determine a Seismic Design Category (SDC) for a project as described in Chapter 16 of the CBC. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault). Design specifications are then determined according to the SDC in accordance with Chapter 16 of the CBC. Chapter 16, Section 1613 provides earthquake loading specifications for every structure, and portion thereof, including nonstructural components that are permanently attached to structures and their supports and attachments, which shall be designed and constructed to resist the effects of earthquake motions in accordance with ASCE 7-05.

Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803), excavation, grading, and fills (Section 1804), load-bearing of soils (1805), as well as foundations (Section 1808), shallow foundations (Section 1809), and deep foundations (Section 1810). Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. 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 mitigation 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.

Construction General Permit

The California Construction Storm Water Permit (Construction General Permit)[3], adopted by the State Water Resources Control Board (SWRCB), regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction General Permit authorizes the discharge of storm water to surface waters from construction activities. It prohibits the discharge of materials other than storm water and authorized non-storm water discharges and all discharges that contain a hazardous substance in excess of reportable quantities established at 40 Code of Federal Regulations 117.3 or 40 Code of Federal Regulations 302.4, unless a separate National Pollutant Discharge Elimination System (NPDES) Permit has been issued to regulate those discharges.

[3] *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities,* Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ, National Pollutant Discharge Elimination System No. CAS000002.

The Construction General Permit requires that all developers of land where construction activities will occur over more than one acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three Risk Levels established in the General Permit;
- Eliminate or reduce non-storm water discharges to storm sewer systems and other waters of the Nation;
- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP), which specifies best management practices (BMPs) that will reduce pollution in storm water discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards; and
- Perform inspections and maintenance of all BMPs.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials, and address post construction runoff quantity (volume) and quality (treatment). The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

Santa Clara Valley Urban Runoff Pollution Prevention Program

The Santa Clara Valley Urban Runoff Pollution Prevention Program comprises 77 cities in the Bay Area region and other agencies in Santa Clara Valley. These jurisdictions and agencies are regulated by the Municipal Regional Stormwater NPDES Permit (MRP) issued under the federal Clean Water Act Section 402 Phase II (Small MS4) regulations that require that stormwater management plans be developed by municipalities with populations smaller than 100,000. As part of permit compliance, these permit holders have created stormwater management plans for their respective locations.

Public Resources Code Section 5097.5 and Section 30244

State requirements for paleontological resource management are included in Public Resources Code (PRC) Section 5097.5 and Section 30244. These statutes prohibit the removal of any paleontological site or feature from public lands without permission of the jurisdictional agency, define the removal of paleontological sites or features as a misdemeanor, and require reasonable mitigation of adverse impacts to paleontological resources from developments on public (State, county, city, district) lands.

4.6.3.3 Local

City of Mountain View 2030 General Plan

The City has established goals and policies in the 2030 General Plan in regards to geologic hazards. Goals and policies as outlined in the Public Safety Element that would apply to the proposed Project are listed as follows:

Goal PSA-5: The protection of life and property from seismic disasters.

Policy PSA 5.1: New development. Ensure new development addresses seismically induced geologic hazards.

Policy PSA 5.1: Alquist-Priolo zones. Development shall comply with the Alquist-Priolo Earthquake Fault Zoning Act.

Policy PSA 5.4: Utility design. Ensure new underground utilities, particularly water and natural gas lines, are designed to meet current seismic standards.

4.6.4 Geology, Soils, and Paleontological Resources Impacts

4.6.4.1 Significance Criteria

Consistent with Appendix G of the State CEQA *Guidelines*, the Project would cause adverse impacts related to geology, soils, or mineral resources if it would:

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

   1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42);
   2. Strong seismic ground shaking;
   3. Seismic-related ground failure, including liquefaction;
   4. Landslides;

b) Result in substantial soil erosion or the loss of topsoil;

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property;

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems where sewers are not available for the disposal of wastewater; or

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

4.6.4.2 Approach to Analysis

The analysis of the Project is based on conditions that are likely present, as determined by the geotechnical investigation prepared for the Project (Appendix D). The geotechnical investigation assesses the existing geologic conditions on the Project site and presents detailed recommendations to mitigate any seismic risks associated with development of the Project on the Project site. These recommendations addressing the following:

- Site Preparation and Grading, including:
  - Soil Subgrade Stabilization
  - Selection of Fill Material
  - Subgrade Preparation for Exterior Concrete Flatwork
  - Utility Trench Backfilling
  - Drainage and Landscaping
- Foundation Design
  - Footings on Improved Soil
- Floor Slabs
- Permanent Below-Grade Walls
  - Flexible and Rigid Pavement Design
- Pavers; and
- Site Seismic Design

The City's Standard Conditions of Approval require City approval and, ultimately, implementation of these mitigating recommendations as approved.

4.6.4.3 Topics with No Impact or Otherwise Not Addressed in This EIR

Review and comparison of the setting circumstances and Project characteristics with the significance criteria stated above clearly indicate that no impacts would be associated with Criterion a.1) (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). The closest active faults to the Project site are the Monte Vista-Shannon Fault, located approximately 5 miles to the southwest; the San Andreas Fault located approximately 8 miles to the southwest. Although fault rupture is not necessarily limited to areas that coincide with the mapped fault trace, the Project site is sufficiently far enough away from the nearest active fault to be considered not at risk of fault rupture. Therefore, there would be no fault rupture-related impact.

The Project would have no impacts associated with Criterion a.4) (expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides). The Project site contains flat relief and is not near any slopes capable of failing during a seismic event. Therefore, the proposed Project would not be adversely affected by potential impacts associated with landslides.

The Project would have no impacts associated with Criterion e) (have soils incapable of adequately supporting the use of septic tanks or alternative waste disposal systems where sewers are not available for the disposal of wastewater), because the Project would not include septic tanks or alternative wastewater disposal systems. Control of wastewater would be through the existing wastewater collection, treatment, and disposal system. Therefore, there would be no related impact.

4.6.4.4 Discussion of Impacts and Mitigation Measures

Impact GEO-1: Development of the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death due to seismically induced ground shaking. (Criterion a.2) (*Less than Significant, No Mitigation Required*)

The geotechnical investigation for the Project site indicated that the closest active faults to the Project site are the Monte Vista-Shannon Fault, located approximately 5 miles to the southwest; the San Andreas Fault located approximately 8 miles to the southwest (Appendix H). As such, the proposed Project's structures could potentially be subject to strong ground shaking during a seismic event. The primary and secondary effects of groundshaking could damage structural foundations, distort or break wells or pipelines, and place people at risk of injury or death. The level of risk would be similar to those of any housing project in the local area.

The Project would include the following City Standard Condition of Approval:

> ***Standard Condition PL-124 (Geotechnical Report)*:** The applicant shall have a design-level geotechnical investigation prepared which includes recommendations to address and mitigate geologic hazards in accordance with the specifications of California Geological Survey (CGS) Special Publication 117, *Guidelines for Evaluating and Mitigating Seismic Hazards*, and the requirements of the Seismic Hazards Mapping Act. The report will be submitted to the City prior to the issuance of building permits, and the recommendations made in the geotechnical report will be implemented as part of the project. Recommendations may include considerations for design of permanent below-grade walls to resist static lateral earth pressures, lateral pressures caused by seismic activity, and traffic loads; method for backdraining walls to prevent the buildup of hydrostatic pressure; considerations for design of excavation shoring system; excavation monitoring; and seismic design.

The geotechnical investigation prepared for the Project included specific recommendations related to the seismic design of proposed Project structures and surrounding site. The Project applicant is required to implement the geotechnical recommendations included in the geotechnical investigation in accordance with the City's Standard Conditions of Approval. Therefore, adherence to the CBC requirements and implementation of the geotechnical recommendations would minimize any potential damage or injury from seismic effects to less-than-significant levels.

Significance: Less Than Significant.

Mitigation: None required.

Impact GEO-2: Project development would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death due to seismically related ground failure, including liquefaction and lateral spreading. (Criterion a.3) (*Less than Significant, No Mitigation Required*)

Liquefaction typically occurs in areas underlain with loose, saturated, cohesion-less soils. These soils (including some fill materials), when subjected to ground shaking, can lose their strength resulting from the buildup of excess pore water pressure, causing them to behave closer to a liquefied state. Liquefaction at a given site can result in loss of bearing pressure, lateral spreading, sand boils (liquefied soil exiting at the ground surface), and earthquake-induced settlement causing damage in proposed structures if not designed appropriately. Mapping compiled by ABAG indicates that the entire Project site has moderate potential for liquefiable soils (ABAG, 2018).

According to the geotechnical investigation prepared for the Project, some layers beneath the site are susceptible to liquefaction; thus, seismically-induced settlement analyses were performed as a part of the geotechnical investigation. It is estimated that total and differential settlements of Project residential buildings associated with liquefaction after a major earthquake would be on the order of about 1.5 to 3 inches. Total and differential settlements of the proposed Project parking structure due to liquefaction after a major earthquake would be on the order of approximately 2 to 4 inches. The anticipated differential settlements of unimproved soil due to post-liquefaction reconsolidation exceed the typical tolerance of shallow foundation systems, such as spread footings or a mat foundation. Therefore, the potential for liquefaction-induced settlement within the relatively shallow layers would need to be mitigated if the building is to be supported on a shallow foundation system as currently proposed. To address this risk, the geotechnical investigation recommended a ground improvement system consisting of drilled displacement sand-cement columns designed to sufficiently reduce liquefaction potential (Appendix H).

Lateral spreading is typically associated with and related to seismic related ground failure and areas in slopes. According to the geotechnical investigation prepared for the Project, although numerous thin, potentially liquefiable layers were encountered on the Project site, the layers do not appear to be continuous, and the topography of the site and surrounding area is relatively flat. Therefore, the risk of lateral spreading is low (Appendix H).

As described above, in accordance with the City's Standard Conditions of Approval, the proposed Project would be required to implement recommendations included in the geotechnical investigation. In addition, the Project is required to conform to the current seismic design provisions of the CBC to mitigate losses from ground failure as a result of an earthquake. Therefore, adherence to the CBC requirements and implementation of the geotechnical recommendations would reduce the potential impacts associated with seismically-related ground failure, including liquefaction and lateral spreading, to less-than-significant levels.

Significance: Less Than Significant.

Mitigation: None required.

Impact GEO-3: The Project would not result in substantial soil erosion during excavation, grading, and construction activities. (Criterion b.) (*Less than Significant, No Mitigation Required*)

Project construction would require earthwork and grading, which would expose soil and potentially subject it to wind and water erosion. The extent of erosion that could occur varies depending on soil type, slope steepness and stability, vegetation/cover, and weather conditions. Water- and wind-induced erosion could occur during the construction phase of the Project when vegetation is removed and soils are stockpiled and exposed.

The Project would include the following City Standard Conditions of Approval:

> ***Standard Condition FEP-03 (State of California Construction General Stormwater Permit)*:** A "Notice of Intent" (NOI) and "Stormwater Pollution Prevention Plan" (SWPPP) shall be prepared for construction projects disturbing one (1) acre or more of land. Proof of coverage under the State General Construction Activity Stormwater Permit shall be attached to the building plans.
>
> ***Standard Condition FEP-05 (Construction Sediment and Erosion Control Plan)*:** The applicant shall submit a written plan acceptable to the City which shows controls that will be used at the site to minimize sediment runoff and erosion during storm events. The plan should include installation of the following items where appropriate: (a) silt fences around the site perimeter; (b) gravel bags surrounding catch basins; (c) filter fabric over catch basins; (d) covering of exposed stockpiles; (e) concrete washout areas; (f) stabilized rock/gravel driveways at points of egress from the site; and (g) vegetation, hydroseeding, or other soil stabilization methods for high-erosion areas. The plan should also include routine street sweeping and storm drain catch basin cleaning.

The Project would be required through the NPDES Construction General Permit administered by the State to establish erosion control measures for grading activities, and the applicant would be required to submit a Construction Sediment and Erosion Control Plan for City review prior to the start of construction.

Implementation of these plans as required by the City's Standard Conditions of Approval related to erosion would minimize erosion impacts during construction and reduce potential impacts to less–than-significant levels.

> **Significance:** Less Than Significant.
>
> **Mitigation:** None required.

Impact GEO-4: The Project would not result in on- or off-site lateral spreading, subsidence, liquefaction, or collapse from placement of improvements on unstable geologic units or soils. (Criterion c.) (*Less than Significant, No Mitigation Required*)

As discussed under *Impact GEO-2* above, impacts related to seismically related ground failure including liquefaction and lateral spreading would be less than significant with implementation of the geotechnical recommendations included in the geotechnical investigation (Appendix H).

The Project site could experience foundation settlement due to the proposed shallow foundation system and compression of the underlying clay soils, some of which are lightly to moderately over-consolidated. Long-term total and differential settlement of the two proposed residential buildings supported on shallow foundation systems would be on the order of 1 to 2 inches. Total long-term total and differential settlement of the proposed parking structure would be on the order of 1.25 to 2.5 inches. The anticipated differential settlements of unimproved soil due to static load conditions exceed the typical tolerance of shallow foundation systems, such as spread footings or a mat foundation. Therefore, the potential for settlement would need to be mitigated if the building is to be supported on a shallow foundation system as currently proposed. As discussed under Impact GEO-2 above, the recommended ground improvement system consists of drilled displacement sand-cement columns, which would need to extend to a depth that would reduce settlement of the structures per the recommendations contained in the geotechnical investigation prepared for the Project (Appendix H).

As discussed above, the Project applicant is required to implement the geotechnical recommendations included in the geotechnical investigation in accordance with the City's Standard Conditions of Approval. Therefore, adherence to the CBC requirements and implementation of the geotechnical recommendations would reduce potential impacts associated with unstable geologic units or materials to less-than-significant levels.

Significance: Less Than Significant.

Mitigation: None required.

Impact GEO-5: Project implementation would not create substantial risks to life or property due to the presence of expansive soils. (Criterion d.) (*Less than Significant, No Mitigation Required*)

The effects of expansive soils, if present at the site, could damage foundations of aboveground structures. Surface structures with foundations constructed in expansive soils could experience expansion and contraction depending on the season and the amount of surface water infiltration. This expansion and contraction could exert enough pressure on a structure to result in cracking, settlement, and uplift.

As found in the geotechnical investigation prepared for the Project, the underlying soil materials are considered to have a high potential for expansion which could over time damage the foundation or utility connections if not engineered appropriately. As discussed in the geotechnical investigation, the effects of expansive soil can be mitigated by moisture-conditioning the expansive soil, providing select, non-expansive fill or lime-treated soil below interior and exterior slabs and behind retaining walls, and either supporting foundations below the zone of severe moisture change or by providing a stiff, shallow foundation that can limit deformation of the superstructure as the underlying soil shrinks and swells (Appendix H).

As discussed above, the Project applicant is required to implement the geotechnical recommendations included in the geotechnical investigation in accordance with the City's Standard Conditions of Approval. Therefore, adherence to the CBC requirements and implementation of the geotechnical recommendations would reduce the impacts associated with the potential presence of expansive soils to less–than-significant levels.

Significance: Less Than Significant.

Mitigation: None required.

Impact GEO-6: Project construction would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (Criterion f.) (*Less than Significant, No Mitigation Required*)

The Project would result in a significant impact if it directly or indirectly destroyed a unique paleontological resource or site or unique geologic feature. As noted above, the Project area is underlain by Holocene alluvial fan deposits, a geologic formation that is considered to have a low paleontological potential at the surface, with increasing potential in deeper (and older) layers in the subsurface. Should any paleontological resource be discovered during construction, compliance with the City's Standard Condition of Approval, listed below, would ensure that the appropriate steps were taken to preserve them.

> ***Standard Condition PL-120 (Discovery of Paleontological Resources)*:** In the event that a fossil is discovered during construction of the project, excavations within 50' of the find shall be temporarily halted or delayed until the discovery is examined by a qualified paleontologist, in accordance with Society of Vertebrate Paleontology standards. The City shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. If the find is determined to be significant and if avoidance is not feasible, the paleontologist shall design and carry out a data recovery plan consistent with the Society of Vertebrate Paleontology standards.

Therefore, through compliance with the City's Standard Condition of Approval, potential impacts to paleontological resources would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

This analysis evaluates whether the impacts of the Project, together with the impacts of cumulative development, would result in a cumulatively significant impact on geology, soils, and paleontological resources (based on the significance criteria and thresholds presented earlier). This analysis then considers whether the incremental contribution of the Project to this cumulative

impact would be considerable. Both conditions must apply in order for a project's cumulative effects to rise to the level of significance.

Geographic Context

The geographic area considered for the assessment of cumulative impacts related to geology, soils, seismic hazards, and mineral resources is the entire San Francisco Bay Area region. This region is considered seismically active and any development exposes people and structures to potentially adverse effects associated with earthquakes, including seismic ground shaking and seismic-related ground failure.

Impact C-GEO-1: The Project, in conjunction with past, present and reasonably foreseeable future projects, would not result in significant cumulative impacts with respect to geology, soils, seismicity, or paleontological resources. (*Less than Significant, No Mitigation Required*)

Development of the Project, combined with past, present, and other reasonably foreseeable development in the area, would result in increased population and development in an area subjected to seismic risks and hazards. However, the proposed Project, as well as all other future projects in the region, would be constructed in accordance with the most current version of CBC seismic safety requirements and recommendations contained in each site-specific geotechnical report as required prior to approval of a building permit. Future development would be constructed to standards similar to those that are described above, which likely would exceed those of older structures within the region.

Cumulatively significant impacts to paleontological resources could occur due to ground disturbance during construction of cumulative projects. However, due to the low paleontological potential of the area and the understanding that other projects would be subject to similar construction standards, the Project's impact on paleontological resources would not be cumulatively considerable. Therefore, impacts to area geology, soils, seismicity, and paleontological resources resulting from future development of the proposed Project; combined with other past, present, or probable future projects; would not result in a cumulatively significant impact.

Significance: Less Than Significant.

Mitigation: None required.

4.6.5 Summary of Geology, Soils, and Paleontological Resources Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact GEO-1: Development of the Project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death due to seismically induced ground shaking.	Less than Significant	None required	-
Impact GEO-2: Project development would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death due to seismically related ground failure, including liquefaction and lateral spreading.	Less than Significant	None required	-
Impact GEO-3: The Project would not result in substantial soil erosion during excavation, grading, and construction activities.	Less than Significant	None required	-
Impact GEO-4: The Project would not result in on- or off-site lateral spreading, subsidence, liquefaction, or collapse from placement of improvements on unstable geologic units or soils.	Less than Significant	None required	-
Impact GEO-5: Project implementation would not create substantial risks to life or property due to the presence of expansive soils.	Less than Significant	None required	-
Impact GEO-6: Project construction would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.	Less than Significant	None required	-
Impact C-GEO-1: The Project, in conjunction with past, present and reasonably foreseeable future projects, would not result in significant cumulative impacts with respect to geology, soils, seismicity, or paleontological resources.	Less than Significant	None required	-

4.6.6 References – Geology, Soils, and Paleontological Resources

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4.7 Greenhouse Gas Emissions

4.7.1 Introduction

This section identifies and evaluates the impacts related to climate change and greenhouse gas (GHG) emissions that could result from development of the Project. This section presents an overview of global and local climate change, and examines the potential for development of the Project to result in increased GHG emissions, which contribute to climate change. The impact analysis also includes an evaluation of the Project's consistency with Statewide and local planning efforts to reduce GHG emissions. This analysis is based in part on a construction air quality analysis that was prepared for the Project site dated April 25, 2019, by Illingworth & Rodkin, Inc. (**Appendix B**).

4.7.2 Environmental Setting

Gases that trap heat in the atmosphere are known as greenhouse gasses or "GHGs." GHGs allow sunlight to enter the atmosphere, but trap a portion of the outward-bound infrared radiation, which warms the air. The process is similar to the effect greenhouses have in raising their internal temperature. Both natural processes and human activities emit GHGs. The accumulation of GHGs in the atmosphere regulates the Earth's temperature; however, emissions from human activities (such as fossil fuel-based electricity production and the use of motor vehicles) have elevated the concentration of GHGs in the atmosphere. Scientists agree that this accumulation of GHGs has contributed to an increase in the temperature of the Earth's atmosphere and has contributed to global climate change. Global climate change is a change in the average weather on Earth that can be measured by wind patterns, storms, precipitation, and temperature. Although there is disagreement as to the rate of global climate change and the extent of the impacts attributable to human activities, most scientists agree that there is a direct link between increased emissions of GHGs and long term global temperature increases.

4.7.2.1 Greenhouse Gases

The principal GHGs are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). CO_2 is the most common reference gas for climate change. To account for the warming potential of GHGs, GHG emissions often are quantified and reported as CO_2 equivalents (CO_2e). For example, SF_6 is a GHG commonly used in the utility industry as an insulating gas in circuit breakers and other electronic equipment. SF_6, while comprising a small fraction of the total GHGs emitted annually world-wide, is a much more potent GHG with 22,800 times the global warming potential as CO_2, which has a global warming potential of 1.[1] Large emission sources are reported in million metric tons of CO_2e.[2]

[1] The California Emissions Estimator Model (CalEEMod) is the modeling software used chiefly for determining GHG emissions from CEQA projects. CalEEMod currently utilizes the Global Warming Potentials from the Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4).

[2] The term metric ton is commonly used in the U.S. to refer to the metric system unit, tonne, which is defined as a mass equal to 1,000 kilograms. A metric ton is approximately 1.1 short tons and approximately 2,204.6 pounds.

4.7.2.2 Impacts of Climate Change

Climate change refers to any significant change in measures of climate (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). The scientific community's understanding of the fundamental processes responsible for global climate change has improved over the past decade, and its predictive capabilities are advancing. However, there remain significant scientific uncertainties in, for example, predictions of local effects of climate change, occurrence, frequency, and magnitude of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system and inability to accurately model it, the uncertainty surrounding climate change may never be completely eliminated.

The Fourth California Climate Change Assessment (Fourth Assessment), published in 2018, finds that the potential impacts in California due to global climate change include: loss in snow pack; sea level rise; more extreme heat days per year; more high ozone days; more extreme forest fires; more severe droughts punctuated by extreme precipitation events; increased erosion of California's coastlines and sea water intrusion into the Sacramento and San Joaquin Deltas and associated levee systems; and increased pest infestation (OPR et al., 2018).

Surface temperature is projected to rise over the 21st century under all assessed emission scenarios. It is very likely that heat waves will occur more often and last longer, and that extreme precipitation events will become more intense and frequent in many regions. The expectation is that the ocean will continue to warm and acidify, and global mean sea level will rise. 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. Limiting climate change would require substantial and sustained reductions in greenhouse gas emissions which, together with adaptation, can limit climate change risks (IPCC, 2014).

Temperature Increase

The primary effect of adding GHGs to the atmosphere has been a rise in the average global temperature. The impact of human activities on global temperature is readily apparent in the observational record. Since 1895, the contiguous U.S. has observed an average temperature increase of 1.5°F per century. The last five-year period (2014–2018) is the warmest on record for the contiguous U.S. (NOAA, 2019), while the 20 warmest years have occurred over the past 22-year period (Climate Central, 2019). The Fourth Assessment indicates that average temperatures in California could rise 5.6°F to 8.8°F by the end of the century, depending on the global trajectory of GHG emissions (OPR et al, 2018).

Wildfires

The expected hotter and dryer conditions expected with climate change will make forests more susceptible to extreme wildfires. A recent study found that, if GHG emissions continue to rise, the frequency of extreme wildfires burning over approximately 25,000 acres would increase by nearly 50 percent, and the average area burned Statewide each year would increase by 77 percent, by the

year 2100. In the areas that have the highest fire risk, wildfire insurance is estimated to see costs rise by 18 percent by 2055 and the fraction of property insured would decrease (Westerling, 2018).

Air Quality

Higher temperatures, conducive to air pollution formation, could worsen air quality in California and make it more difficult for the State to achieve air quality standards. Climate change may increase the concentration of ground-level ozone in particular, which can cause breathing problems, aggravate lung diseases such as asthma, emphysema, and chronic bronchitis, and cause chronic obstructive pulmonary disease (COPD). Emissions from wildfires can lead to excessive levels of particulate matter, ozone, and volatile organic compounds (Kenward et al., 2013).

Hydrology and Sea Level Rise

California's hydrology is already changing due to global climate shifts. The vulnerability of the water sector to climate change stems from a modified hydrology that affects the frequency, magnitude, and duration of extreme events, which, in turn, affect water quantity, quality, and infrastructure. Changes in hydrology include declining snowpack, earlier snow melt, more precipitation as rain than snow, more frequent and longer droughts, more frequent and more severe flooding, changes in the timing and volume of peak runoff, and consequent impacts on water quality and water availability. Additionally, rising sea level will produce higher storm surges during coastal storms, and climate impacts are reducing the percentage of annual precipitation that falls as snow.

Sea levels measured at stations in San Francisco have risen at a rate of 8 inches over the century. Sea level rise in California could lead to flooding of low–lying areas, loss of coastal wetlands such as portions of the San Francisco Bay Delta system, erosion of cliffs and beaches, saltwater contamination of drinking water, impacts on roads and bridges, and harmful ecological effects along the coastline (CNRA, 2018).

Agriculture

Successful food crop production is closely tied to weather, which are the conditions of the atmosphere over a short period of time. Climate change is changing the longer-term patterns of atmospheric conditions, and the resulting impacts are expected to worsen over the next century. Climate impacts like unpredictable water availability, rising minimum and maximum temperatures, extended heat waves, changes in the prevalence of plant and livestock pests and diseases, and impacts to beneficial species directly affect agricultural food crop and livestock production. This poses a significant threat to California, which grows over 33 percent of the U.S.'s vegetables and two-thirds of its fruits and nuts (CNRA, 2018).

Ecosystem and Biodiversity Impacts

Increases in global temperatures and the potential resulting changes in weather patterns could have ecological effects on a global and local scale. Increasing concentrations of GHGs are likely to accelerate the rate of climate change. Scientists expect that the average global surface temperature could rise by 2-11.5°F (1.1-6.4°C) by 2100, with significant regional variation

(National Research Council, 2010). Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Sea level could rise as much as 2 feet along most of the United States coastline. With climate change, ecosystems and wildlife will be challenged by the spread of invasive species, barriers to species migration or movement in response to changing climatic conditions, direct impacts to species health, and mismatches in timing between seasonal life-cycle events such as species migration and food availability (CNRA, 2014).

Human Health Impacts

Global climate change is also anticipated to result in more extreme heat events (OPR et al., 2018). These extreme heat events increase the risk of death from dehydration, heart attack, stroke, and respiratory distress, especially with people who are ill, children, the elderly, and the poor, who may lack access to air conditioning and medical assistance. A warming planet is expected to bring more severe weather events, worsening wildfires and droughts, a decline in air quality, rising sea levels, increases in allergens and in vector-borne diseases, all of which present significant health and wellbeing risks for California populations (CNRA, 2018).

4.7.2.3 Greenhouse Gas Emissions Estimates

Global Emissions

Total global annual GHG emissions, including from land-use change, reached a record high of 53.5 Gigatons (Gt) CO_2e in 2017, an increase of 0.7 Gt CO_2e compared with 2016. The main drivers of the increase are higher gross domestic product (GDP) growth (about 3.7 percent) and slower declines in energy, and especially carbon, intensity, compared with the 2014–2016 period. (UN Environment, 2018).

U.S. Emissions

In 2017, the United States emitted about 6.46 billion tons of CO_2e, representing a 0.5 percent decrease from 2016. The decrease in total GHG emissions between 2016 and 2017 was driven in large part by a decrease in CO_2 emissions from fossil fuel combustion, which was a result of multiple factors including a continued shift from coal to natural gas, increased use of renewables in the electric power sector, and milder weather that contributed to less overall electricity use.

Of the five major sectors nationwide — residential and commercial, industry, agriculture, transportation, and electricity— transportation accounts for the highest fraction of GHG emissions (approximately 29 percent), closely followed by electricity (approximately 28 percent). The residential and commercial sector accounts for approximately 12 percent of GHG emissions. CO_2 accounts for 82 percent of GHG emissions (U.S. EPA, 2019).

State of California Emissions

In 2017, California emitted approximately 424 million tons of CO_2e, representing a 1.2 percent decrease from 2016. For the first time since California started to track GHG emissions, electricity generation from zero-GHG sources, including solar, hydro-electric, wind, and nuclear, exceeded generation from GHG-emitting sources. The transportation sector remains the largest source of

GHG emissions in the State and saw a 1 percent increase in emissions in 2017; however, this represents the lowest growth rate for this sector over the past 4 years.

The latest California Air Resources Board (CARB) inventory also reports that transportation is the source of approximately 41 percent of the State's GHG emissions, followed by industrial sources at 24 percent and electricity generation (both in-State and out-of-State) at 15 percent. Residential and commercial activity is the source of about 12 percent, agriculture is the source of approximately 8 percent (CARB, 2019).

Bay Area Emissions

In the nine county San Francisco Bay Area, GHG emissions from the transportation sector represent the largest source of the Bay Area's GHG emissions in 2015 at 41 percent, followed by the stationary industrial sources at 26 percent, electricity generation and co-generation at 14 percent, and fuel use (primarily natural gas) by building at 10 percent. The remaining 8 percent of emissions is comprised of fluorinated gas emissions and emissions from solid waste and agriculture. Of the total transportation emissions in 2015, on-road sources accounted for approximately 87 percent, while off-road sources accounted for the remainder (BAAQMD, 2017b).

City of Mountain View Emissions

The City of Mountain View recently completed a community GHG emissions inventory for 2015. In 2015, the community generated 768,365 MT CO_2e in five sectors: energy, transportation, waste, water, and off-road mobile sources (construction and lawn and garden equipment). The most significant sources of 2015 emissions were transportation (59.5 percent) and energy use (32.9 percent), accounting for more than 92 percent of emissions. Emissions from energy use decreased nearly 15 percent between 2005 and 2015, and water and waste emissions also went down by 38 percent and 53 percent, respectively, but these emissions reductions could not keep pace with steadily rising transportation emissions, which increased by 22 percent between 2005 and 2015 (City of Mountain View, 2018).

4.7.3 Regulatory Setting

4.7.3.1 Federal

U.S. Environmental Protection Agency "Endangerment" and "Cause or Contribute" Findings

In *Massachusetts v. Environmental Protection Agency* et al., 12 states and cities, including California, together with several environmental organizations, sued to require the U.S. Environmental Protection Agency (USEPA) to regulate GHGs as pollutants under the Clean Air Act (127 S. Ct. 1438 [2007]). The U.S. Supreme Court ruled that GHGs fit within the Clean Air Act's definition of a pollutant and the USEPA had the authority to regulate GHGs.

On December 7, 2009, the USEPA Administrator signed two findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- **Endangerment Finding:** The current and projected concentrations of six key GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—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.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, the USEPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year (FY) 2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), that required the USEPA to develop "…mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy." The Reporting Rule applies to most entities that emit 25,000 metric tons of CO_2e or more per year. The Project is not expected to reach this threshold.

Vehicle Emissions Standards

In 1975, Congress enacted the Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the act, the EPA and National Highway Traffic Safety Administration (NHTSA) are responsible for establishing additional vehicle standards. In August 2012, standards were adopted for model year 2017 through 2025 for passenger cars and light-duty trucks. By 2025, vehicles are required to achieve 54.5 mpg (if GHG reductions are achieved exclusively through fuel economy improvements) and 163 grams of CO_2 per mile. According to the U.S. EPA, a model year 2025 vehicle would emit one-half of the GHG emissions from a model year 2010 vehicle (U.S. EPA, 2012). Notably, the state of California harmonized its vehicle efficiency standards through 2025 with the federal standards at this time (see Advanced Clean Cars program below).

In January 2017, US EPA issued its Mid-Term Evaluation of the GHG emissions standards, finding that it would be practical and feasible for automakers to meet the model year 2022-2025 standards through a number of existing technology.

In August 2018, the US EPA revised its 2017 determination, and issued a proposed rule that maintains the 2020 Corporate Average Fuel Economy (CAFE) and CO_2 standards for model years 2021 through 2026.[3] The estimated CAFE and CO_2 standards for model year 2020 are 43.7 mpg and 204 grams of CO_2 per mile for passenger cars and 31.3 mpg and 284 grams of CO_2 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 February 7, 2019, the State of California, joined by 16 other states and the District of Columbia, filed a petition challenging the US EPA's proposed rule to revise the vehicle emissions standards, arguing that the US EPA had reached

[3] Federal Register. Vol. 83, No. 165. August 24, 2018. Proposed Rules

erroneous conclusions about the feasibility of meeting the existing standards.[4] As of April, 9, 2019, the case was pending and oral arguments had not been scheduled.[5] Accordingly, due to the uncertainty of future federal regulations, this analysis assumes that the existing CAFE standards will remain unchanged.

4.7.3.2 State

The legal framework for GHG emission reduction in California has come about through Executive Orders, legislation, and regulations. The major components of California's climate change initiative are reviewed below:

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, then-Governor Arnold Schwarzenegger established Executive Order S-3-05 (EO S-3-05), which announced target dates by which Statewide GHG emissions would be progressively reduced. These included a reduction of GHG emissions to 2000 levels by 2010; a reduction of GHG emissions to 1990 levels by 2020; and a reduction of GHG emissions to 80 percent below 1990 levels by 2050. As discussed below, the 2020 reduction target was codified in 2006 as Assembly Bill 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 California Climate Change Scoping Plan

In 2006, the California legislature passed Assembly Bill 32 (Health and Safety Code §38500 et seq., or AB 32), also known as the Global Warming Solutions Act. AB 32 requires CARB to design and implement feasible and cost-effective emission 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 anticipates that the GHG reduction goals will be met, in part, through local government actions. CARB has identified a GHG reduction target of 15 percent from current levels for local governments and notes that successful implementation relies on local governments' land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted a Scoping Plan in December 2008 (CARB, 2009), which was re-approved by CARB on August 24, 2011, that outlines measures to meet the 2020 GHG reduction goals. To meet these goals, California must reduce its GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from today's levels. The Scoping Plan recommends measures for further study and possible State implementation, such as new fuel regulations. It estimates that a reduction of 174 million metric tons of CO_2e (about 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors and other sources could be achieved should the State implement all of the measures in the Scoping

4 Amicus brief, 2019. USCA Case #18-1114, Doc#1772455_filed February 14, 2019. Available: http://climatecasechart.com/case/california-v-epa-4/. Accessed April 17, 2019.

5 Amicus brief, 2019_USCA Case #18-1114 _Doc #1781696_filed 04.08.19. Available: http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/case-documents/2019/20190207_docket-18-1114_brief-1.pdf. Accessed April 17, 2019.

Plan. The Scoping Plan relies on the requirements of Senate Bill (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 five years. The first update to the AB 32 Scoping Plan was approved on May 22, 2014 by CARB (CARB, 2014). The 2017 Scoping Plan Update was adopted on December 14, 2017. The Scoping Plan Update addresses the 2030 target established by Senate Bill 32 (SB 32) as discussed below, and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. The key programs that the Scoping Plan Update builds on include: increasing the use of renewable energy in the State, the Cap-and-Trade Regulation, the Low Carbon Fuel Standard, and reduction of methane emissions from agricultural and other wastes (CARB, 2017).

Executive Order B-30-15 and Senate Bill 32

California Executive Order B-30-15 (April 29, 2015) set an "interim" Statewide emission target to reduce GHG emissions to 40 percent below 1990 levels by 2030, and directed State agencies with jurisdiction over GHG emissions to implement measures pursuant to statutory authority to achieve this 2030 target. Specifically, the Executive Order directed CARB to update the Scoping Plan to express this 2030 target in metric tons. On September 8, 2016, Governor Jerry Brown signed Senate Bill 32 (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, as discussed above (CARB, 2017).

Senate Bill 605

On September 21, 2014, Governor Jerry Brown signed Senate Bill 605 (SB 605), which required CARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants in the State no later than January 1, 2016. As defined in the statute, short-lived climate pollutant means "an agent that has a relatively short lifetime in the atmosphere, from a few days to a few decades, and a warming influence on the climate that is more potent than that of carbon dioxide." SB 605, however, does not prescribe specific compounds as short-lived climate pollutants or add to the list of GHGs regulated under AB 32. In developing the strategy, the CARB completed an inventory of sources and emissions of short-lived climate pollutants in the State based on available data, identified research needs to address any data gaps, identified existing and potential new control measures to reduce emissions, and prioritized the development of new measures for short-lived climate pollutants that offer co-benefits by improving water quality or reducing other air pollutants that impact community health and benefit disadvantaged communities.

Senate Bill 375

In addition to policy directly guided by AB 32, the legislature in 2008 passed SB 375 (Chapter 728, Statutes of 2008), 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, and land use and housing allocations. SB 375 requires Regional Transportation Plans (RTPs) developed by the

State's 18 metropolitan planning organizations (MPOs) to incorporate "sustainable communities strategies" (SCS) that will achieve GHG emission reduction targets set by CARB and coordinate regional housing and transportation. MTC is the federally recognized metropolitan planning organization (MPO) for the nine county Bay Area, which includes Santa Clara County and the City of Mountain View.

Plan Bay Area, which includes the region's SCS and the 2040 RTP, was jointly approved by the Association of Bay Area Governments' (ABAG) Executive Board and the Metropolitan Transportation Commission (MTC) on July 18, 2013. The SCS lays out how the region will meet certain GHG reduction targets, which include reducing per capita emissions by seven percent by 2020 and 15 percent by 2035 from a 2005 baseline. On July 26, 2017, the updated Plan Bay Area 2040 and an associated EIR were approved by ABAG and MTC (ABAG and MTC, 2017).

Assembly Bill 1493 (Pavley Standards)

In 2002, then-Governor Gray Davis signed Assembly Bill (AB) 1493. AB 1493 requires that CARB develop and adopt, by January 1, 2005, regulations that achieve "the maximum feasible reduction of greenhouse gases 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 California Code of Regulations (CCR) adding GHG emissions standards to California's existing standards for motor vehicle emissions. All mobile sources are required to comply with these regulations as they are phased in from 2009 through 2016.

Because the Pavley standards (named for the bill's author, State Senator Fran Pavley) would impose stricter standards than those under the CAA, California applied to the US EPA for a waiver under the CAA. In 2008, the US EPA denied the application. In 2009, however, the US EPA granted the waiver. The waiver has been extended consistently since 2009; however, in 2018 the US EPA and NHTSA indicated their intent to revoke California's waiver, and prohibit future State emissions standards enacted under the CAA. As of June 2019, the waiver was still in place and the status of the federal government's revocation of the waiver was uncertain.

Executive Order S-1-07

Executive Order S-1-07, which was signed by then- Governor Schwarzenegger in 2007, proclaims that the transportation sector is the main source of GHG emissions in California, generating more than 40 percent of Statewide emissions. It established a low carbon fuel standard (LCFS) with a goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 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 (CARB, 2018).

Advanced Clean Cars

In January 2012, pursuant to Recommended Measures T-1 and T-4 of the Scoping Plan, CARB approved the Advanced Clean Cars Program, a new emissions-control program for model year 2017 through 2025.The program combines the control of smog, soot, and GHGs with requirements for greater numbers of zero-emission vehicles. By 2025, when the rules will be fully implemented, the new automobiles will emit 34 percent fewer global warming gases and 75 percent fewer smog-forming emissions.

The program also requires car manufacturers to offer for sale an increasing number of zero-emission vehicles (ZEVs) each year, including battery electric, fuel cell, and plug-in hybrid electric vehicles. In December 2012, CARB adopted regulations allowing car manufacturers to comply with California's GHG emissions requirements for model years 2017-2025 through compliance with the EPA GHG requirements for those same model years (CARB, 2012).

CEQA and Senate Bill 97

CEQA requires lead agencies to disclose, consider, and mitigate the adverse environmental effects of projects they are considering for approval. GHG emissions have the potential to adversely affect the environment because they contribute to global climate change. Senate Bill 97 (Chapter 185, Statutes of 2007) and other California regulations address global climate change through revisions to the CEQA *Guidelines* and implementation of GHG emission reduction programs as described below.

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 the CEQA *Guidelines* amendments, as required by SB 97 (CNRA, 2009). These 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.

Senate Bill 1368

SB 1368 (Chapter 598, Statutes of 2006) is the companion bill of AB 32 and was signed by then-Governor Schwarzenegger in September 2006. SB 1368 requires the California Public Utilities Commission (CPUC) to establish a GHG emission performance standard for baseload generation from investor-owned utilities by February 1, 2007. The California Energy Commission was also required to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and California Energy Commission (CEC).

Renewable Portfolio Standards (Senate Bills 1078 and 107 and Executive Orders S-14-08 and S-21-09)

In November 2008, then-Governor Schwarzenegger signed Executive Order S-14-08, which expands the State's Renewable Portfolio Standard to 33 percent renewable power by 2020. In September 2009, then-Governor Schwarzenegger continued California's commitment to the Renewable Portfolio Standard by signing Executive Order S-21-09, which directs CARB under its AB 32 authority to enact regulations to help the State meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020.

Senate Bill 350

Senate Bill 350 (SB 350; Chapter 547, Statutes of 2015), signed October 7, 2015, is the Clean Energy and Pollution Reduction Act of 2015. SB 350 is the implementation of some of the goals of EO B-30-15. The objectives of SB 350 are:

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.

California Building and Energy Efficiency Standards (Title 24)

The CEC first adopted Energy Efficiency Standards for Residential and Nonresidential Buildings (CCR, Title 24, Part 6) in 1978 in response to a legislative mandate to reduce energy consumption in the State. Although not originally intended to reduce GHG emissions, increased energy efficiency and reduced consumption of electricity, natural gas, and other fuels would result in fewer GHG emissions from residential and nonresidential buildings subject to the standard. The standards are updated periodically (typically every three years) to allow for the consideration and inclusion of new energy efficiency technologies and methods (CEC, 2016).

The current Title 24, Part 6 standards (2016 standards) were made effective on January 1, 2017. The next update to the Title 24 energy efficiency standards (2019 standards) go into effect on January 1, 2020.

California Green Buildings Standards Code (CALGreen)

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24) was adopted as part of the California Building Standards Code (Title 24 CCR). CALGreen is a Statewide regulatory code for all buildings, including residential and commercial buildings. The regulations are 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. Title 24 standards require that all new residential and non-residential development implement various energy conservation measures, including ceiling, wall, and concrete slab insulation; vapor barriers; weather stripping on doors and windows; insulated heating and cooling ducts; water

heater insulation blankets; and certified energy efficient appliances. CALGreen became mandatory on January 1, 2011, for new residential and commercial construction. The 2016 CALGreen Code went into effect on January 1, 2017. Updates to the 2013 CALGreen Code include required construction waste recycling and/or salvage being increased from 50 percent of the nonhazardous construction and demolition waste to 65 percent, and additional electric vehicle (EV) charging space requirements for new multi-family dwellings (CBSC, 2016). The City has more stringent requirements for EV charging spaces required as part of the Mountain View Green Building Code as described under Section 4.7.3.4, *Local*.

4.7.3.3 Regional

Bay Area Air Quality Management District

BAAQMD is the regional government agency that regulates sources of air pollution within the nine San Francisco Bay Area counties. The BAAQMD regulates GHG emissions through the following plans, programs, and guidelines.

Clean Air Plan

BAAQMD and other air districts prepare clean air plans in accordance with the State and federal Clean Air Acts. On April 19, 2017, the BAAQMD Board of Directors adopted the 2017 Clean Air Plan *Spare the Air, Cool the Climate,* an update to the 2010 Clean Air Plan. The Clean Air Plan is a comprehensive plan that focuses on the closely-related goals of protecting public health and protecting the climate. Consistent with the State's GHG reduction targets, the plan lays the groundwork for a long-term effort to reduce Bay area GHG emissions 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050 (BAAQMD, 2017b)

BAAQMD CEQA Air Quality Guidelines

BAAQMD CEQA Air Quality Guidelines were prepared to assist in the evaluation of air quality impacts of projects and plans proposed within the Bay Area. The guidelines provide recommended procedures for evaluating potential air impacts during the environmental review process, consistent with CEQA requirements, and include recommended thresholds of significance, mitigation measures, and background air quality information. The guidelines also include recommended assessment methodologies for air toxics, odors, and greenhouse gas emissions. In June 2010, the BAAQMD's Board of Directors adopted CEQA thresholds of significance and an update of the CEQA Guidelines, which included significance threshold for GHG emissions based on the emission reduction goals for 2020 articulated by the State Legislature in AB 32. The first threshold, 1,100 MT CO_2e per year, is a numeric emissions level below which a project's contribution to global climate change would be less than cumulatively considerable. For larger and mixed-use projects, the Guidelines state that emissions would be less than cumulatively significant if the project as a whole would result in an efficiency of 4.6 MT CO_2e per service population or better (BAAQMD, 2010).

On March 5, 2012, the Alameda County Superior Court issued a judgment finding that the BAAQMD had failed to comply with CEQA when it adopted the thresholds of significance in the BAAQMD CEQA Air Quality Guidelines. That decision was appealed to the Court of Appeal and

one of the issues in the case has been decided by the California Supreme Court. The Supreme Court found that CEQA does not require an analysis of how existing environmental conditions will impact future residents or users of a proposed project, and remanded the case down for the lower court to decide remaining issues. Following the Superior Court order, the BAAQMD released revised *CEQA Air Quality Guidelines* in May of 2012 that include guidance on calculating air pollution emissions, obtaining information regarding the health impacts of air pollutants, and identifying potential mitigation measures, and which set aside the significance thresholds. There was no challenge to BAAQMD's 2010 greenhouse gas thresholds or the substantial evidence supporting those thresholds (BAAQMD, 2012). In May 2017, the Air District published a new version of the Guidelines, which included no changes to the greenhouse gas thresholds.

Under BAAQMD's current Air Quality Guidelines, a local government may prepare a qualified GHG Reduction Strategy that is consistent with AB 32 goals. If a project is consistent with an adopted qualified GHG Reduction Strategy and General Plan that addresses the project's GHG emissions, it can be presumed that the project will not have significant GHG emissions under CEQA (BAAQMD, 2017a).

Silicon Valley Clean Energy

Silicon Valley Clean Energy (SVCE) is a community-governed, local power supplier that provides renewable and carbon-free electricity to Mountain View residents and businesses under Silicon Valley's community choice energy (CCE) program, at rates that are lower or comparable to Pacific Gas & Electric's (PG&E) rates. The State of California passed legislation in 2002 (Assembly Bill 117) that permits local agencies to form CCE programs for their communities. Under a CCE program, the utility company (in this case PG&E) continues to deliver and service the electricity through its existing utility lines, and provide billing and customer service. SVCE offers 100 percent carbon-free electricity at about the same price as PG&E's standard grid offering. Customers are automatically enrolled in the program, but have the option to opt out and use traditional PG&E service[6] (SVCE, 2019).

4.7.3.4 Local

Mountain View 2030 General Plan and Greenhouse Gas Reduction Program

The City of Mountain View certified the General Plan Program EIR and adopted the *Mountain View 2030 General Plan* and *Greenhouse Gas Reduction Program* (GGRP) in July 2012. The GGRP is a separate but complementary document to the *Mountain View 2030 General Plan* (General Plan) that implements the GHG emissions reduction goals of the General Plan and serves as a programmatic GHG emissions reduction strategy for CEQA tiering purposes. The GGRP includes goals, policies, performance standards, and implementation measures for achieving GHG emission reductions and meeting the requirements of AB 32. The GGRP includes goals, policies, performance standards, and implementation measures for achieving GHG emission reductions, to meet the requirements of AB 32. The program includes a goal to improve communitywide emissions efficiency by 15 to 20 percent over 2005 levels by 2020 and by

[6] Only a small percentage of customers opt out of SVCE, amounting to 1.8 percent of combined residential and commercial accounts (City of Mountain View, 2018).

30 percent over 2005 levels by 2030. The GGRP is also intended to meet the mandates outlined in the BAAQMD CEQA Air Quality Guidelines and the recent standards for "qualified plans" set forth by BAAQMD (City of Mountain View, 2012).

City of Mountain View Climate Protection Roadmap

The City of Mountain View adopted the *City of Mountain View Climate Protection Roadmap* (CPR) in September 2015 to address climate change through 2050 and the feasibility of achieving the adopted targets in the GGRP. The City's adopted absolute target is to reduce community emissions 80 percent below 2005 levels by 2050. The CPR seeks to evaluate mechanisms through which the community could achieve the 2050 emission reduction target and identify various roles the City might play in facilitating such reductions (City of Mountain View, 2015).

Mountain View Green Building Code

The Mountain View Green Building Code (MVGBC) amends the State-mandated CALGreen Code to include local green building standards and requirements for private development. The MVGBC applies green building requirements per building type and threshold to new construction, residential additions and commercial/industrial tenant improvements. All residential construction of five units or more must: 1) comply with the mandatory measures of the CALGreen Code and any Mountain View amendments; 2) meet the intent of 70 GreenPoint Rated points[7]; and 3) demonstrate energy compliance to meet or exceed Title 24 standards. All non-residential new construction less than 5,000 square feet must: 1) meet the mandatory measures of the CALGreen Code and any Mountain View amendments; and 2) demonstrate energy compliance to meet or exceed Title 24 standards. All new mixed-use construction projects must comply with Mountain View's green building requirements and meet the requirements applicable to each primary occupancy component. The MVGBC also includes a requirement for 10 percent of parking spaces for multi-family residential development (greater than three units) and non-residential development (with more than 200 spaces) to be electric vehicle spaces installed with electric vehicle supply equipment (EVSE).

Mountain View Water Conservation in Landscaping Regulations

The City's water conservation in landscaping regulations (Chapter 36, Article XI, Division 3, Section 36.34.30) further the city's current water conservation efforts, reduce future water demands, and comply with State water conservation requirements. New and/or rehabilitated landscaping must comply with the provisions of the water conservation in landscaping regulations.

Mountain View Construction and Demolition Debris Ordinance

All construction, demolition and renovation projects within the City which involve the construction, demolition, or renovation of 5,000 square feet or more must comply with the City's Construction and Demolition Debris Ordinance (Chapter 16, Article III). Projects are required to recycle or divert at least 50 percent of materials generated for discards by the project.

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7 Refers to a residential green building rating system developed by Build It Green. Projects can use any of the adopted GPR checklists that most appropriately apply to the project type proposed.

4.7.4 Greenhouse Gas Emissions Impacts

4.7.4.1 Significance Criteria

This analysis evaluates the Project impacts related to GHG emissions. The evaluation considers the Project plans, conditions at the Project site, and applicable regulations and guidelines. Significance criteria used in this analysis are based on Appendix G of the CEQA *Guidelines*. Specifically, the Project would have a significant effect on the environment if it were to:

a) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment;

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purposes of reducing GHG emissions.

4.7.4.2 Approach to Analysis

Per the BAAQMD CEQA Air Quality Guidelines, for land use projects, the threshold for operational-related GHG emissions is compliance with a qualified GHG Reduction Strategy that is consistent with AB 32 goals (BAAQMD, 2017a). As discussed above, the City has adopted a qualified GHG Reduction Strategy, the GGRP. The City's GGRP relies on land use data provided in the 2030 General Plan. Since the Project as proposed would require a General Plan Amendment, and the land use assumptions would differ from the 2030 General Plan, the GGRP cannot be solely relied upon to make a significance determination with regard to criterion a) listed above. Therefore, this analysis uses an efficiency-metric to determine significance related to the Project's GHG emissions.

Efficiency-based thresholds commonly describe an efficiency limit using "per service population," which refers to the sum of the number of jobs and the number of residents generated by a project, and use emissions associated with commercial and residential uses, also known as the land use sector, to derive an efficiency metric. BAAQMD's current efficiency thresholds account for only consistency with AB 32's established GHG emissions reduction targets for 2020. However, efficiency-based thresholds can also be derived to assess a project's consistency with the State's post-2020 reduction targets. Projects that attain an efficiency target that supports Statewide reduction planning for future milestones would result in less-than-significant GHG emissions.

For quantifying a project's GHG emissions, BAAQMD recommends that all GHG emissions from the project be estimated, including direct and indirect GHG emissions from operations. Direct emissions include emissions produced from onsite combustion of energy, such as natural gas used in furnaces and boilers, emissions from industrial processes, and fuel combustion from mobile sources. Indirect emissions are emissions produced offsite by energy production and water conveyance due to a project's energy use and water consumption. BAAQMD has provided guidance on detailed methods for modeling GHG emissions from proposed projects (BAAQMD, 2017a). Potential impacts are assessed by modeling the estimated CO_2e GHG emissions generated by Project construction and operations, using the CalEEMod version 2016.3.2 land use

emissions model (Appendices B and C), were compared to a calculated GHG efficiency threshold for 2023, the Project's assumed buildout year.[8]

The calculated GHG efficiency threshold is based on BAAQMD's GHG threshold calculation methodology (BAAQMD, 2017a; CLE, 2016). GHG efficiency thresholds specific to the land use development sector and based on the emissions reduction targets under AB 32 and SB 32 were established to support this analysis. BAAQMD adopted a 2020 GHG efficiency metric of 4.6 metric tons (MT) of CO_2e per service population, based on previously projected population and employment data for 2020 and the 1990 CO_2e emissions equivalent target (BAAQMD, 2009). To establish the GHG emissions target for 2030, the emissions level 40 percent below the 1990 CO_2e levels (the emissions target for 2020) was calculated. A GHG efficiency threshold for 2023 was estimated by interpolating a 12 percent reduction below 1990 CO_2e emissions levels between 2020 and 2030 CO_2e emissions levels. Population and employment data projections for 2023 were used to calculate the efficiency metric for the Project (DoF, 2019; EDD, 2018). **Table 4.7-1** below summarizes the efficiency thresholds developed and used for the analysis.

TABLE 4.7-1
GHG EFFICIENCY METRICS

Year	MT CO_2e per SP	Basis for Threshold
2020	4.6[a]	GHG emissions reduced to 1990 levels per AB 32
2023	4.3	GHG emissions reduced to 12 percent[b] below 1990 levels
2030	2.8	GHG emissions reduced to 40 percent below 1990 levels per SB 32

NOTES:
[a] This threshold is contained in the current BAAQMD CEQA Air Quality Guidelines (BAAQMD, 2017a).
[b] The 12 percent reduction assumes a 4 percent reduction per year from 2020 to 2030 meet the target of 40 percent below 1990 levels.

SOURCE: BAAQMD, 2009; CLE, 2016; DoF, 2019; EDD, 2018

The Project was also assessed for consistency with plans, policies, and regulations adopted for the purposes of reducing GHG emissions, including the City's GGRP.

Project Assumptions

Construction of the Project would generate GHG emissions through the use of heavy-duty construction equipment, construction workers' vehicle trips, truck hauling trips, and vendor truck trips. As described in Section 4.2, *Air Quality*, two Project construction scenarios were modeled. Simultaneous construction of Blocks A and B would result in a buildout year of 2021, while sequenced construction of each would result in a buildout year of 2023. The total GHG emissions from construction under both scenarios would be similar, and are presented for the simultaneous construction scenario in the analysis below. Construction modeling outputs and detailed assumptions are provided in Appendix B.

[8] As described in Section 4.2, *Air Quality*, two Project construction scenarios were modeled. Simultaneous construction of Blocks A and B would result in a buildout year of 2021, while sequenced construction of each would result in a buildout year of 2023. The buildout year (2023) for sequenced construction was used in this analysis to assess a more conservative scenario, where Project emissions would be compared to a numerically lower efficiency metric.

The Project would generate operational GHG emissions from a variety of sources, including area sources (natural gas combustion for heating, cooking, and landscape equipment); indirect emissions from purchased electricity; and from mobile sources (daily automobile and truck trips). Water usage for the residential buildings[9] was estimated using the building water demand found in the Utility Impact Study (**Appendix L**), and energy use from 100 percent aerobic wastewater treatment was also assumed based on the City's use of the Palo Alto Region Water Quality Control Plant (RWQCP), as described in Section 4.15, *Utilities and Service Systems*. Operational modeling outputs and detailed assumptions are provided in **Appendix C**.

Cumulative

Both BAAQMD and the California Air Pollution Control Officers Association (CAPCOA) consider GHG impacts to be exclusively cumulative impacts, in that no single project could, by itself, result in a substantial change in climate (BAAQMD, 2017a; CAPCOA, 2008). Therefore, the evaluation of cumulative GHG impacts presented below evaluates whether the Project would make a considerable contribution to cumulative climate change effects.

4.7.4.3 Discussion of Impacts and Mitigation Measures

Impact GHG-1: Development of the proposed Project would produce GHG emissions that would not have a significant impact on the environment. (Criterion a.) (*Less Than Significant, No Mitigation Required*)

Construction and operation of the Project would generate GHG emissions. The use of fossil fuels in construction equipment would generate GHGs such as CO_2, methane, and nitrous oxide. Once operational, the Project would generate GHG emissions primarily from motor vehicle use, natural gas consumption, electricity use, solid waste generation, and water use. GHG emissions resulting from the Project were calculated using the methodology described in Section 4.7.4.2, *Approach to Analysis*, above.

Short-Term GHG Emissions from Construction of the Project

On-site sources of GHG emissions include off-road equipment and off-site sources include on-road vehicles (e.g., haul trucks, vendor trucks, and worker vehicles). The BAAQMD CEQA Air Quality Guidelines do not include a specific threshold or methodology for assessing construction-related GHG emissions for CEQA analysis. The analysis of construction emissions only considers improvements in construction equipment exhaust emissions through manufacturer requirements and turnover. The Project would incorporate dust control measures recommended by BAAQMD as required by the City's Standard Conditions of Approval (as detailed in Section 4.2, *Air Quality,* in this EIR), which primarily include dust abatement measures but do include some measures to reduce construction exhaust emissions. **Table 4.7-2** presents construction emissions for the Project by construction year from on-site and off-site emission sources. Additional details on calculations can be found in Appendix B.

[9] Water usage from retail uses were based on CalEEMod default values, which are higher than those estimated for the Project in Appendix L, which amounts to a more conservative analysis.

TABLE 4.7-2
ESTIMATED ANNUAL UNMITIGATED CONSTRUCTION GREENHOUSE GAS EMISSIONS

Year	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
2020 – Block A	337.68	0.06	0.00	339.16
2020 – Block B	329.32	0.06	0.00	330.80
2021 – Block A	322.23	0.05	0.00	323.43
2021 – Block B	294.67	0.05	0.00	295.85
Total	**1,283.90**	**0.22**	**0.00**	**1,289.24**
Amortized Emissions over 30 Years				42.97

NOTES:
The total GHG emissions from construction under both scenarios would be similar, and are presented for the simultaneous construction scenario in this table.
Columns may not total precisely due to rounding.
CH_4 = methane; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N_2O = nitrous oxide
SOURCE: Illingworth and Rodkin, 2019 (Appendix B)

As shown in Table 4.7-2, an estimated total of approximately 1,289 metric tons (MT) of CO_2e would be emitted from construction activities during all construction years. Construction emissions are annualized because the proposed operational GHG emissions thresholds are analyzed in terms of metric tons "per year." This analysis assumes a 30-year development life of the Project, after which it is assumed to be demolished or remodeled for energy efficiency.[10] Total construction emissions therefore, represent approximately 42.97 MT CO_2e annually, over 30 years. Additionally, **Mitigation Measure AIR-1** would require the Project to use electric powered cranes and stationary equipment during construction. For the purposes of a conservative analysis, this mitigation and BAAQMD dust control measures for construction are not incorporated into the Project GHG emissions calculations, and would further reduce construction-related GHG emissions. GHG emissions generated during initial demolition and construction of the Project would be short-term in nature, and would not represent a long-term source of GHG emissions. Nevertheless, amortized annual emissions were added to annual operational GHG emission estimates, discussed below.

Long-Term GHG Emissions from Operation of the Project

Operation and maintenance of the Project would generate GHG emissions through motor vehicle trips to and from the Project site; energy use (natural gas or electricity consumed by the Project); solid waste disposal; and generation of electricity associated with water supply, treatment, and distribution and wastewater treatment. CalEEMod was used to calculate the annual GHG emissions based on the operational assumptions described in Appendix C.

Table 4.7-3 shows the estimated operational Project-generated GHG emissions in 2023 from area sources, energy usage, motor vehicles, solid waste generation, and water usage and wastewater generation.

[10] 30 years of useful life is the common standard currently used in practice.

TABLE 4.7-3
ESTIMATED ANNUAL OPERATIONAL GREENHOUSE GAS EMISSIONS

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area	3.81	<0.01	0.00	3.90
Energy	464.93	0.04	0.01	468.58
Mobile	1,680.62	0.06	0.00	1,682.01
Waste	28.93	1.71	0.00	71.68
Water	17.81	0.02	0.01	20.86
Total	**2,196.11**	**1.82**	**0.02**	**2,247.03**
Amortized Construction Emissions over 30 Years[a]				42.97
Operation including Construction Total				**2,290.00**
Service Population[b]				684
Total Project GHG Emissions by Service Population				**3.3**
2023 Project-level Service Population Threshold[c]				4.3
Exceeds Significance Threshold?				**No**

NOTES:
a See Table 4.7-2 above.
b Conservatively includes a 7.5 percent vacancy factor and an average of 2.4 persons per household from 303 residential units (675 residents) and 9 retail employees as discussed in Section 4.12, *Population and Housing*.
c See Table 4.7-1 above.

Columns may not total precisely due to rounding, and due to the influence of minimal amounts of less common GHGs not represented in the table.

SOURCE: Appendix C.

As shown in Table 4.7-3, estimated annual Project-generated GHG emissions would be approximately 2,247.03 MT CO_2e per year as a result of Project operation. Estimated annual Project generated operational emissions in 2023 and amortized Project construction emissions would be approximately 2,290.00 MT CO_2e per year. Emissions would not exceed the calculated 2023 efficiency threshold of 4.3 MT of CO_2e/SP/yr (see Table 4.7-1), with Project emissions estimated to be approximately 3.3 MT CO_2e/SP/yr.[11] Therefore, Project-generated GHG emissions would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

[11] Total of 2,270.60 MT/year of CO_2e divided by a service population of 684 residents and employees.

Impact GHG-2: Development of the Project would not conflict with an applicable plan, policy, or regulation of an appropriate regulatory agency adopted for the purpose of reducing GHG emissions. (Criterion b.) (*Less Than Significant, No Mitigation Required*)

The Project's consistency with Statewide, regional, and local planning efforts to reduce GHG emissions are evaluated below, based on applicable plans, policies, and regulation described in Section 4.7.3, *Regulatory Setting*, above.

Local

Consistency with the City's GGRP

Development of the Project would also be subject to applicable policies in the City's GGRP adopted by the City in July 2012. The program includes a goal to improve communitywide emissions efficiency by 15 to 20 percent over 2005 levels by 2020 and by 30 percent over 2005 levels by 2030. The GGRP includes goals, policies, performance standards, and implementation measures for achieving GHG emission reductions, to meet the requirements of AB 32. These measures are individually identified in **Table 4.7-4** and an assessment is made in the table as to whether the GGRP measures are reasonably applicable to the Project, and whether the Project is consistent with each measure. As shown in Table 4.7-4, the Project is consistent with all applicable GGRP measures.

TABLE 4.7-4
PROJECT CONSISTENCY WITH MEASURES OF THE CITY'S GGRP

GGRP Measure	Description	Consistency of Proposed Project with Measure
Measure E-1.1: Residential Energy Efficiency Retrofit	Energy efficiency improvements to existing residential structures.	**Not applicable.** The Project would create new residential structures in compliance with Title 24 Standards.
Measure E-1.2: Non-Residential Energy Efficiency Retrofit	Energy efficiency improvements to existing non-residential structures.	**Not applicable.** The Project would create new retail structures in compliance with Title 24 Standards.
Measure E-1.3: Non-Residential Lighting Retrofit	Requires large non-residential tenant improvements (>15,000 square feet) to exceed the Title-24 energy efficiency standards by 10 percent.	**Not applicable.** The retail component of the Project is 3,000 square feet.
Measure E-1.4: Residential Energy Star Appliances	Encourage voluntary community participation to upgrade home appliances and electronics to Energy Star or other energy efficient models.	**Consistent.** The Project would include energy-efficient appliances in all dwelling units.
Measure E-1.5: Smart Grid	Promote the use of smart appliances in homes and businesses through outreach and incentives.	**Consistent.** The Project would consider including "smart grid" and "smart grid-compatible" appliances in all dwelling units.
Measure E-1.6: Exceed State Energy Standards in New Residential Development	New residential development must comply with the MVGBC.	**Consistent.** The Project would meet all City building standard requirements and be built to exceed GreenPoint home certification rating standards.
Measure E-1.7: Exceed State Energy Standards in New Non-Residential Development	New non-residential development must comply with the MVGBC.	**Consistent.** The Project would meet all City building standard requirements.
Measure E-1.8: Building Shade Trees in Residential Development	Require the planting of one building shade tree on a parcel to accompany each new single-family residential unit.	**Not applicable.** The Project is multi-family residential development. However, the Project would provide a net total of 276 trees that would provide shade for the Project site.

TABLE 4.7-4 (CONTINUED)
PROJECT CONSISTENCY WITH MEASURES OF THE CITY'S GGRP

GGRP Measure	Description	Consistency of Proposed Project with Measure
Measure E-2.1: Residential Solar Water Heaters	Promote the use of solar water heater systems for residential buildings.	**Consistent.** The Project would include solar hot water systems to preheat domestic hot water.
Measure E-2.2: Non-Residential Solar Water Heaters	Promote the use of solar water heater systems for non-residential buildings.	**Consistent.** Per the applicant's preliminary Green Points rated checklist, Project mixed-use buildings would include solar hot water systems to preheat domestic hot water.
Measure E-2.3: Residential Solar Photovoltaic Systems	Encourage residential property owners to invest in solar photovoltaic systems.	**Not applicable.** This measure applies to existing residential development. However, the MVGBC requires the Project to achieve 70 points at a minimum on the GreenPoint Rated checklist, which includes a photovoltaic system for multifamily projects as a potential measure for which the Project has yet to determine commitment.
Measure E-2.4: Non-Residential Solar Photovoltaic Systems	Encourage the installation of solar photovoltaic systems for commercial and industrial facilities.	**Not applicable.** This measure applies to existing non-residential development.
Measure E-2.5: Landfill Gas to Energy	Continue to operate the Shoreline Landfill gas-to-energy generation systems.	**Not applicable.** This measure applies to renewable energy generation from landfills
Measure E-3.1: Energy Efficiency in Municipal Buildings	Energy efficiency actions for municipal buildings.	**Not applicable.** This measure applies to existing municipal development.
Measure E-4.1: Energy Efficiency in Streetlights and Traffic Lights	Lighting level and energy efficiency improvements for City streetlights and traffic lights.	**Not applicable.** This measure applies to municipal light efficiency.
Measure E-5.1: Renewable Energy Systems on Municipal Buildings	Determine potential of installing solar photovoltaic systems or other renewable energy systems on other municipal facilities.	**Not applicable.** This measure applies to municipal renewable energy systems.
Measure SW-1.1: Implementation of Zero-Waste Plan	Goal to divert 90 percent of communitywide waste from landfills by 2020 and 100 percent of its waste by 2030.	**Consistent.** The Project would meet or exceed the City's Construction and Demolition Ordinance for recycling of construction debris as well as the CALGreen Code and MVGBC. The Project would also participate in the City's residential recycling programs.
Measure W-1.1: Urban Water Management Plan Conservation Strategies	Actions toward reducing municipal water consumption.	**Consistent.** The Project would meet all City water efficiency and conservation regulations.
Measure T-1.1: Transportation Demand Management (TDM)	Requires the City to adopt a TDM ordinance that specifics all new non-residential development, generating 50 employees or more, to reduce home-based, drive-alone peak hour commute trips.	**Consistent.** The Project includes a TDM program to reduce vehicle trips.
Measure CS-1.1: Enhance the Urban Forest	Encourage tree planting and urban reforestation in public and private development.	**Consistent.** The Project would provide a net total of 276 trees on the Project site.

SOURCE: City of Mountain View, 2012

Consistency with the City's Climate Protection Roadmap (CPR)

The City adopted the CPR in September 2015 which addresses City climate change efforts through 2050 and the feasibility of achieving the adopted targets in the GGRP. The CPR evaluates mechanisms by which the City may achieve an emissions reduction target of 80 percent below 2005 levels by 2050. The CPR is not a plan in and of itself, but an analysis that may be used by City officials to evaluate the potential for long-term communitywide emission reduction initiatives moving forward. Due to the high-level nature of the analysis, the CPR does not explicitly direct implementation of any specific City actions. However, the CPR outlines viable options for future City programs, policies, and actions that could be pursued following additional feasibility analysis (City of Mountain View, 2015). **Table 4.7-5** outlines strategies applicable to the Project and the Project's consistency with these strategies. As shown in Table 4.7-5, the Project would be consistent with several of the applicable strategies in the City's CRP. Although the Project has yet to determine whether or not solar photovoltaic panels would be included, the Project would not be required directly to do so and would largely be consistent with the CRP. The updated 2019 Title 24 Standards will also require that Project buildings be solar ready.

TABLE 4.7-5
PROJECT CONSISTENCY WITH APPLICABLE STRATEGIES OF THE CITY'S CPR

CRP Strategies	Consistency of Proposed Project with Strategy
Lower-Carbon Electricity	**Consistent.** Project residents and businesses would automatically be enrolled in SVCE's CCE program which provides 100 percent carbon-free energy to the City.
Renewable Energy Generation – Solar Photovoltaic	**Partially Consistent.** The MVGBC requires the Project to achieve 70 points at a minimum on the GreenPoint Rated checklist, which includes a photovoltaic system for multifamily projects as a potential measure. The Project has yet to determine commitment to this measure, but is not required to do so.
Renewable Energy Generation – Solar Hot Water	**Consistent.** Project mixed-use buildings would include solar hot water systems to preheat domestic hot water.
Energy Efficiency – New Construction	**Consistent.** The Project would seek GreenPoint Rated Gold level certification, and would comply with the CalGreen Code, MVGBC, and Title 24 building energy efficiency requirements, and would include energy saving measures such as high-efficacy lighting, energy efficient appliances, and solar hot water systems to preheat domestic hot water.
Fuel Switching – Electric Vehicles (EV)	**Consistent.** EV charging spaces will be provided on-site in proposed parking garages, per CalGreen and MVGBC requirements, which require at least 10 percent EV spaces installed with electric vehicle supply equipment (EVSE), and would facilitate fuel switching.
Reduce Landfilled Waste	**Consistent.** During construction, the Project would be required to recycle and/or salvage at least 65 percent of the nonhazardous construction and demolition waste per the CALGreen Code, and reuse or recycle 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing per the MVGBC. During operation, as discussed in Section 4.15, *Utilities and Service Systems*, the Project-specific Trash Management Plan designed a waste management system for the Project which would facilitate the proper recycling and disposal of waste from residential and retail uses in accordance with the City of Mountain View's waste management requirements as well as Statewide waste reduction goals.

SOURCE: City of Mountain View, 2015

State/Regional GHG Reduction Goals

BAAQMD 2020 thresholds (see Table 4.7-1) were crafted in a manner that defined a project's (or plan's) emissions as significant if the resulting development would emit GHG emissions above the level beyond which achievement of AB 32 goals may be inhibited. The efficiency threshold was developed for land uses that would involve population and employment growth (service population) under forecast conditions, and factored the emission rates that would accommodate growth while still allowing for consistency with the goals of AB 32 (i.e., 1990 GHG emissions levels by 2020) (BAAQMD, 2009). The 2017 Scoping Plan Update addresses the 2030 target established by SB 32, and establishes a proposed framework of action for California to meet a 40 percent reduction in GHG emissions by 2030 compared to 1990 levels. As described under Impact GHG-1, Project-generated GHG emissions would be less than the calculated 2023 efficiency threshold of 4.3 MT of CO_2e/SP/yr, which would support emissions reductions through 2030.

Additionally, as discussed in Section 4.2, *Air Quality*, Table 4.2-3, the Project would be consistent with the applicable control measures of the BAAQMD's *2017 Clean Air Plan* to reduce emissions of GHGs, which lays the groundwork for a long-term effort to reduce Bay area GHG emissions 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050. Further, as discussed above, the Project would be consistent with applicable measures and strategies in the City's GGRP and CRP to achieve local GHG reduction targets in support of State and Regional goals. Thus, the Project would support emissions reductions to meet AB 32 and SB 32 GHG emissions reduction targets.

Conclusion

Overall, development of the Project would not conflict with any applicable plans, policies or regulations adopted with the intent to reduce GHG emissions. The impact would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

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 to global climate change are inherently cumulative.

Geographic Context

GHGs are global pollutants, and also pollutants of regional and local concern. Whereas pollutants with localized air quality effects have relatively short atmospheric lifetimes (about 1 day), GHGs

have long atmospheric lifetimes (1 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.

Impact C-GHG-1: The Project, combined with cumulative development, including past, present, existing, approved, pending, and reasonably foreseeable future development in the vicinity of the Project site, would not result in cumulative impacts regarding GHG emissions. (*Less Than Significant, No Mitigation Required*)

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 contribute substantially to the phenomenon of global climate change and its associated environmental impacts.

As discussed above under **Impacts GHG-1 and GHG-2**, GHG emissions from the development of the Project would be less than significant and the Project would not conflict with an applicable plan, policy, or regulation of an appropriate regulatory agency adopted for the purpose of reducing GHG emissions. Therefore, their contribution to a global cumulative impact would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

4.7.5 Summary of Greenhouse Gas Emissions Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact GHG-1: Development of the proposed Project would produce GHG emissions that would not have a significant impact on the environment.	Less than Significant	None required	-
Impact GHG-2: Development of the Project would not conflict with an applicable plan, policy or regulation of an appropriate regulatory agency adopted for the purpose of reducing GHG emissions.	Less than Significant	None required	-
Impact C-GHG-1: Development of the Project, combined with cumulative development, including past, present, existing, approved, pending, and reasonably foreseeable future development in the vicinity of the Project site, would not result in cumulative impacts regarding GHG emissions.	Less than Significant	None required	-

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4.8 Hazards and Hazardous Materials

4.8.1 Introduction

This section discusses hazardous materials and hazards conditions within the Project site, and evaluates the potential for construction and operation of the Project to result in significant impacts related to exposing people or the environment to adverse effects related to hazards and hazardous materials. A review of the applicable regulatory framework is also provided. Site information is based on the results of a Phase I/II Environmental Site Assessment (ESA) performed in 2019, and a follow-up site characterization (soil and soil gas sampling) also performed in 2019, as presented in Appendix I (EKI, 2019). In addition, Appendix I also includes two peer review letters of the Phase I/II assessments that were conducted by an independent consultant, Cornerstone Earth Group.

CEQA requires the analysis of potential adverse effects of a project on the environment, but, as discussed in Chapter 1, *Introduction*, of this EIR, potential effects of the environment on the Project are not required to be analyzed or mitigated under CEQA. Notwithstanding this fact, this section analyzes both the potential effects of hazards and hazardous materials associated with implementation of the Project and the potential effects of existing hazards and hazardous materials on sensitive uses and receptors within the built Project site, in order to provide information to the public and decision-makers.

4.8.2 Background

4.8.2.1 Hazardous Material and Waste

Materials and waste are generally considered hazardous if they are poisonous (toxicity), can be ignited by open flame (ignitability); corrode other materials (corrosivity); or react violently, or explode or generate vapors when mixed with water (reactivity).

The term “hazardous material” is defined in the State Health and Safety Code (Chapter 6.95, Section 25501[n][1]) to include any material that, because of quantity, concentration, 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.

A hazardous waste, for the purpose of this EIR, is any hazardous material that is discarded, stored and treated, or recycled, as defined in the State Health and Safety Code (Chapter 6.95, Section 25124).

The transportation, use, and disposal of hazardous materials, as well as the potential releases of hazardous materials to the environment, are closely regulated through many State and federal laws.

4.8.2.2 Potential Receptors/Exposure

The sensitivity of potential receptors in the areas of known or potential hazardous materials contamination is dependent on several factors, the primary factor being the potential pathway for

human exposure. Exposure pathways include external exposure, inhalation, and ingestion of contaminated soil, air, water, or food. The magnitude, frequency, and duration of human exposure can cause a variety of health effects, from short-term acute symptoms to long-term chronic effects. Potential health effects from exposure can be evaluated in a health risk assessment. The main elements of exposure assessments typically include:

- Evaluation of the fate and transport processes for hazardous materials at a given site;
- Identification of potential exposure pathways;
- Identification of potential exposure scenarios;
- Calculation of representative chemical concentrations; and
- Estimation of potential chemical uptake.

4.8.2.3 Soil and Groundwater Contamination

In California, regulatory databases listing hazardous materials sites provided by numerous federal, State, and local agencies were consolidated in the "Cortese List" pursuant to Government Code Section 65962.5, originally enacted in 1985. The Cortese List is no longer consolidated as originally intended, but is now available as web-based information from the responsible organizations as linked on the California Environmental Protection Agency's (CalEPA) website, and includes:

- List of Hazardous Waste and Substances sites from Department of Toxic Substances Control (DTSC) EnviroStor database;
- List of Leaking Underground Storage Tank Sites by County and Fiscal Year from the State Water Resources Control Board (SWRCB) GeoTracker database;
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit;
- List of active Cease and Desist Orders (CDO) and Cleanup and Abatement Orders (CAO) from the SWRCB; and
- List of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC and listed in the EnviroStor database.

The SWRCB GeoTracker database includes leaking underground storage tanks (LUSTs); permitted underground storage tanks (USTs); and spills, leaks, investigations, and cleanup database (SLIC) sites. The DTSC EnviroStor database includes federal and State response sites, voluntary, school, and military cleanups and corrective actions, and permitted sites. The five databases cited above identify sites with suspected and confirmed releases of hazardous materials to the subsurface soil and/or groundwater. The statuses of these sites change as identification, monitoring and clean-up of hazardous materials progress. Typically, a site is considered "closed" (i.e., no further action is needed to address hazardous materials at the site) once it has been demonstrated that existing site uses combined with the levels of identified contamination present no significant risk to human health or the environment.

Underground Fuel Tanks

An underground fuel tank (UFT) system is a tank and any underground piping connected to the tank that has at least 10 percent of its combined volume underground. Until the mid-1980s, most UFTs were made of single-walled bare steel which could corrode over time, resulting in leakage. Faulty installation or maintenance procedures also resulted in UFT leakage, in addition to potential releases associated with spills. Revised UFT regulations in the late 1990s significantly reduced the incidents of leakage from new UFT systems and the resulting soil and groundwater contamination. However, some older UFT systems remain in service, and many sites contaminated by UFTs are still undergoing investigation and cleanup.

Underground storage tanks installed prior to the mid-1980s that have leaked, as well as improperly installed UFTs, have resulted in fuel spills that can present contamination issues. In addition, it is not uncommon for older UFTs to have been abandoned in place with no documentation of location or abandonment technique. Unknown and undocumented UFTs can be found during ground disturbances associated with redevelopment activities of commercial and industrial properties.

Case closure for leaking underground storage tanks (LUSTs, also referred to as leaking underground fuel tanks or LUFTs) is typically granted by the oversight agency when soil or groundwater affected by a release of petroleum hydrocarbons (PHCs) and the constituents of PHCs (such as benzene, toluene, ethylbenzene, xylenes, and methyl tertiary butyl ether [MTBE]) have been substantially cleaned up, and the contamination no longer poses a substantial threat to human health or the environment. However, it should be noted that residual contaminants may remain in soil or groundwater at closed sites. PHCs tend to naturally degrade over time; excavation for project construction at closed LUFT sites, however, may encounter low levels of PHCs in soil, soil vapor, or groundwater.

4.8.3 Existing Setting

4.8.3.1 Local and Regional Setting

The following information in this section is based on the findings of the 2019 Phase I/II report by EKI (2019 Phase I/II) and accompanying peer reviews by Cornerstone (see Appendix I). The Project site and vicinity are characterized by a mix of commercial office, light industrial, and residential land uses. Historical uses on and around the Project site included agricultural activities such as orchards and row crops dating as far back as the 1930s. Residential land uses appear in the area beginning in the early 1940s with possible residential structures on the site beginning in 1948. Otherwise, from approximately 1939 to 1956, rows of trees in a gridded pattern appear on aerial photographs covering the project site during this time frame. By 1956, the photographs show two large rectangular greenhouses on the northern end of the Project site.

Agricultural activities on the Project site appear to diminish in the late 1960s. In the 1974 aerial photograph, the former farmhouse/agricultural buildings remain on the northwestern portion of the Project site, but the western portion of the site has been improved with a commercial building. The eastern portion of the site has been improved with the multi-tenant industrial/office building

associated with the former address 1062 Linda Vista Avenue. The adjoining properties to the east and southwest have been improved with the current commercial storage facility and office buildings and associated paved areas. The western portion of the Project site associated with 1023 North Shoreline Boulevard appears as a paved parking lot, with an office building that is not present until at least 1982. In addition, the adjacent office buildings currently located to the west of the site, beyond North Shoreline Boulevard, are present in the 1982 aerial photograph. The industrial building located at the portion of the Project site associated with the former address 1130 Terra Bella Avenue was also constructed by 1982. By 1991, the site was improved with the buildings that were then demolished and redeveloped in 2016.

Past Phase I and II Investigations

The Project site encompasses 1150 and 1130 Terra Bella Avenue, 1062 Linda Vista Avenue, 1091 North Shoreline Boulevard, and portions of 1043, 1023, and 1005 North Shoreline Boulevard, and also a small portion of 1160-1170 Terra Bella Avenue as shown in **Figure 4.8-1**. The 2019 Phase I /II report reviewed a total of ten previous Phase I ESAs, two Phase II ESA reports and one Preliminary Soil Vapor Quality Evaluation report that covered the following addresses:

- 1130 Terra Bella Avenue (Phase I/II ESA – 2014),
- 1062 Linda Vista Avenue (Phase I ESA – 2013),
- 1091 North Shoreline (Phase I ESA – 2014)
- 1043 North Shoreline (Phase I ESA – 2013)
- 1023 North Shoreline (Phase I ESA – 2013)
- 1005 and 1015 North Shoreline and 1150 Terra Bella Avenue (Phase I/II ESA – 2011)
- 1160–1170 Terra Bella Avenue (Phase I ESA – 2014)
- 1001 North Shoreline Boulevard (west of Project site) (Preliminary Soil Vapor Quality Evaluation and Phase I ESA – 2015 and 2018)
- 1155 Terra Bella Avenue (Phase I/II ESA – 2016)

The Phase I reports completed for the various site addresses within the project area, generally concluded that no recognized environmental conditions (RECs) or conditions that warranted further investigation were present with the exceptions of 1130 Terra Bella, 1001 North Shoreline, 1005/1015 North Shoreline and 1150 Terra Bella, 1043 North Shoreline, and 1160–1170 Terra Bella Avenue.[1] Historical RECs were also identified at 1023 North Shoreline, 1043 North Shoreline, and 1160–1170 Terra Bella Avenue but none warranted further investigation.[2]

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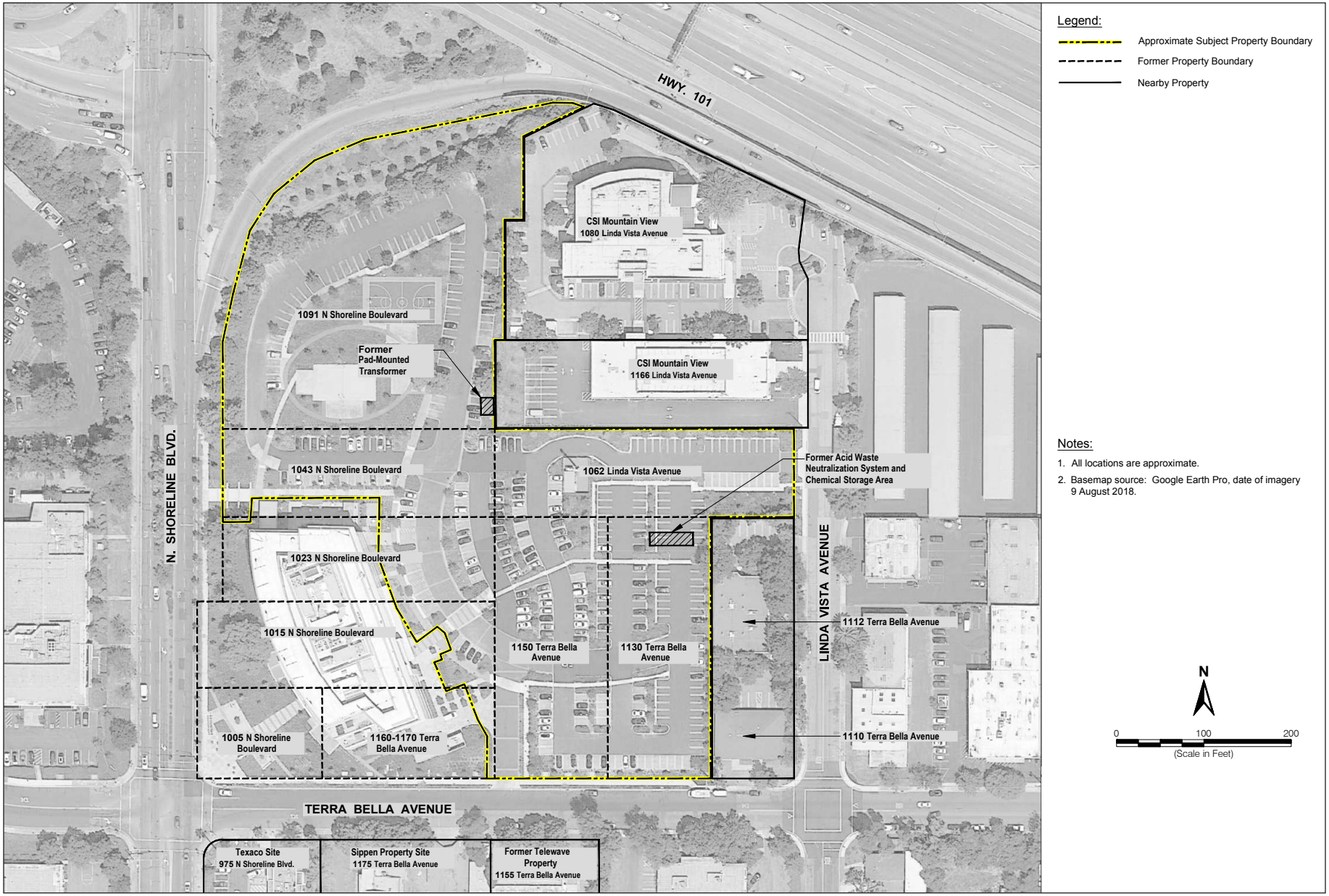
1 A recognized environmental condition is something identified to represent the presence or likely presence of hazardous substances or petroleum products in, on, or at a property, due to any release to the environment, under any conditions indicative of a release to the environment, or under conditions that pose a material threat of a future release to the environment.

2 A historical REC or HREC is a past, regularly reported, release of any hazardous substances or petroleum products that has occurred in connection with the property and has been addressed to the satisfaction of the applicable



SOURCE: EKI, 2019

Residences @ Shoreline Gateway Project

Figure 4.8-1
Phase I-II Setting

ESA

1130 Terra Bella Avenue

The 2014 Phase I report for the property at 1130 Terra Bella Avenue indicated that a REC was present at the property due to unresolved impacts from volatile organic compounds (VOCs) to groundwater. VOCs were reportedly stored at one time at the 1130 Terra Bella site and as a result three monitoring wells were installed and the groundwater sampled. The findings indicated that VOCs were present in the groundwater above regulatory screening levels but that the likely source was upgradient and had migrated onto the site.

1005/1015 North Shoreline Boulevard and 1150 Terra Bella Avenue

The 2011 Phase I/II report for the properties that included 1005/1015 North Shoreline Boulevard and 1150 Terra Bella Avenue included Phase II sampling because of RECs identified during performance of the Phase I ESA. The identified off-site adjoining leaking underground storage tank (LUST) case to the south located at 975 North Shoreline Boulevard was in the process of receiving closure but the release had impacted the properties and constituted a REC. Indoor air sampling was also conducted at 1015 North Shoreline and did not show that significant vapor intrusion was occurring as a result of impacted groundwater onsite. A potential presence of asbestos-containing materials and/or lead based paint was also identified based on the age of the buildings.

As part of a Phase II Investigation conducted in March 2011 for 1015 North Shoreline Boulevard, four hand auger borings were advanced to a maximum depth of 3 feet below ground surface (bgs) in the areas near where materials including paints and lubricants were observed in the fenced-in area to the north and east of the residential building located near the site. Soil samples were collected from 0.5 and 2.5-3 feet bgs and submitted for VOC analysis. No VOCs were detected in any of the soil samples and the Phase I/II report did not recommend additional sampling activities at that time. The report also noted that an open drinking water well was located on 1150 Terra Bella Avenue portion of the Project site. This well was reportedly not in use at the time of the investigation. The findings of the report noted that this well did not constitute a REC but could act as a potential conduit for contamination to enter or migrate through the groundwater if not sealed appropriately. In addition, the 2011 Phase I/II report identified the closed LUST case associated with the Shippen Property located at 1175 Terra Bella Avenue, south of the Project site. The report indicated that low levels of petroleum contamination were identified in groundwater samples collected at the Project site from a soil boring located at the southwestern corner of 1150 Terra Bella Avenue at the time of closure. However, the report indicated that these identified concentrations were below applicable environmental screening thresholds and the LUST case had achieved regulatory closure. The condition was classified as an HREC.

1001 North Shoreline Boulevard

A soil vapor evaluation was conducted at 1001 North Shoreline Boulevard, which is west of the development portion area of the Project site, in 2015 prior to construction of the office building. The evaluation found low concentrations of petroleum hydrocarbons and volatile organic compounds that were below the respective residential and commercial screening levels for potential vapor intrusion risk. Nonetheless, a vapor intrusion liner was installed under the existing office building constructed on the Project site. The VOCs in vapor were considered a CREC in a Phase I ESA completed in 2018.

Former Telewave Property (1155 Terra Bella Avenue)

The Former Telewave Property site is located adjacent and to the south of the eastern portion of the Project site, just south of Terra Bella Avenue (Figure 4.8-1). A Phase I/II ESA was previously completed for the Former Telewave Property site, in November 2016. The site had been used for fabrication of radio equipment from the 1980s to 2008; from 2008 to 2016 the site had been used as storage. Manufacturing activities at the site included acid etching, painting, and assembly of metal parts. According to the 1155 Terra Bella Avenue Phase I/II ESA, a UST was reportedly removed from the site prior to 2016, although documentation for the UST removal was unavailable. The UST may have been used to store solvents. Soil, soil gas, and groundwater at the site were impacted with chlorinated VOCs including trichloroethylene (TCE), tetrachloroethylene (PCE), cis-dichloroethene (DCE), and vinyl chloride. Maximum concentrations of compounds in groundwater during the 2016 investigation included TCE at 6,600 ug/L, PCE at 26 ug/L, cDCE at 1,500 ug/L, tDCE at 280 ug/L, and vinyl chloride at 32 ug/L. Maximum concentrations of compounds in soil during the 2016 investigation included TCE at 72 milligrams per kilogram (mg/kg) and cDCE at 0.5 mg/kg. Maximum concentrations of compounds in soil gas during the 2016 investigation included TCE at 25,000 ug/m3, PCE at 770 ug/m3, and TPHg at 140,000 ug/m3.

In October 2018, Santa Clara County Department of Environmental Health (SCCDEH) requested that the property owner perform groundwater sampling on the north side of Terra Bella Avenue, immediately south of the Project site, to characterize the extent of VOCs in groundwater. Based on an evaluation of the data, a plume of chlorinated VOCs including TCE, cDCE, and vinyl chloride was determined to be migrating from the 1155 Terra Bella Avenue site to the Project site. The 2019 Phase I/II investigations further confirmed the presence of these compounds at concentrations above residential and commercial screening levels for soil gas and groundwater.

Current (2019) Phase I Environmental Site Assessment Findings for the Project Site

The findings of the Phase I found that soil gas and groundwater on the site has been likely affected by offsite sources, including the migration of TCE and degradation or breakdown products cDCE and vinyl chloride that originated from the Former Telewave site at 1155 Terra Bella Avenue to the south of the site. In addition, several known petroleum hydrocarbon release sites are located south and upgradient of the Project site, including the former Texaco site located at 975 North Shoreline Boulevard and the Shippen Property site located at 1175 Terra Bella Avenue, as well as other release sites located further to the south. The Texaco and the Shippen Property sites have undergone remediation and both sites received regulatory closure in 2011 and 2001, respectively. Given that both the Texaco and the Shippen Property sites have received regulatory closure and the very low concentrations of constituents of concern detected in groundwater, these groundwater impacts are not likely to significantly impact the planned future use of the Project site. Nonetheless, the Phase I determined that additional sampling in the form of a Phase II investigation was warranted and was subsequently performed (see below).

Current (2019) Phase II Environmental Site Assessment Findings for the Project Site

Based on the previous land uses on the Project site and surrounding properties as well as data collected from the Phase I for the Project site, a subsurface investigation that included collection of soil, groundwater, and soil vapor was conducted to screen for the potential presence of pesticides, lead, arsenic, polychlorinated-biphyls (PCBs), and VOCs. In March 2019, a total of 15 boreholes were advanced by hand to collect soil samples and install soil gas probes. In addition, five grab groundwater samples were collected on the site using a direct push drill rig. Two additional soil gas samples were collected in April 2019 to confirm conditions indicated by one of the sample results (see Soil Gas Sampling section below).

Soil Sampling

EKI collected soil samples from 14 locations on the Project site from depths of approximately 0.5 to 1 foot bgs for analysis of organochlorine pesticides, arsenic, and lead. EKI also collected soil samples from one borehole in the location of a former transformer pad from depths of approximately 0.5 to 1 foot and 2.5 to 3 feet bgs for analysis of PCBs. According to the analytical results, arsenic and lead concentrations in the soil samples were consistent with background levels, and organochlorine pesticides and PCBs were not detected above residential screening levels. Based on this sampling, EKI did not identify any adversely affected subsurface soil on the Project site.

Soil Gas Sampling

EKI collected soil gas samples from 9 soil gas probes on the Project site for analysis of VOCs. The primary VOCs detected in soil gas included TCE, cDCE, vinyl chloride, PCE, benzene, and chloroform, which were detected at concentrations above the residential land use environmental screening levels (ESLs) for soil gas. TCE, cDCE, and vinyl chloride concentrations in soil gas in the southeastern portion of the Project site are consistent with the concentrations of these chemicals observed in groundwater samples collected immediately south of the Project site at 1155 Terra Bella Avenue, where a release of TCE has resulted in an identified groundwater plume migrating to the north, i.e., beneath the Project site. The detections of cDCE and vinyl chloride likely represent breakdown products of the TCE in the plume.

The findings also indicated that an elevated level of PCE was detected in one borehole outside the plume originating from 1155 Terra Bella Avenue. PCE was not detected in any of the groundwater samples and no historic source was reportedly apparent on the site from the Phase I findings. Two additional soil gas samples were collected in close proximity to that borehole in April 2019 and found to contain PCE at elevated concentrations, although somewhat lower than the concentration detected in the April 2019 borehole. As such, the PCE detection at this location appears to be limited in area (e.g., from a small historic release).

Groundwater Sampling

EKI collected groundwater samples from five locations on the Project site for analysis of VOCs. TCE and cDCE were detected in groundwater samples at concentrations above screening levels.

The TCE and cDCE detected in groundwater are consistent with those found in the soil gas and with the plume known to be migrating from the upgradient 1155 Terra Bella Avenue property to the south.

Taken all together, these results were interpreted in the Phase II report as follows:

- The TCE, cDCE, and vinyl chloride in soil gas detected on the site likely originate from offsite groundwater migrating to the site from 1155 Terra Bella Avenue to the south;
- It is unlikely that any significant release of VOCs, including TCE, occurred on the Project site; and
- Potential historical uses of organochlorine pesticides, arsenic, lead, and PCBs do not appear to have affected shallow soil on the Project site.

Wildland Fire

Factors that contribute to the risk of fire include dense and fire-prone vegetation, poor access to fire-fighting equipment because of slopes or inadequate roads, lack of adequate water pressure and service in fire-prone locations, and seasonal atmospheric conditions that result in warm, dry fire seasons with strong afternoon winds. Some properties near the Project site include vegetated open space and urban areas that can become very dry during summer months. However, the Project site is currently developed within an urban area that is surrounded by other developed commercial properties, freeways, and roadways. The Project site is not located in a designated wildland area that would contain substantial forest fire risks or hazards although it is located just within the boundaries of an area that is considered to be a Wildland-Urban interface of a fire threatened community (ABAG, 2019).

Airports and Air Hazards

The project site is located within the Airport Influence Area of Moffett Field and subject to compatibility requirements of the Santa Clara County Airport Land Use Commissions Comprehensive Land Use Plan. The land use plan encourages compatibility of land uses with existing airports in the county. The project site is not located within the safety zones for Moffett Field. In addition, the project site is over 5,300 feet west of the 65 CNEL noise contour, is exposed to excessive noise levels from air traffic (see also discussion in Section 4.11, *Noise and Vibration*) and, therefore, is not subject to FAA reporting requirements. However, the project site is located within the sphere of influence for Moffett Field and is subject to a 182-foot elevation height restriction.

Other Hazards

The City coordinates emergency response and evacuation through the emergency operations center, or EOC, which is the central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management, or disaster management functions at a strategic level in an emergency situation, and ensuring the continuity of operation of the city.

During a disaster, the EOC is responsible for the strategic overview of the disaster, and does not normally directly control field assets. Rather, it makes operational decisions and leaves tactical decisions to lower commands. The common functions of the EOC is to collect, gather and analyze data; make decisions that protect life and property; maintain continuity of the organization within the scope of applicable laws; and disseminate those decisions to all concerned departments, residents, and agencies.

4.8.4 Regulatory Setting

4.8.4.1 Federal

The primary federal agencies with responsibility for hazardous materials management include the USEPA, U.S. Department of Labor Occupational Safety and Health Administration (Fed/OSHA), and the U.S. Department of Transportation (DOT). Federal laws, regulations, and responsible agencies are summarized in **Table 4.8-1**.

TABLE 4.8-1
FEDERAL LAWS AND REGULATIONS RELATED TO HAZARDOUS MATERIALS MANAGEMENT

Classification	Law or Responsible Federal Agency	Description
Accidental Release Prevention	USEPA Risk Management Plan (RMP) Rule	Regulates flammable substances, including petroleum hydrocarbons, manufactured and stored in quantities over 10,000 pounds.
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	U.S. Department of Transportation (DOT)	Has the regulatory responsibility for the safe transportation of hazardous materials. The DOT regulations govern all means of transportation except packages shipped by mail (49 CRF).
	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 Code of Federal Regulations [CFR]).

State and local agencies often have either parallel or more stringent regulations 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.

4.8.4.2 State

California Environmental Protection Agency (CalEPA)

Agencies within CalEPA include the State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards (RWQCBs), and Department of Toxic Substances Control (DTSC), as described below.

In January 1996, the CalEPA adopted regulations implementing a Unified Hazardous Waste and Hazardous Materials Management Regulatory Program (Unified Program). The program is implemented at the local level, by the certified uniform program agencies (CUPAs). The Secretary of CalEPA is directly responsible for coordinating the administration of the Unified Program, certifies Unified Program Agencies, and has certified 83 CUPAs to date. These 83 CUPAs carry out certain responsibilities previously handled by approximately 1,300 State and local agencies. The responsibilities of the CUPAs are described below.

State Water Resources Control Board (SWRCB) and Regional Water Quality Control Boards (RWQCBs)

The SWRCB protects water quality in California by setting Statewide policy. The SWRCB supports the nine RWQCBs, which, within their areas of jurisdiction, protect surface water and groundwater from pollutants discharged or threatened to be discharged to the waters of the State. For the majority of the San Francisco Bay Area, the SFRWQCB maintains jurisdiction within the subject basin. This protection is carried out by the SFRWQCB through the issuance and enforcement of National Pollutant Discharge Elimination System (NPDES) permits under the federal Clean Water Act, called Waste Discharge Requirements (WDRs), regulation of leaking underground storage tanks and contaminated properties through the LUST and Spills, Leaks, Investigation, and Cleanup (SLIC) programs respectively. USTs are regulated under Chapter 6.7 of the California Health and Safety Code and 23 CCR Chapter 16.

California Environmental Screening Levels. The interim final ESLs for Bay Area sites were issued by the SFRWQCB in 2019. ESLs are guidelines for evaluation of potential environmental risks at contaminated sites and are not enforceable regulatory criteria. The presence of a chemical at concentrations in excess of a screening level does not necessarily indicate adverse effects on human health or the environment, but rather that additional evaluation is warranted (SFRWQCB, 2019). ESLs address media including soil, groundwater, soil gas, and indoor air as well as a range of impacts, including vapor intrusion and impacts to aquatic life. The ESLs are updated frequently to reflect current toxicological data.

Department of Toxic Substances Control (DTSC)

The DTSC is authorized by the USEPA to enforce and implement federal hazardous waste laws and regulations. In addition, the DTSC generally acts as the lead agency for soil and groundwater cleanup projects that primarily affect public health (especially residential projects requiring environmental site mitigation), and establishes cleanup levels for subsurface contamination that are equal to, or more restrictive than, federal levels. The DTSC's principal cleanup authority is established under the Carpenter-Presley Tanner Hazardous Substance Account Act (HSAA; Cal.

Health and Safety Code sections 25300–25395.45). Most State hazardous materials regulations are contained in Title 22 of the California Code of Regulations (CCR).

The DTSC has established that "[it is the Department's] goal that sites requiring response actions, where sensitive land uses are anticipated, be remediated to the degree that allows unrestricted use." The HSAA also expressly relies on the current and reasonably foreseeable future use of the site to establish cleanup standards, stating that risk assessments "shall include the development of reasonable maximum estimates of exposure for both current land use conditions and reasonably foreseeable future land use conditions at the site (DTSC, 2002; California Health and Safety Code Section 25356.1.5[d]).

The DTSC has an established process for determining what land uses are foreseeable. This process, in general, refers to the municipality in which the site is located for guidance. The DTSC has stated:

> "… local government will normally be the source of information about anticipated land uses. In cases where the future land use is relatively certain, the remedial action objective must reflect such land use. Conversely, where the future land use is less certain, a range of uses should be considered. Selection of cleanup levels must be based on consideration of public health and environmental risk, technical and cost limitations, and the performance and risk uncertainties inherent in all waste remediation efforts."

Certified Unified Program Agencies (CUPAs)

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections, and enforcement activities of six environmental and emergency response programs (see below). The State agency partners involved in the Unified Program have the responsibility of setting program element standards, working with CalEPA on ensuring program consistency, and providing technical assistance to the CUPAs. The Unified Program Administration and Advisory Group (UPAAG) was created to foster effective working partnerships between local, State and federal agencies. The UPAAG's goals and objectives are listed in the UPAAG Strategic Plan. The six programs are:

- Hazardous Materials Release Response Plans and Inventories (Business Plans)
- California Accidental Release Prevention (CalARP) Program
- Underground Storage Tank Program
- Aboveground Petroleum Storage Act (APSA) Program
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements

Governor's Office of Emergency Services (OES)

The Governor's Office of Emergency Services is responsible for providing technical assistance and evaluation of the Business Plan Program and for implementing the provisions of the CalARP Program. CalARP regulations became effective January 1, 1997, replacing the California Risk

Management and Prevention Program. CalARP was created to prevent the accidental release of regulated substances. It covers businesses that store or handle certain volumes of regulated substances at their facilities. A list of regulated substances is found in Section 2770.5 of the CalARP regulations. If a business has more than the listed threshold quantity of a substance, an accidental release prevention program must be implemented and a risk management plan (RMP) may be required for facilities that qualify under the Level 3 Program.

Office of the State Fire Marshal (OSFM) and California Fire Code

The Office of the State Fire Marshal is responsible for ensuring the implementation of the Hazardous Material Management Plans and the Hazardous Material Inventory Statement Programs. These programs tie in closely with the Business Plan Program. The State Fire Marshal is also responsible for approving the State Fire Code which is included in the California Building Standards Code, Title 24 California Code of Regulations.

Hazardous Materials Transportation

The State has adopted federal DOT regulations for the intrastate movement of hazardous materials. State regulations are contained in Title 26 of the California Code of Regulations (CCR). In addition, the State of California regulates the transportation of hazardous waste originating in the State and passing through the State (26 CCR). Both regulatory programs apply in California. The two State agencies that have primary responsibility for enforcing federal and State regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans).

Occupational Safety and Health Administration

The California Occupational Safety and Health Administration (Cal/OSHA) assumes 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 (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. Cal/OSHA enforces hazard communication program regulations, which contain training and information requirements, including procedures for identifying and labeling hazardous substances, and communicating hazard information relating to hazardous substances and their handling. State laws, like federal laws, include special provisions for hazard communication to employees in research laboratories, including training in chemical work practices. Specific, more detailed training and monitoring is required for the use of carcinogens, ethylene oxide, lead, asbestos, and certain other chemicals listed in 29 CFR.

Cal/OSHA also regulates and enforces National Fire Protection Agency (NFPA) 30: Flammable and Combustible Liquids Code to ensure that safeguards are in place to reduce the hazards

associated with the storage, handling, and use of flammable and combustible liquids. Cal/OSHA also administers California's hazardous waste operations and emergency response (HAZWOPER) rules for general industry workplaces, which mirror federal rules, with additional requirements for training, safety and health plans, and personal protective equipment that are stricter than the federal rules (Title 8 CCR Section 5192).

4.8.4.3 Regional and Local

Santa Clara County Hazardous Materials Compliance Division (HMCD)

As mentioned above, the routine management of hazardous materials in California is administered under the Unified Program. The CalEPA has granted responsibilities to the Santa Clara County Hazardous Materials Compliance Division (HMCD) for implementation and enforcement of hazardous material regulations under the Unified Program as a CUPA. Through a formal agreement with the HMCD, the Mountain View Fire Department (MVFD) implements hazardous materials programs for the City of Mountain View as a Participating Agency within the Unified Program. The MVFD coordinates with the HMCD to implement the Santa Clara County Hazardous Materials Management Plan and to ensure that commercial and residential activities involving classified hazardous substances are properly handled, contained, and disposed.

4.8.5 Hazards and Hazardous Materials Impacts

4.8.5.1 Significance Criteria

Consistent with Appendix G of the State CEQA *Guidelines*, the Project would cause adverse impacts related to hazards and hazardous materials if it would:

a) Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school;

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would result in a safety hazard or excessive noise for people residing or working in the project area;

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires.

4.8.5.2 Approach to Analysis

The following analysis considers former site uses and regulatory requirements along with the proposed Project. Taking into account the proposed use, some assumptions have been made based on professional judgment about typical uses and practices of handling, storing and disposing of hazardous materials.

4.8.5.3 Topics with No Impact or Otherwise Not Addressed in This EIR

Review and comparison of the setting circumstances and Project characteristics with each of the eight significance criteria stated above clearly show that no impacts associated with hazards or hazardous materials would result for Criteria c). The following discusses the reasoning supporting this conclusion.

With regards to Criterion c) (the Project could emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within 0.25 mile of an existing or proposed school): the Project site is not located within 0.25 mile of an existing or proposed school and would only include limited quantities of hazardous materials commonly associated with the proposed land uses including small quantities of cleaning products, fuels, oils, pesticides, and lubricants. Theuerkauf Elementary School is the closest school to the Project site, located approximately 0.4 miles southwest. Therefore, the Project would not handle or result in emissions of hazardous materials within 0.25 miles of an existing school, no impact would result.

4.8.5.4 Discussion of Impacts and Mitigation Measures

Impact HAZ-1: The Project would include the routine transport, use and disposal of hazardous materials but would not create a significant hazard to the public or the environment. (Criterion a.) (*Less than Significant, No Mitigation Required*)

Construction

Project construction activities would require the use of certain hazardous materials, such as fuels, oils, lubricants, solvents, and glues. Inadvertent release of these materials into the environment could adversely impact soil, surface waters, or groundwater quality. The Project would disturb more than one acre and would therefore be required to adhere to the requirements of the General Construction Permit issued by the SFRWQCB as discussed in Section 4.9, *Hydrology and Water Quality*. One of the requirements of the permit is the implementation of a storm water pollution prevention plan (SWPPP) which includes Best Management Practices (BMPs) including containment and spill cleanup measures to prevent the accidental release of hazardous materials used during construction, as required under the National Pollution Discharge Elimination System (NPDES) permit program to prevent hazardous materials from spreading off the property. Hazardous materials that would be generated during construction would be disposed of as described in the required SWPPP. Compliance with existing regulations (i.e., the NPDES permit program), which is a necessary condition of construction, would address potential upsets and accidents. Therefore, any impacts during construction would be less than significant.

Operation

Once constructed, hazardous material use would be associated with the proposed residential land uses on the Project site. In general, small quantities of hazardous materials are associated with residential land uses, including cleaning products, fuels, oils, pesticides, and lubricants. Activities such as automobile or building maintenance, as well as landscaping, can become sources of releases of hazardous materials. The types of hazardous materials that would be used at the Project site are typically handled and transported in small quantities. All hazardous materials are required to be stored and handled according to manufacturer's directions and local, State and federal regulations. With adherence to existing regulatory requirements, impacts related to the routine transport, use or disposal of hazardous materials during Project operation would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact HAZ-2: The Project would not create a significant hazard to the public or environment through an upset or accident involving the release of hazardous materials. (Criterion b.) (*Less than Significant, No Mitigation Required*)

Construction

As noted above in Impact HAZ-1, construction of the Project would include activities that would likely require the use of limited quantities of hazardous materials such as fuels, oils, lubricants, solvents, and glues. These materials would be transported to and from the project site. The improper handling and transport of hazardous materials could result in accidental release of hazardous materials, thereby exposing site occupants to hazardous materials contamination.

In general, aside from refueling needs for heavy equipment, the hazardous materials typically used on a construction site are brought onto the site by the construction contractor, packaged in consumer quantities and used in accordance with manufacturer recommendations. The overall quantities of these materials on the site at any one time would not result in large bulk amounts that, if spilled, could cause a significant soil or groundwater contamination issue. Spills of hazardous materials on construction sites are typically localized and would be cleaned up in a timely manner. As described above, refueling activities of heavy equipment would be conducted in a controlled dedicated area complete with secondary containment and protective barriers to minimize any potential hazards that might occur with an inadvertent release in accordance with BMPs required by the SWPPP, as described above. Given the required protective measures (i.e., best management practices) and the quantities of hazardous materials typically needed for construction projects such as the proposed Project, the threat of exposure to the public or the environment from upset or accident conditions from construction-related hazardous materials is considered a less than significant impact.

The potential to encounter hazardous materials in the subsurface during construction is discussed below in Impact HAZ-3 (Criterion d).

Operation

As discussed above under Impact HAZ-1, proposed land uses would likely require the minor use of hazardous materials and wastes common to residential land use settings. If not handled appropriately, upset and accident conditions could result in releases of hazardous materials or wastes that could affect residents, workers, the public or the environment. As described above, residential land use is associated with relatively small quantities of hazardous materials that typically do not result in substantive accident or upset conditions. Considering the anticipated volumes of hazardous materials associated with the proposed land use and adherence to existing regulatory requirements, the potential to adversely affect the public or the environment from upset and accident conditions would be less-than-significant.

Therefore, impacts associated with accident or upset conditions would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact HAZ-3: The Project could create a significant hazard to the public or environment as a result of being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. (Criterion d.) *(Potentially Significant)*

As noted above in the Environmental Setting section, land uses in the Project vicinity have been associated with releases of hazardous materials to soils and groundwater. Due to the land use history and evidence for the potential of contaminants in the subsurface materials at the Project site; groundwater and soil gas samples were collected and tested for the potential presence of VOCs, pesticides, arsenic, lead, and PCBs (EKI, 2019 Appendix I). The results of the investigation determined that VOCs are present in soil gas at the Project site that likely originate from offsite groundwater migrating to the site from 1155 Terra Bella Avenue (Figure 4.8-1). However, the subsurface soils do not appear to be adversely affected by pesticides, arsenic, lead, or PCBs (EKI, 2019).

VOCs are known to be hazardous to human health and the environment. They include a variety of chemicals, some of which may have short- and long-term adverse health effects. The ability of VOC chemicals to cause health effects varies greatly and depends on a number of factors including exposure level and length of time exposed but can be anywhere from being highly toxic, to having no known health effect.

Construction

Construction of the Project would include grading and excavation for installation of utilities and building foundations. Depending on the conditions and concentrations that are encountered, the public could become exposed to adverse effects from VOCs that are exposed during construction activities. However, implementation of a Soil Management Plan and an Air Monitoring Plan

(SMP), as required by **Mitigation Measure HAZ-1a** and additional investigations and remediation measures, as required by **Mitigation Measure HAZ-1b**, would be effective in minimizing potential impacts by ensuring that protocols and procedures are enacted during construction to minimize the potential for any adverse health effects.

Operation

As discussed above, VOCs are present in the subsurface at the Project site. If not addressed appropriately, future residents or visitors could be exposed to adverse air quality from vapor intrusion of these carcinogens. However, implementation of **Mitigation Measure HAZ-1c**, would require the Project to include a vapor intrusion mitigation system into building design in accordance with SCCDEH requirements and approval. Therefore, implementation of the recommendations included as part of Mitigation Measure HAZ-1c would ensure that the potential to adversely affect the public or the environment would be reduced to less-than-significant levels.

> **Mitigation Measure HAZ-1a: Soil Management Plan and Air Monitoring Plan.** Prior to commencement of construction, the Project Applicant shall prepare and obtain Santa Clara County Department of Environmental Health (SCCDEH) written approval of a Soil Management Plan (SMP) and Air Monitoring Plan (AMP) that shall include consideration of the specific protocols and procedures identified below, as guided by the recommendations of the May 8, 2019 Cornerstone Earth Group Peer Review Letter (Appendix I). The specific elements of the SMP and AMP shall be approved by SCCDEH, but shall consider (but not be limited to) the following elements:
>
> - Protocols and procedures for determining when soil and air sampling and analytical testing should be performed.
> - Monitoring of vapors during excavation and grading activities (as guided by the procedures outlined by Cornerstone Earthwork Group in Appendix I and in consultation with SCCDEH).
> - Segregation and stockpiling of excavated soil in contact with groundwater. This soil shall be placed at a designated, plastic-lined stockpile area, and sampled per Department of Toxic Substances Control's (DTSC's) protocols to determine if soil can be reused onsite or if soil is required to be disposed offsite at a permitted facility.
> - Protocols for management of ground water discharges during excavation dewatering. Protocols shall be prepared to evaluate water quality and discharge/disposal alternatives. The pumped water shall not be used for onsite dust control or any other on-site use.
> - Protocols for management of Project site risks during earthwork activities in areas where impacted soil, soil vapor and/or ground water are present or suspected. Worker training requirements, health and safety measures, and soil handling procedures shall be described.
> - During earthwork excavation activities (trenching approximately 5 feet or deeper) and/or any trench with ponded ground water, daily ambient air samples shall be collected at the Project site perimeter. Ambient air samples shall be collected and analyzed for TCE per the requirements outlined by SCCDEH. If the response action level is exceeded, DEH must be notified within two working days, and specific response actions are required to determine if additional mitigation and worker

protection measures are necessary. If the above actions levels are not exceeded in the first three days of perimeter air monitoring, the monitoring shall be reduced to one event per work week.

- Excavated soils from approximately 5 feet or deeper shall be field-screened for the presence of VOCs. Potentially contaminated soil shall be segregated and stockpiled at a designated, plastic-lined stockpile area for subsequent testing and laboratory analyses to determine if the soil can be reused onsite or if it is required to be disposed offsite at a permitted facility.
- Evaluation and documentation of the quality of any soil imported to the Project site shall follow the Information Advisory Clean Imported Fill Material (DTSC, October 2001). Soil containing chemicals exceeding the current residential (unrestricted use) screening levels or typical background concentrations of metals shall not be accepted.
- Evaluation of the residual contaminants to determine if they will adversely affect the integrity of below ground utility lines and/or structures (e.g., the potential for corrosion).
- Measures to reduce soil vapor and ground water migration through trench backfill and utility conduits. Such measures shall be finalized in conjunction with SCCDEH and will include placement of low-permeability backfill "plugs" at specified intervals onsite and at all locations where the utility trenches extend offsite. In addition, utility conduits that are placed below ground water shall be installed with water-tight fittings to reduce the potential for ground water to migrate into the conduits.
- Any removed utility line that is approximately 3 inches or greater in diameter shall be observed for sediment. If sediment is present, it shall be stockpiled as potentially contaminated material and sampled in accordance with the protocols outlined in the SMP.
- Prior to the start of any construction activity that involves below ground work (e.g., mass grading, foundation construction, excavating or utility trenching), information regarding Project site risk management procedures (e.g., a copy of the SMP) shall be provided to the Contractors for their review, and each Contractor shall provide such information to its Subcontractors.
- The Project Applicant's Environmental Professional shall assist in the implementation of the SMP and shall, at a minimum, perform part-time observation services during excavation, grading and trenching activities. Within 60 days of completion of soil disturbance activities, the Environmental Professional shall prepare a report documenting compliance with the SMP; this report shall be submitted to the City and the SCCDEH.

Additionally, prior to the commencement of construction activities, each contractor performing earth work or subsurface work at the Project site shall prepare and submit a Health and Safety Plan (HSP) to the City that addresses the safety and health hazards of each phase of site operations that includes the requirements and procedures for employee protection. Workers conducting site investigation and earthwork activities in areas of contamination shall complete a 40-hour HAZWOPER training course (29 CFR 1910.120 (e)). The contractor shall be responsible for the health and safety of their employees as well as for compliance with all applicable federal, State, and local laws and guidelines.

To ensure that the final SMP and AMP are able to consider the most current information regarding the Project site and apply the most up to date and appropriate mitigation methods, SCCDEH will retain final discretion regarding the specific protocols and procedures to be included in the SMP and AMP and implemented at the site.

Mitigation Measure HAZ-1b: Additional Assessments, Investigations, and/or Remediation. SCCDEH shall be contacted to determine if additional investigation, mitigation and/or remediation is required for PCB contamination detected on-site at a concentration of 0.622 mg/kg at a former transformer pad, exceeding its residential screening level (0.24 mg/kg).

SCCDEH shall be contacted regarding elevated PCE concentration in soil vapor detected at soil vapor probe SG-6 in EKI Environment & Water's Phase I/II Environmental Site Assessment dated June 14, 2019 (see Appendix I) to determine if further investigation, mitigation, and/or remediation will be required for this area.

If a deep foundation system is proposed, the foundation of the building shall incorporate measures to help reduce the potential for the downward migration of contaminated ground water, if any. These measures shall be identified in the Geotechnical Investigation report and the SMP and implemented as a part of the development plans.

The Project Applicant shall cooperate with SCCDEH, the San Francisco Regional Water Quality Control Board, and/or any other State or local oversight agency for the on-going investigation and subsequent remediation, if necessary, and implement any further requirements these agencies may have regarding subsurface contamination prior to occupation of the proposed improvements.

Mitigation Measure HAZ-1c: Vapor Mitigation System. A vapor mitigation system shall be installed for all residential and commercial structures, using the Vapor Intrusion Mitigation Advisory (DTSC, October 2011) as guidance for the design. Prior to obtaining construction-related permits, the Project Applicant shall submit Vapor Intrusion Mitigation System drawings and specifications to the City SCCDEH for their review and written approval. Upon SCCDEH's written approval, these drawings and specifications shall be incorporated into the building permit plans.

Within 60 days of completion of construction activities, the Project Applicant shall provide a Vapor Mitigation Completion Report to the City and the SCCDEH. The report shall document installation of the vapor control measures identified in the Vapor Intrusion Mitigation Plan, including final as-built design drawings, and present an Operation, Maintenance and Monitoring Plan. The Project Applicant shall submit SCCDEH written approval of the Vapor Mitigation Completion Report to the City prior to the issuance of any occupancy permit. The Project Applicant shall also provide Institutional Controls and Financial Assurance, or proof that adequate funds are available for long-term maintenance and monitoring of the vapor intrusion mitigation system as required by SCCDEH, with a copy to the City, to ensure that future Project site occupants are not exposed to unacceptable levels of VOC vapors.

To ensure that the final vapor mitigation measures are able to consider the most current information regarding the Project site and apply the most up to date and appropriate mitigation methods, SCCDEH will retain final discretion regarding the specific protocols

and procedures to be included in the Vapor Intrusion Mitigation System and implemented at the site.

Significance after Mitigation: Less Than Significant.

Impact HAZ-4: The Project would not result in a safety hazard or excessive noise for people residing or working in the vicinity of a public airport or public use airport. (Criterion e.) (*Less than Significant, No Mitigation Required*)

As noted above, the project site is located within the Airport Influence Area of Moffett Field and subject to compatibility requirements of the Santa Clara County Airport Land Use Commissions Comprehensive Land Use Plan.

According to the plan, the project site is subject to a 182-foot elevation height restriction. The Project would develop an approximately 86.5-foot-tall structure on an elevation of approximately resulting a maximum elevation height of approximately 122.5 feet above sea level. Further, the Project site is over 5,300 feet west of the 65 CNEL noise contour. Project residents, visitors, and employees at the project site would not be exposed to excessive noise levels from air traffic (see also discussion in Section 4.11, *Noise and Vibration*). Therefore, there would be no FAA reporting requirements and the potential impact related to safety hazards or excessive noise of nearby airports is less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact HAZ-5: The Project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (Criterion f.) (*Less than Significant, No Mitigation Required*)

The Project site is currently vacant, and development would increase the demand for fire protection services. The circulation plan for the Project has been designed to ensure appropriate emergency access to and egress from the site in accordance with all City and Fire Code requirements (for further information, see Section 4.14, *Transportation*). Proposed improvements would not close or reroute any existing roadways and would not interfere with roads, access, or egress of future occupants.

As discussed in Section 4.14, construction activities at the Project site could result in temporary closure of roads, sidewalks and/or bicycle lanes. Per the requirements of the City Engineering Division, the Project applicant will develop and implement a construction Traffic Control Plan (TCP) to the satisfaction of the City of Richmond Department of Public Works, Police Department, and Fire Department. Among other requirements, the plan shall include provisions

for preservation of emergency vehicle access. Once constructed, the Project would not interfere with the City's ability to coordinate emergency response and evacuation through the emergency operations center, or EOC, which is the central command and control facility responsible for carrying out the principles of emergency preparedness and emergency management, or disaster management functions.

Therefore, the Project would not interfere with an adopted emergency response plan or emergency evacuation plan, and would have a less than significant impact.

Significance: Less Than Significant.

Mitigation: None required.

Impact HAZ-6: The Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. (Criterion g.) (*Less than Significant, No Mitigation Required*)

As noted above in the Environmental Setting section, the Project site is located in a developed urban area. However, the project site is located at the edge of an area that has been mapped as a Wildland-Urban interface fire hazard area (ABAG, 2019). Regardless, the Project would comply with all sections of the California Fire Code as enforced locally by the City that address fire suppression and safety requirements to minimize fire hazards. In addition, the Project site and vicinity are within the service area of the Mountain View Fire Department, which would respond to fires reported at the site (more detail on fire and emergency response for the site are presented in Section 4.13, *Public Services and Recreation* and wildfire hazards are also addressed in Section 4.16, *Effects Found not to be Significant*). Therefore, with adherence to all Fire Code safety requirements and accessibility to fire department response, the Project would have a less than significant impact related to wildland fires.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

Geographic Context

As discussed above for the Project, hazardous material impacts typically occur in a local or site-specific context versus a cumulative context and thus do not combine with other development projects. It is possible, however, for combined effects of transporting and disposal of hazards and hazardous materials to be affected by cumulative development.

Impact C-HAZ-1: Development under the proposed Project, combined with cumulative development in the region, including past, present, existing, approved, pending, and reasonably foreseeable future development, could contribute considerably to cumulative impacts related to hazards and hazardous materials. (*Potentially Significant*)

Development of the Project, with implementation of the identified mitigation measures above, would have a less than significant hazardous materials impact to the public or the environment within the vicinity of the Project site, for the reasons discussed above. Other foreseeable development within the area, although likely increasing the potential to disturb existing contamination and potentially increase the handling of hazardous materials, would be required to comply with the same regulatory framework as the Project. These stringent regulatory requirements include federal and State regulatory requirements for transporting hazardous materials or cargo (including fuel and other materials used in all motor vehicles) on public roads or disposing of hazardous materials (e.g., CalEPA, Caltrans, DOT, DTSC, and SCCDEH requirements discussed above). Therefore, the effect of the Project with respect to hazards and hazardous materials, in combination with other foreseeable projects, would be less than significant with implementation of Mitigation Measures HAZ-1a, HAZ-1b, and HAZ-1c.

Mitigation: Mitigation Measure HAZ-1: Soil Management Plan and Air Monitoring Plan; Mitigation Measure HAZ-1b: Additional Assessments, Investigations, and/or Remediation; Mitigation Measure HAZ-1c: Vapor Mitigation System.

Significance after Mitigation: Less Than Significant.

4.8.6 Summary of Hazards and Hazardous Materials Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact HAZ-1: The Project would include the routine transport, use and disposal of hazardous materials but would not create a significant hazard to the public or the environment.	Less than Significant	None required	-
Impact HAZ-2: The Project would not create a significant hazard to the public or environment through an upset or accident involving the release of hazardous materials.	Less than Significant	None required	-
Impact HAZ-3: The Project could create a significant hazard to the public or environment as a result of being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.	Potentially Significant	Mitigation Measure HAZ-1a: Soil Management Plan and Air Monitoring Plan Mitigation Measure HAZ-1b: Additional Assessments, Investigations, and/or Remediation Mitigation Measure HAZ-1c: Vapor Mitigation System	Less than Significant

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact HAZ-4: The Project would not result in a safety hazard or excessive noise for people residing or working in the vicinity of a public airport or public use airport.	Less than Significant	None required	-
Impact HAZ-5: The Project would not impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.	Less than Significant	None required	-
Impact HAZ-6: The Project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.	Less than Significant	None required	-
Impact C-HAZ-1: Development under the proposed Project, combined with cumulative development in the region, including past, present, existing, approved, pending, and reasonably foreseeable future development, could contribute considerably to cumulative impacts related to hazards and hazardous materials.	Potentially Significant	Mitigation Measure HAZ-1a: Soil Management Plan and Air Monitoring Plan Mitigation Measure HAZ-1b: Additional Assessments, Investigations, and/or Remediation Mitigation Measure HAZ-1c: Vapor Mitigation System	Less than Significant

4.8.7 References – Hazards and Hazardous Materials

Association of Bay Area Governments (ABAG), 2019. Wildland Urban Interface Fire Threat. Available at: http://gis.abag.ca.gov/website/Hazards/?hlyr=firePerimeters, accessed May 30, 2019.

EKI Environment & Water (EKI), 2019. *Phase I Environmental Site Assessment and Phase II Subsurface Investigation*, 1001 North Shoreline Boulevard Mountain View, California, June 14, 2019 (Appendix I).

San Francisco Bay Regional Water Quality Control Board (SFRWQCB), 2019. *User's Guide: Derivation and Application of Environmental Screening Levels*, Regional Water Quality Control Board Region 2. Interim Final 2019.

4.9 Hydrology and Water Quality

4.9.1 Introduction

This section describes existing hydrologic conditions in the vicinity of the Project site and presents conditions and applicable regulations that pertain to surface water drainage, stormwater management, groundwater, flooding potential, and water quality. This section also discusses the changes in hydrology and water quality that could result from implementation of the Project and identifies potential Project impacts and appropriate mitigation measures when necessary. This section refers to information included in the *Conceptual Stormwater Control Plan* prepared by BKF Engineers in January 2019 (BKF, 2019), *The Residences @ Shoreline Gateway Utility Impact Study* prepared by Schaaf & Wheeler Consulting Civil Engineers in August 2019 (Utility Impact Study) (**Appendix L**), the *Geotechnical Investigation, Proposed Mixed-Use Development, The Residences at Shoreline Gateway - Phase II*, prepared by Rockridge Geotechnical in July 2018 (**Appendix H**), and the *Phase I Environmental Site Assessment and Phase II Subsurface Investigation*, prepared by EKI, Environment & Water in June 2019 (**Appendix I**).

4.9.2 Existing Setting

4.9.2.1 Regional Setting

The Project site is located within the San Francisco Bay Hydrologic Region, which includes all of San Francisco and portions of Marin, Sonoma, Napa, Solano, San Mateo, Santa Clara, Contra Costa, and Alameda counties (DWR, 2003).

Groundwater Basins

The Project site is located within the Santa Clara Valley Groundwater Basin, Santa Clara Subbasin, which extends from the northern border of Santa Clara County to the groundwater divide near the town of Morgan Hill. The Santa Clara Subbasin is underlain by Pliocene to Holocene age continental deposits of unconsolidated to semi-consolidated gravel, sand, silt and clay. The Pleistocene to Holocene alluvium is the most important water bearing unit in the Santa Clara Subbasin. The permeability of the valley alluvium is generally high, and most large-production wells in the Santa Clara Subbasin derive their water from the unit (DWR, 2004).

Surface Water

The Project site is less than 0.5 mile west of Stevens Creek, approximately 0.5 mile east of Permanente Creek, approximately 2 miles south of San Francisco Bay. It is wholly within the Permanente Creek watershed, which is within the Santa Clara Basin. Permanente Creek drains an area of approximately 17.5 square miles on the northeast-facing slopes of the Santa Cruz Mountains. The Creek flows east through unincorporated County land for about 5 miles, then turns to the north at the base of the foothills and continues another 8 miles along the valley floor traversing through the cities of Los Altos and Mountain View, finally draining to the Lower South San Francisco Bay (SCVURPPP, 2019).

Stormwater in the City's 12 square mile area is collected by a network of over 135 miles of storm drain pipe, routing from the Santa Cruz Mountains at the south towards the San Francisco Bay to the north. A significant portion of the City storm drain system, south of Highway 101 (U.S. 101), discharges to Stevens Creek and Permanente Creek (City of Mountain View, 2016b).

Water Quality

Groundwater

The Santa Clara Valley Water District (SCVWD) manages groundwater in Santa Clara County and has monitored and evaluated groundwater quality in the Santa Clara Subbasin for decades, with regular testing since the mid-1980s. The Santa Clara Subbasin generally produces groundwater of good quality from public supply wells that does not need treatment beyond disinfection. Although some organic chemicals have been detected in the subbasin, there are minimal impacts to deep drinking water aquifers despite hundreds of sites with known releases in the shallow aquifer zone. Some areas in the shallow aquifers adjacent to salt ponds and tidal creeks near San Francisco Bay have been affected by salt water intrusion, as indicated by higher chloride and other indicators in some shallow monitoring wells (SCVWD, 2016a).

The City also tests over 2,000 water samples each year to continuously monitor water quality supplied within the City. Groundwater from the City's water supply wells meets all water quality standards (City of Mountain View, 2018).

Surface Water

The San Francisco Bay is an estuary with complex hydrodynamics that result in intricate sediment and chemical fate transport processes. The water quality in the Bay is influenced by a variety of factors including a mix of point and non-point source discharges, groundwater and surface water interactions, and water quality/water quantity relationships. A number of water bodies in the Bay are impaired due to excessive siltation, although it is difficult to distinguish between excessive siltation and impairment due to flow alterations. South San Francisco Bay, Stevens Creek, and Permanente Creek are among the impaired water bodies in the San Francisco Bay Region near the Project site. Pollutants affecting the South San Francisco Bay include chlordane, dieldrin, selenium, and Dichlorodiphenyltrichloroethane (DDT). Toxicity and trash affect Stevens Creek and Permanente Creek, respectively (SWRCB, 2018).

During periods of wet weather, rain carries pollutants and sediments from all parts of a watershed into surface water bodies such as storm drains, streams, rivers, reservoirs, or marshes. In an urban setting, natural drainage patterns have been altered and stormwater runoff, as well as non-storm discharges (irrigation water, accidental spills, washdown water, etc.), pick up sediments and contaminants from land surfaces and transport these pollutants into surface and ground water. These diffuse sources of pollutants include parking lots, bare earth at construction sites, agricultural sites and a host of other sources. The total amount of pollutants entering aquatic systems from these diffuse, non-point sources is now generally considered to be greater than that from any other source, such as pipe discharges (point source).

4.9.2.2 Project Setting

Existing Features

The majority of the Project site a part from the existing office building is covered with asphalt-paved parking areas, recreational areas (e.g., basketball court and volleyball court), and surrounding landscaped areas. Surface water runoff on the Project site flows via the paved surfaces down to the street level and into onsite storm drains, in storm drains in the street gutters, or into a swale located along the northern boundary of the Project site. Surface water in the landscaped areas likely infiltrates into the ground (Appendix I). No natural creeks or streams cross the Project site.

Project Site Groundwater

Groundwater has been observed on the Project site ranging from 7 to 15 feet below ground surface (Appendices H and I). The estimated historic high groundwater level at the site is about 5 feet below ground surface. The groundwater level at the site is expected to fluctuate several feet seasonally with potentially larger fluctuations annually, depending on the amount of rainfall (Appendix H). Groundwater beneath the Project site generally flows to the north. Potential groundwater contamination may have occurred from several known release sites in the general vicinity of the Project site. Ground water sampling detected chlorinated volatile organic compounds (trichloroethylene [TCE] and cis-1,2-dichloroethene [cDCE]) present in groundwater in the southeastern portion and a limited area of the central portion of the Project site (Appendix I). See Section 4.8, *Hazards and Hazardous Materials*, for more information.

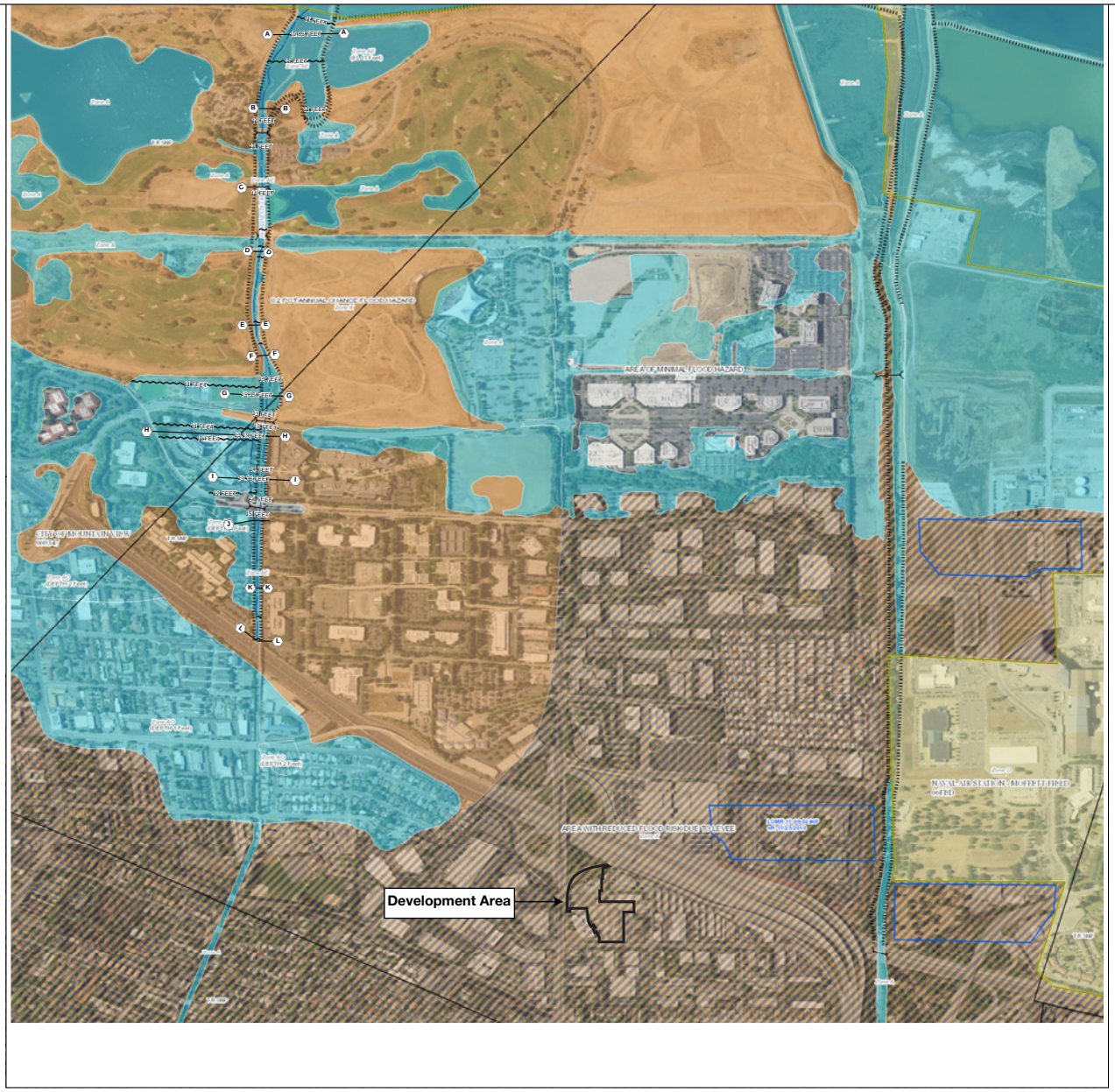
Flooding

Flooding is inundation of normally dry land as a result of rise in the level of surface waters or rapid accumulation of stormwater runoff. Flooding can also occur due to tsunami, seiches, or failure of dams or levees.

The Federal Emergency Management Agency (FEMA), through its Flood Insurance Rate Map (FIRM) program, designates and maps areas where flooding could occur during a 1.0 percent annual chance (100-year) flood event or a 0.2 percent annual chance (500-year) flood event. The May 18, 2009 FIRM Map No. 06085C0037H indicates that the Project site lies within Zone X, described as an "Area of Reduced Flood Risk due to Levee," as shown on **Figure 4.9-1**. This designation represents an area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods, which are protected by levees from the 100-year flood (FEMA, 2009).

Tsunami and Seiches

Tsunami are waves caused by an underwater earthquake, landslide, or volcanic eruption, while seiches are waves in an enclosed or semi-enclosed body of water such as a lake, reservoir, or harbor. Flooding from tsunami could generally affect low-lying areas along the Pacific Coast and San Francisco Bay shorelines. In the City, the Bayshore and areas along sloughs up to approximately 1 mile inland could be affected. The Project site is not located within a mapped



FLOOD HAZARD INFORMATION

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS	Without Base Flood Elevation (BFE) *Zone A, V, A99*
	With BFE or Depth *Zone AE, AO, AH, VE, AR*
	Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
	Future Conditions 1% Annual Chance Flood Hazard *Zone X*
	Area with Reduced Flood Risk due to Levee See Notes. *Zone X*
	Area with Flood Risk due to Levee *Zone D*
OTHER AREAS	NO SCREEN Area of Minimal Flood Hazard *Zone X*
	Effective LOMRs
	Area of Undetermined Flood Hazard *Zone D*
GENERAL STRUCTURES	Channel, Culvert, or Storm Sewer
	Levee, Dike, or Floodwall
OTHER FEATURES	20.2 / 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
	Coastal Transect
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary

SCALE

N

Map Projection:
GCS, Geodetic Reference System 1980;
Vertical Datum: NAVD88
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map please see the Flood Insurance Study(FIS) Report for your community at https://msc.fema.gov

1 inch = 500 feet 1:6,000

0 250 500 1,000 1,500 2,000 Feet

0 50 100 200 300 400 Meters

SOURCE: FEMA National Flood Insurance Program

Residences @ Shoreline Gateway Project

Figure 4.9-1
Flood Map

ESA

tsunami inundation area (Cal OES, 2009). In addition, seiche risk at areas along the City's shoreline is minimal because seiches with an increase in water elevation of more than 4 inches would be considered unlikely, and there are no published maps or hazard information on seiche hazards in the Bay Area (City of Mountain View, 2012a).

Dam Failure

Flooding can also occur due to dam failure. The California Department of Water Resources (DWR), Division of Safety of Dams oversees the design, construction, and maintenance of dams that are more than 25 feet high and impound more than 15 acre-feet of water, as well as dams that are more than 6 feet high and impound more than 50 acre-feet of water. Although some areas in the City are within the dam failure inundation area for the Anderson Dam, the Project site does not lie within this area (SCVWD, 2016b).

Sea Level Rise

As discussed in Section 4.7, *Greenhouse Gas Emissions*, a rise in average global temperature due largely to an increase in greenhouse gas (GHG) emissions is expected to be accompanied by a rise in the global sea level. Flooding along coastal areas and channels could occur in the event of substantial sea level rise. Most shoreline impacts would occur from flooding caused by the combined effects of storm activity and higher water level because of sea level rise. The Project site is not within an area predicted to be affected by up to 36 inches of sea level rise (BCDC, 2017).

4.9.3 Regulatory Setting

4.9.3.1 Federal

Federal Clean Water Act

The Clean Water Act (CWA) (33 U.S.C. 1251 – 1376) established the basic structure for regulating discharges of pollutants into the waters of the U.S. and gave the US EPA the authority to implement pollution control programs such as setting wastewater standards for industry. The CWA sets water quality standards for all contaminants in surface waters. The statute employs a variety of regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. Under Section 401 of the CWA every applicant for a federal permit or license for any activity which may result in a discharge to a water body must obtain State Water Quality Certification that the proposed activity will comply with State water quality standards.

Section 303(d) of the CWA requires that each state identify water bodies or segments of water bodies that are "impaired" (i.e., not meeting one or more of the water quality standards established by the state). These waters are identified in the Section 303(d) list as waters that are polluted and need further attention to support their beneficial uses. Once the water body or segment is listed, the state is required to establish Total Maximum Daily Load (TMDL) for the pollutant causing the conditions of impairment. TMDL is the maximum amount of a pollutant that a water body can receive and still meet water quality standards. Generally, TMDL is the sum of the allowable loads

of a single pollutant from all contributing point and non-point sources. The intent of the Section 303(d) list is to identify water bodies that require future development of a TMDL to maintain water quality.

National Pollutant Discharge Elimination System

The National Pollutant Discharge Elimination System (NPDES) permit program under the CWA controls water pollution by regulating point and non-point sources that discharge pollutants into "waters of the U.S." California has an approved State NPDES program. The US EPA has delegated authority for NPDES permitting to the California State Water Resources Control Board (SWRCB), which has nine regional boards. The San Francisco Bay Regional Water Quality Control Board (SFRWQCB) regulates water quality for the Project site and its surroundings. Under this system, municipal and industrial facilities are required to obtain a NPDES permit that specifies allowable limits, based on available wastewater treatment technologies, for pollutant levels in their effluent. Stormwater discharges are regulated somewhat differently than pollutant discharges. Discharge of stormwater runoff from construction areas of one acre or more requires either an individual permit issued by the SFRWQCB or coverage under the Statewide Construction General Stormwater Permit for stormwater discharges (discussed below).

4.9.3.2 State and Regional

Porter-Cologne Act

The State Board and the SFRWQCB 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. In order to meet this requirement for the San Francisco Bay area, the Regional Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan, discussed below) was prepared by the SFRWQCB to protect the water quality of the State according to the beneficial uses identified for each water body.

Prior to authorizations of waste discharge by the SFRWQCB, the Porter-Cologne Act requires reports of waste discharges to be filed. The SFRWQCB then prescribes Waste Discharge Requirements, which serve as NPDES permits under a provision of the Porter-Cologne Act.

Water Quality Control Plan for the San Francisco Region (Basin Plan)

The SFRWQCB is responsible for developing and implementing the Basin Plan, which documents approaches to implementing State and federal policies in the context of actual water quality conditions. The SFRWQCB's other activities include permitting of waste discharges and implementing monitoring programs of pollutant effects.

The SFRWQCB most recently revised the Basin Plan to incorporate all amendments approved by the Office of Administrative Law as of May 4, 2017. The Basin Plan identifies beneficial uses of receiving waters, water quality objectives imposed to protect the designated beneficial uses, and strategies and schedules for achieving water quality objectives. Section 303(c)(2)(B) of the CWA requires basin plans to include water quality objectives governing approximately 68 of US EPA's list of 126 pollutants.

Water quality objectives are achieved primarily through the establishment and enforcement of Waste Discharge Requirements for each wastewater discharger, as discussed under *Porter-Cologne Act*, above. State policy for water quality control in California is directed toward achieving the highest water quality consistent with maximum benefit to the people of the State. Therefore, all water resources must be protected from pollution and nuisance that may occur from waste discharges. Beneficial uses of surface waters, ground waters, marshes, and mud flats serve as a basis for establishing water quality standards and discharge prohibitions to attain this goal.

Construction General Permit

The California Construction Stormwater Permit (Construction General Permit)[1], adopted by the SWRCB, regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction General Permit authorizes the discharge of storm water to surface waters from construction activities. It prohibits the discharge of materials other than storm water and authorized non-storm water discharges and all discharges that contain a hazardous substance in excess of reportable quantities established at 40 Code of Federal Regulations 117.3 or 40 Code of Federal Regulations 302.4, unless a separate NPDES Permit has been issued to regulate those discharges.

The Construction General Permit requires that all developers of land where construction activities will occur over more than one acre do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three Risk Levels established in the Construction General Permit;
- Eliminate or reduce non-storm water discharges to storm sewer systems and other waters of the Nation;
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP), which specifies Best Management Practices (BMPs) that will reduce pollution in storm water discharges to the Best Available Technology Economically Achievable/Best Conventional Pollutant Control Technology standards; and
- Perform inspections and maintenance of all BMPs.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control pollutants from construction materials, and address post construction runoff quantity (volume) and quality (treatment). The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

Sustainable Groundwater Management Act

On September 16, 2014, Governor Jerry Brown signed into law a three-bill legislative package, composed of AB 1739, SB 1168, and SB 1319, collectively known as the Sustainable Groundwater Management Act (SGMA). SGMA requires governments and water agencies of

[1] *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities,* Order No. 2009-0009-DWQ, as amended by Order No. 2010-0014-DWQ, National Pollutant Discharge Elimination System No. CAS000002.

high and medium priority basins to halt overdraft and bring groundwater basins into balanced levels of pumping and recharge. Under SGMA, these basins should reach sustainability within 20 years of implementing their sustainability plans. For critically over-drafted basins, that will be 2040. For the remaining high and medium priority basins, 2042 is the deadline. SGMA empowers local agencies to form Groundwater Sustainability Agencies (GSAs) to manage basins sustainably and requires those GSAs to adopt Groundwater Sustainability Plans (GSPs) for crucial groundwater basins in California.

The SCVWD is the GSA for the Santa Clara and Llagas subbasins, the primary subbasins within Santa Clara County. The *2016 Groundwater Management Plan for the Santa Clara and Llagas Subbasins* describes the SCVWD's groundwater sustainability goals, and the strategies, programs, and activities that support those goals.

Santa Clara Valley Urban Runoff Pollution Prevention Program

The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) comprises 77 cities in the Bay Area region and other agencies in Santa Clara Valley. These jurisdictions and agencies are regulated by the Municipal Regional Stormwater NPDES Permit (MRP) issued under the federal Clean Water Act Section 402 Phase II (Small MS4) regulations that require that stormwater management plans be developed by municipalities with populations smaller than 100,000. Provision C.3 is for New Development and Redevelopment source control, site design, and stormwater treatment measures to address stormwater runoff pollutant discharges. This is accomplished through LID techniques, including rainwater harvest, infiltration, and biotreatment. The MRP (under Provision C.3) requires that permanent water quality control devices treat all stormwater to the maximum extent practicable. Runoff from new impervious surfaces of 10,000 square feet or more must be sized according to the volume or rate criteria identified in the permit. After treatment devices are installed, owners must enter into a maintenance agreement with the City to ensure the treatment devices are maintained, inspected, and reported on annually. The SCVURPPP requires Operation and Maintenance (O&M) programs for new development or redevelopment. The MRP requires each co-permittee to implement a stormwater treatment BMP O&M Verification Program, to ensure that property owners are maintaining BMPs implemented on their sites. Participants in the SCVURPPP O&M Verification Program must report all results to the SFRWQCB.

4.9.3.3 Local

Mountain View 2030 General Plan

The Mountain View 2030 General Plan identifies multiple policies in order to address water quality and flooding and to provide for adequate storm drainage flood control facilities to meet both current and future needs. These policies consider potential development areas and their relation to flood hazard zones, and address the minimization of impervious surfaces to reduce runoff and peak flows (City of Mountain View, 2012b).

> ***Policy INC 8.1: Citywide stormwater system.*** Maintain the stormwater system in good condition.

Policy INC 8.2: National Pollutant Discharge Elimination System Permit. Comply with requirements in the Municipal Regional Stormwater NPDES Permit.

Policy INC 8.3: Cost-effective strategies. Encourage stormwater strategies that minimize additional City administrative and maintenance costs.

Policy INC 8.4: Runoff pollution prevention. Reduce the amount of stormwater runoff and stormwater pollution entering creeks, water channels and the San Francisco Bay through participation in the Santa Clara Valley Urban Runoff Pollution Prevention Program.

Policy INC 8.5: Site-specific stormwater treatment. Require post-construction stormwater treatment controls consistent with the Municipal Regional Storm water NPDES Permit requirements for both new development and redevelopment projects.

Policy INC 8.6: Green streets. Seek opportunities to develop green streets and sustainable streetscapes that minimize stormwater runoff, using techniques such as on-street bio-swales, bio-retention, permeable pavement or other innovative approaches.

Policy INC 8.7: Stormwater quality. Improve the water quality of stormwater and reduce flow quantities.

4.9.4 Hydrology and Water Quality Impacts

4.9.4.1 Significance Criteria

Consistent with Appendix G of the State CEQA *Guidelines*, the Project would cause adverse impacts to hydrology or water quality if it would:

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality;

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the Project may impede sustainable groundwater management of the basin;

c) 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:

   i. result in substantial erosion or siltation on- or off-site;

   ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;

   iii. 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

   iv. impede or redirect flood flows.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to Project inundation; or

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

4.9.4.2 Discussion of Impacts and Mitigation Measures

This impact analysis considers the potential impacts to hydrology and water quality of activities associated with development of the Project. The analysis considers the potential direct, indirect, and cumulative impacts on hydrology and water resources as well as any mitigation measures that would be implemented to avoid or minimize potential significant impacts. Water resources comprise surface water, groundwater, and water quality considerations. Surface waters include, but are not limited to, overland flow, undirected flow, and deliberately channeled surface water flow.

Impact HYD-1: The Project could result in an increase of stormwater pollutants due to construction activities and/or the introduction of new impervious surfaces with development but would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. (Criterion a.) (*Less than Significant, No Mitigation Required*)

Stormwater pollution during both construction and operational phases of the Project can include oils, fuels, heavy metals, pesticides, and other contaminants of concern that originate on rooftops, parking lots, and other impervious surfaces and could subsequently be discharged into local receiving waters during storm events if not managed appropriately. Pollutants can also include sedimentation caused by erosion from activities such as ground clearing for construction, chemicals used for lawn and garden maintenance, and litter. New urban land uses on the Project site could increase the volume of potential sources of stormwater pollution that could ultimately be conveyed to impaired waterbodies. Any increased pollution that would violate water quality standards is considered a potentially significant impact.

Project Construction

Existing drains and infrastructure on the Project site convey stormwater directly into the City's stormwater system, which discharges into to Stevens Creek and Permanente Creek, and eventually the Lower South San Francisco Bay. Construction activities, if not appropriately managed, could result in the release of chemical contaminants including oil, gasoline and diesel motor fuel, industrial solvents, and other chemicals necessary for Project construction into receiving waters.

The Project would be required to adhere to the following City Standard Conditions of Approval:

> ***Standard Condition FEP-03 (State of California Construction General Stormwater Permit)*:** A "Notice of Intent" (NOI) and "Stormwater Pollution Prevention Plan" (SWPPP) shall be prepared for construction projects disturbing one (1) acre or more of land. Proof of coverage under the State General Construction Activity Stormwater Permit shall be attached to the building plans.
>
> ***Standard Condition FEP-04 (Construction Best Management Practices)*:** All construction projects shall be conducted in a manner which prevents the release of hazardous materials, hazardous waste, polluted water, and sediments to the storm drain system. Refer to the City of Mountain View document, "It's In the Contract But Not In the Bay," for the specific construction practices required at the job site.

***Standard Condition FEP-05 (Construction Sediment and Erosion Control Plan)*:** The applicant shall submit a written plan acceptable to the City which shows controls that will be used at the site to minimize sediment runoff and erosion during storm events. The plan should include installation of the following items where appropriate: (a) silt fences around the site perimeter; (b) gravel bags surrounding catch basins; (c) filter fabric over catch basins; (d) covering of exposed stockpiles; (e) concrete washout areas; (f) stabilized rock/gravel driveways at points of egress from the site; and (g) vegetation, hydroseeding, or other soil stabilization methods for high-erosion areas. The plan should also include routine street sweeping and storm drain catch basin cleaning.

***Standard Condition PL-126 (Soil Management Plan)*:** Prepare a soil and groundwater management plan for review and approval by the Santa Clara County Department of Environmental Health (SCCDEH). Proof of approval or actions for site work required by the SCCDEH must be provided to the Building Inspection Division prior to the issuance of any demolition or building permits.

The Project would disturb more than one acre of soil during construction and thus would be subject to the NPDES General Construction Permit requirements which include preparation of a SWPPP along with a Notice of Intent prior to construction. As required under the permit, implementation of the SWPPP would begin with the commencement of construction and continue through the completion of the Project. At a minimum, the SWPPP would include a description of construction materials, practices and equipment storage and maintenance, a list of pollutants likely to contact stormwater, site specific erosion and sedimentation control practices, list of provisions to eliminate or reduce discharge of materials to stormwater and BMPs for fuel and equipment storage. The Project applicant would develop and implement a monitoring program as required under the General Construction Permit. The Project applicant would require the contractor to conduct inspections of the construction site prior to anticipated storm events and after the actual storm events. During extended storm events, inspections would be conducted after every 24-hour period. The goals of these inspections are to:

- Identify areas contributing to stormwater discharge,
- Evaluate whether measures to reduce pollutant loadings identified in the SWPPP are adequate and properly installed and functioning in accordance with the General Construction Permit, and
- Evaluate whether additional control practices or corrective maintenance activities are needed.

Equipment, materials and workers would be available for rapid response to spills and/or emergencies. All corrective maintenance or BMPs would be performed as soon as possible, depending upon worker safety. Upon Project completion, the Project applicant would submit a Notice of Termination to the SFRWQCB.

In addition, and as discussed above, the City's Standard Conditions of Approval also require additional BMPs which would prevent the release of hazardous materials, hazardous waste, polluted water, and sediments to the storm drain system, and the preparation of a construction sediment and erosion control plan for review and approval by the City prior to the start of Project construction.

As discussed in Section 4.8, *Hazards and Hazardous Materials*, and Section 4.9.2.2, *Project Setting*, groundwater below the Project site may contain contaminants including TCE and cDCE. There is potential for release of these contaminants from site runoff if dewatering is required during Project construction. However, the Project would be required to implement a groundwater management plan as part of the City's Standard Condition of Approval. This plan would establish protocols for dewatering water that may be generated as part of Project construction.

Compliance with City Standard Conditions of Approval and existing regulations, including the site construction SWPPP (including BMPs), and the required construction sediment and erosion control plan, as discussed above, would reduce water quality impacts associated with Project construction to a less-than-significant level.

Project Operations

The Project would result in approximately 249,619 square feet of impervious surface on the Project site. To offset this increase in impervious surfaces, the Project includes stormwater control features including pervious pavers, bioretention basins, flow through planters, and self-retaining planted areas to treat and retain stormwater runoff prior to entering the City's stormwater system. The Project would include a total of approximately 11,555 square feet of bioretention areas and treatment areas (BKF, 2019). Stormwater would be routed to these areas, and treated onsite per Santa Clara County C.3 requirements.

The Project would be required to adhere to the following City Standard Conditions of Approval:

> ***Standard Condition FEP-10 (Landscape Design)*:** Landscape design shall minimize runoff and promote surface filtration. Examples include: (a) no steep slopes exceeding 10 percent; (b) using mulches in planter areas without ground cover to avoid sedimentation runoff; (c) installing plants with low water requirements; and (d) installing appropriate plants for the location in accordance with appropriate climate zones. Identify which practices will be used in the building plan submittal.
>
> ***Standard Condition FEP-22 (Stormwater Treatment [C.3])*:** This project will create or replace more than ten thousand (10,000) square feet of impervious surface; therefore, stormwater runoff shall be directed to approved permanent treatment controls as described in the City's guidance document entitled, "Stormwater Quality Guidelines for Development Projects." The City's guidelines also describe the requirement to select Low- Impact Development (LID) types of stormwater treatment controls; the types of projects that are exempt from this requirement; and the Infeasibility and Special Projects exemptions from the LID requirement.
>
> The "Stormwater Quality Guidelines for Development Projects" document requires applicants to submit a Stormwater Management Plan, including information such as the type, location, and sizing calculations of the treatment controls that will be installed. Include three stamped and signed copies of the Final Stormwater Management Plan with the building plan submittal. The Stormwater Management Plan must include a stamped and signed certification by a qualified Engineer, stating that the Stormwater Management Plan complies with the City's guidelines and the State NPDES Permit. Stormwater treatment controls required under this condition may be required to enter into a formal recorded Maintenance Agreement with the City.

> ***Standard Condition FEP-19 (Outdoor Storage Areas [Including Garbage Enclosures])*:** Outdoor storage areas (for storage of equipment or materials which could decompose, disintegrate, leak, or otherwise contaminate stormwater runoff), including garbage enclosures, shall be designed to prevent the run-on of stormwater and runoff of spills by all of the following: (a) paving the area with concrete or other nonpermeable surface; (b) covering the area; and (c) sloping the area inward (negative slope) or installing a berm or curb around its perimeter. There shall be no storm drains in the outdoor storage area.

Landscape design, as required by the City Standard Condition of Approval, would minimize runoff and promote surface filtration. As shown in Figure 3-7, the Project would include new landscaping along the perimeter of the Project site, along internal streets, and between the buildings within open space areas.

As described in the City's Stormwater (C.3) Standard Condition of approval above, because the Project would create or replace more than 10,000 square feet of impervious surface, stormwater runoff would be directed to approved permanent treatment controls as described in the City's guidance document entitled, "Stormwater Quality Guidelines for Development Projects." The document requires applicants to submit a Stormwater Management Plan, including information such as the type, location, and sizing calculations of the treatment controls that will be installed and how they would be in compliance with the City's guidelines and the NPDES MS4 Permit, including Provision C.3. The Project would reduce total runoff rates and implement biotreatment measures as discussed above. Thus, the Project would be in compliance with Provision C.3, and the stormwater management measures proposed for the Project would reduce pollutant discharges from stormwater through filtration and infiltration. Additionally, per the City's Standard Conditions of Approval outdoor storage areas, such as garbage enclosures, are required to be designed to prevent spills and contaminated runoff.

Potential water quality impacts from Project operation, with implementation of the City Standard Conditions of Approval, would not violate any water quality standards or waste discharge requirements, or otherwise substantially degrade water quality. Therefore, Project impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact HYD-2: The Project would increase demand for groundwater resources and increase impervious surfaces which would reduce the amount of stormwater runoff available for groundwater recharge, but not to the extent that it would substantially decrease groundwater supplies, interfere substantially with groundwater recharge, or impede sustainable groundwater management of the basin. (Criterion b.) (*Less than Significant, No Mitigation Required*)

As discussed in Section 4.9.2.2, *Project Setting*, groundwater has been observed on the Project site ranging from 7 to 15 feet below ground surface (Appendices H and I). Should dewatering be

necessary during construction activities (for example, for deep utility construction), it would be conducted on a temporary basis that would not have any lasting effects on the groundwater table. Construction-related dewatering activities would be required to comply with the Construction General Permit, the San Francisco Bay Regional Water Board regulations, and other requirements related to dewatering activities and groundwater resources. Accordingly, impacts on groundwater supplies and groundwater recharge during Project construction would be less than significant.

Potable water used for the Project uses would be provided by the City, which owns and operates its own water utility. Approximately 2 percent of City water is sourced from groundwater wells in the Santa Clara Valley Groundwater Subbasin maintained by the City (City of Mountain View, 2016a). The Utility Impact Study (Appendix L) evaluated the increased water demand from Project development compared with the City's supply turnouts and groundwater well capacities and concluded that additional Project demand would not impact the City's ability to meet total system demand. Since groundwater represents a small proportion (2 percent) of the City's water supply and sufficient water supplies are available to serve the Project, development of the Project would not substantially decrease groundwater supplies.

The Project would increase the amount of impervious surface on the site and has the potential to reduce groundwater recharge by limiting the area where precipitation could infiltrate onsite. However, as discussed above, the Project is required to include stormwater control features such as pervious pavers, bioretention basins, flow through planters, and self-retaining planted areas that would treat and retain stormwater runoff on the Project site and allow for additional opportunity for groundwater recharge. Additionally, the Project would be located on a site previously developed with impervious surfaces. As a result, there would be no significant decrease in the amount of stormwater recharging to underlying water supplies, and the addition of impervious surfaces would not substantially affect groundwater recharge or the underlying groundwater table.

The Project site is located within the Santa Clara Hydrologic Basin. Since the Project would not substantially decrease groundwater supplies, and would not substantially affect groundwater recharge or the underlying groundwater table, the Project would not impede sustainable groundwater management of the basin. Thus, the Project would have a less-than-significant impact on groundwater supplies and groundwater recharge.

Significance: Less Than Significant.

Mitigation: None required.

Impact HYD-3: The Project would not substantially alter the existing drainage pattern such that substantial erosion, siltation, flooding, an exceedance of stormwater system capacity, or impedance to flood flows would occur. (Criterion c.) (*Less than Significant, No Mitigation Required*)

The Project would result in an increase in impervious surface onsite, but would not substantially alter the drainage pattern of the site. Existing surface water runoff on the Project site flows via the

paved surfaces down to the street level and into onsite storm drains, in storm drains in the street gutters, or into a swale located along the northern boundary of the Project site. The Project would recondition, reuse, or reconstruct existing storm drain lines and outfalls in order to collect and discharge stormwater runoff offsite after onsite treatment by stormwater control features.

Substantial Erosion or Siltation

As described under Impact HYD-1, City Standard Conditions of Approval require the Project applicant to prepare a construction sediment and erosion control plan identifying on site controls to minimize sediment runoff and erosion during storm events. Therefore, potential impacts from erosion or siltation during Project construction would be minimized.

The Project would result in additional impervious surfaces that could increase the amount of surface runoff at the Project site. Runoff at the site would flow into stormwater control features including pervious pavers, bioretention basins, flow through planters, and self-retaining planted areas to treat and retain stormwater runoff. Project flows and treatment are required to be consistent with the City's guidelines and the State NPDES Permit, which are designed to minimize the potential for erosion of siltation. Therefore, the impacts related to erosion or siltation during Project operation would be less than significant.

Substantial Increase in the Rate or Amount of Surface Runoff Causing Flooding

While the Project would result in an increase of impervious surface on-site, as discussed under Impact HYD-1, the Project would include stormwater control features such as pervious pavers, bioretention basins, flow through planters, and self-retaining planted areas to treat and retain stormwater runoff. The Project would also be required to have runoff drain to approved permanent Hydromodification Management (HM) controls to mitigate increases in peak runoff flow and increased runoff volume, per the following City Standard Condition of Approval:

> ***Standard Condition FEP-25 (Hydromodification Management)*:** Postconstruction stormwater runoff shall drain to approved permanent Hydromodification Management (HM) controls to mitigate increases in peak runoff flow and increased runoff volume. Projects that will decrease impervious surface area in comparison to the pre-project condition are not subject to the HM requirement. Information related to this requirement, including the exemption criteria, is included in the City's document entitled, "Hydromodification Management Plan Guidelines for Development Projects," and the Santa Clara Valley Urban Runoff Pollution Prevention Program's manual entitled, "C.3 Stormwater Handbook: Guidance for Implementing Stormwater Requirements for New and Redevelopment Projects."
>
> The City's "Hydromodification Management Plan Guidelines for Development Projects" manual requires applicants to submit a Stormwater Management Plan, including information such as the type, location, and sizing requirements of the controls that will be installed. Include the Stormwater Management Plan with the building plan submittal. Property owners of projects that include stormwater controls constructed in accordance with this condition are required to enter into a formal recorded self-inspection and maintenance agreement with the City.

With compliance with City Standard Conditions of Approval, the Project would not substantially increase surface water runoff during rain events in the watershed and would not increase the

potential for flooding, onsite or offsite. Therefore, the Project would not alter the drainage pattern of the site such that it would result in flooding, and impacts would be less than significant.

Exceed Capacity of Drainage Systems

As discussed under Impact HYD-1, the Project would include required stormwater control features. Per the City's Standard Conditions of Approval, the Project would be required to submit a Stormwater Management Plan that complies with the City's guidelines and the State NPDES Permit, and would mitigate increases in peak runoff flow and increased runoff volume. The Project would not increase peak runoff flow or runoff volume and therefore would not contribute to any capacity exceedance in the existing drainage system.

Through implementation of stormwater management measures and compliance with Standard Conditions of Approval, runoff water from the Project site would not exceed the capacity of existing or planned stormwater drainage systems, and this impact would be less than significant.

Impedance or Redirection of Flood Flows

As discussed in Section 4.9.2.2, *Project Setting*, above, the Project site lies within Zone X, described as an "Area of Reduced Flood Risk due to Levee," as shown on Figure 4.9-1. This designation represents an area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods, which are protected by levees from the 100-year flood (FEMA, 2009). While the Project would introduce new impervious surfaces to the Project site, the Project would not substantially alter the existing drainage pattern of the site and is protected from flood events by levees. Therefore, the Project would not impede or redirect flood flows and impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact HYD-4: The Project would not risk release of pollutants due to Project inundation. (Criterion d.) (*Less than Significant, No Mitigation Required*)

The Project site is not located within a tsunami or seiche zone. As discussed above, the Project site lies within Zone X, described as an "Area of Reduced Flood Risk due to Levee," as shown on Figure 4.9-1, which represents an area of moderate flood hazard, usually the area between the limits of the 100-year and 500-year floods, which are protected by levees from the 100-year flood. The Project is an infill project involving redevelopment of surface parking lots and landscaping. As discussed in Section 4.8, *Hazards and Hazardous Materials*, the Project would develop residential and retail uses onsite that would not involve the use or storage of acutely hazardous materials, substances, or waste during operation. Any hazardous materials handled would be typical household materials, which are generally used in small, localized amounts. Therefore, in the event of catastrophic failure of levees that currently protect the Project site from inundation, the Project would not risk release of pollutants and impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact HYD-5: The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. (Criterion e.) (*Less than Significant, No Mitigation Required)*

The Project site is located within the Santa Clara Hydrologic Basin Planning Area, for which the Basin Plan was revised most recently in May 2017. As noted above, the Project would be required to adhere to NPDES drainage control requirements during construction and operation as well as to City drainage control requirements per the City's Standard Conditions of Approval. The Project would not include any other waste discharges that could conflict with the Basin Plan.

The SCVWD 2016 Groundwater Management Plan sets groundwater sustainability goals for the Santa Clara Subbasin. As discussed under Impact HYD-2, the Utility Impact Study (Appendix L) evaluated the increased water demand from Project development compared with the City's supply turnouts and groundwater well capacities and concluded that Project demand would not impact the City's ability to meet total system demand, of which groundwater represents approximately 2 percent of supply. Since groundwater represents a small proportion of the City's water supply and sufficient water supplies are available to serve the Project, development of the Project would not conflict with the SCVWD's groundwater management plan.

Therefore, the Project would not conflict with or obstruct a water quality control plan or a sustainable groundwater management plan and the potential impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

Cumulative impacts on hydrology and water quality could result from incremental changes that degrade water quality or contribute to drainage and flooding problems within the watershed when the cumulative projects are combined.

Geographic Context

The cumulative geographic context for hydrology and water quality for the Project consists of the San Francisco Bay Hydrologic Region for surface water and the Santa Clara Subbasin for groundwater. Development of the Project would contribute to cumulative impacts if the Project and other projects in the Moffett/Whisman Planning Area were to combine to adversely affect the same hydrological resources.

Impact C-HYD-1: Development of the Project, in conjunction with past, present and reasonably foreseeable future projects, would not result in significant cumulative impacts with respect to hydrology and water quality. (*Less Than Significant, No Mitigation Required*)

With regard to water supply, other cumulative projects would require water for construction and operation. Many of the other development projects in the cumulative scenario also involve infill development, which would be required to demonstrate adequate water supply as a part of environmental review. As discussed above, the Project would not have any adverse operational effects on groundwater supplies and recharge. Therefore, construction and operation of the Project would not have a cumulatively considerable contribution to a cumulative impact.

During construction, other cumulative projects would be required to implement a SWPPP and associated BMPs similar to the Project to minimize potential for release of pollutants and sediment into surface water. These construction requirements are intended to protect water resources on a watershed basis and not just a site-specific basis. Therefore, cumulative impacts associated with water quality degradation would not be significant, and the Project's contribution would not be cumulatively considerable.

With respect to erosion, runoff, and flooding, the Project would implement drainage control measures in accordance with City drainage standards and the NPDES MS4 permit requirements established by the SFRWQCB, which would minimize direct impacts on erosion, drainage and flooding. Other cumulative scenario projects would implement similar measures, as required, to minimize erosion and drainage related impacts. Flooding related impacts tend to be site specific hazards that do not combine provided that projects are not redirecting or impeding flood flows. The Project would not impede or redirect flood flows, and therefore could not combine with other projects to contribute to a cumulative impact. Therefore, cumulative impacts on erosion, drainage, and flooding would not be significant, and the Project's contribution to cumulative flooding, erosion, or drainage conditions would not be cumulatively considerable.

With regard to the water quality control plan and sustainable groundwater management plan, these plans are intended to manage surface water and groundwater on a region-wide and basin-wide basis. Adherence to NPDES drainage control requirements during construction and operation as well as to City drainage control requirements as applied to all current and foreseeable projects would ensure that individual contributions do not become cumulatively considerable.

Therefore, based on the Project characteristics and the characteristics of the cumulative projects, with adherence to existing regulatory requirements, the potential cumulative impacts related to hydrology and water quality would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

4.9.5 Summary of Hydrology and Water Quality Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact HYD-1: The Project could result in an increase of stormwater pollutants due to construction activities and/or the introduction of new impervious surfaces with development but would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.	Less than Significant	None required	-
Impact HYD-2: The Project would increase demand for groundwater resources and increase impervious surfaces which would reduce the amount of stormwater runoff available for groundwater recharge, but not to the extent that it would substantially decrease groundwater supplies, interfere substantially with groundwater recharge, or impede sustainable groundwater management of the basin.	Less than Significant	None required	-
Impact HYD-3: The Project would not substantially alter the existing drainage pattern such that substantial erosion, siltation, flooding, an exceedance of stormwater system capacity, or impedance to flood flows would occur.	Less than Significant	None required	-
Impact HYD-4: The Project would not risk release of pollutants due to Project inundation.	Less than Significant	None required	-
Impact HYD-5: The Project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.	Less than Significant	None required	-
Impact C-HYD-1: Development of the Project, in conjunction with past, present and reasonably foreseeable future projects, would not result in significant cumulative impacts with respect to hydrology and water quality.	Less than Significant	None required	-

4.9.6 References – Hydrology and Water Quality

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4.10 Land Use and Planning

4.10.1 Introduction

This section addresses the physical aspects of land use and the regulatory planning framework that guides development of the Project and includes a summary of existing land uses in and around the Project site, a list of applicable City of Mountain View 2030 General Plan land use policies, and an assessment of whether the Project would conflict with the adopted General Plan and other applicable plans and policies pertaining to physical land use and planning factors.

4.10.2 Existing Setting

The following description of existing land use conditions of the Project site and vicinity summarizes and, in some cases, elaborates on the description presented in Chapter 3, *Project Description*, of this EIR.

4.10.2.1 Regional and Local Setting

The City of Mountain View is located south of San Francisco at the southern end of the San Francisco Peninsula, where the Peninsula joins the Santa Clara Valley in northwestern Santa Clara County as shown in Figure 3-1 (in Chapter 3, *Project Description*). It is bordered by the cities of Palo Alto, Los Altos, and Sunnyvale, and also by the NASA-Ames/Moffett Federal Airfield complex to the east and the San Francisco Bay and tidal marshes to the north. Highways 101, 237, 82, and 85 run through the city.

Project Site and Immediate Surroundings

The Project site is located in the City's Moffett/Whisman Planning Area, in the north central portion of the City. The Moffett/Whisman Planning Area generally contains a mix of general industrial, commercial, and residential uses (City of Mountain View, 2012a). The Project site is bounded by Highway 101, N Shoreline Boulevard, Terra Bella Avenue, and Linda Vista Avenue.

As shown in Figure 3-3 in Chapter 3, *Project Description*, surrounding properties include predominantly industrial and office uses. Light industrial uses are located west of the Project site, a fast food restaurant and office uses are located south of the Project site, and light industrial and public storage uses are located east of the Project site. The closest residential uses are located approximately 200 feet southeast of the Project site on Linda Vista Avenue, with a larger residential neighborhood located approximately 700 feet south of the Project site along Linda Vista Avenue. Two existing buildings at 1080 and 1066 Linda Vista Avenue, owned by the Church of Scientology, have recently undergone renovation into a church and café. The Stevens Creek Trail is located approximately 0.5 mile east of the site, and the San Francisco Bay is located approximately 2 miles to the north. Moffett Field and the NASA Ames Research Center are located across U.S. 101, approximately 1.2 miles east of the site. The City of Sunnyvale is approximately 1.75 miles east of the site.

The approximately 7.81-acre Project site currently contains one 111,443 square-foot (sf) four-story office building, which would be retained on the site. Existing surface parking lots, private amenity space, landscaping and a basketball and volleyball court would be removed as a part of the Project. As described in Section 3.3.2, Caltrans holds a blanket easement on Parcel 33 at the northern end of the Project site. Through this easement, the applicant has agreed to relocate existing utilities within a 10-foot easement at the rear of the parcel after which Caltrans will abandon the easement.

Circulation and Transit

Primary regional auto access to the Project site is provided by Highway 101 (U.S. 101), via the Shoreline Boulevard exit, and via Moffett Blvd/NASA Parkway, W Middlefield Road, and N Shoreline Boulevard. The site can be accessed via driveways on Terra Bella Avenue and Linda Vista Avenue. The Santa Clara Valley Transportation Authority (VTA) provides bus, light rail, and paratransit services within Santa Clara County. The Project site is less than 1 mile from the Mountain View Transit Center which includes connections to Caltrain, the Mountain View-Manchester Light Rail Line as well as the 34, 35, and 52 local bus routes. Within a 1-mile radius of the Project site there are stops for nine different local bus routes (VTA, 2018).

4.10.2.2 History and Existing Uses on the Project Site

As described in Section 4.4, *Cultural and Tribal Cultural Resources*, the Project area was once part of a 160-acre farm. By 1940, the majority of this portion of north Mountain View was still largely in agricultural use, primarily fruit trees, with limited rural residential development. The Bayshore Freeway, just to the north of the Project site, was completed through Mountain View in 1937, and later widened to four lanes in the late 1950s to become U.S. 101. During the late 1950s and through the 1980s, most of the single family homes, as well as the remaining agricultural fields, had been subdivided and replaced by commercial and industrial uses as this area experienced rapid development during the post-World War II period. As a part of the 2015 Office Project, nine buildings on the Project site were demolished, and replaced with a single four-story office building, which would be retained on the Project site.

4.10.2.3 Existing General Plan Land Use Map Designation and Zoning Designation

The General Plan Land Use Map designation for the Project site is described below. The City's 2030 General Plan is discussed in detail under 4.10.3, *Regulatory Setting*, further in this section.

General Plan Land Use Map Designation: General Industrial

The entire Project site has a General Plan Land Use Map designation of General Industrial (City of Mountain View, 2018a). According to the City's 2030 General Plan, the General Industrial designation is intended for the production, storage and wholesale of goods and services to create a broad industrial base. Industrial uses are permitted and include manufacturing and storage, research and development, administrative offices, and ancillary commercial. The General Industrial designation has an intensity of 0.35 floor area ratio (FAR), with an up to 0.55 FAR for

uses with a limited number of employees and customers, such as warehouses.[1] Height guidelines for this designation permit up to 3 stories (City of Mountain View, 2012ba).

Zoning Designation: General Industrial (MM) and Limited Industrial (ML)

The zoning designation for the site is General Industrial (MM) and Administrative, Research, and Limited Industrial (ML) (City of Mountain View, 2018b). The purpose of the MM designation is to encourage sound industrial development in the City by providing and protecting an environment exclusively for such development, subject to regulations necessary to insure the purity of the air and waters in the bay area, and the protection of nearby residential uses of the land from hazards and noise or other radiated disturbances. The MM zoning district is consistent with the general industrial and high-intensity office land use designation of the General Plan.

Uses permitted in the MM zoning district by right include manufacturing and processing, public and quasi-public utilities, data centers, storage and warehouse facilities, crop, tree farming, and livestock uses, and railroad yards, freight stations, trucking and motor freight stations. Uses that are permitted after review and approval of a conditional use permit in the MM zoning district include office, educational or recreational uses, research and development, restaurants with or without liquor or live entertainment, retail commercial, warehouse retail, churches, drive-up or drive-in services.

The purpose of the ML designation is to provide an environment conducive to the development and protection of modern, large-scale administrative facilities, research institutions and specialized manufacturing organizations, all of a non-nuisance type. The ML zoning district is consistent with the general industrial and high-intensity office land use designations of the General Plan.

Uses permitted in the ML zoning district by right include administrative, executive and financial offices, research and development offices, data centers, light manufacturing, research, wholesale and distribution, warehousing, small-scale commercial entertainment and recreation facilities and minor utilities. Uses that are permitted after review and approval of a conditional use permit in the ML zoning district include educational uses, child-care, churches, membership organization facilities, retail, drive-in services, and public service use.

4.10.3 Regulatory Setting

4.10.3.1 Regional and Local Regulations

Association of Bay Area Governments and Metropolitan Transportation Commission

The Association of Bay Area Governments (ABAG) is the comprehensive regional planning agency and Council of Governments for the nine counties and 101 cities and towns within the San Francisco Bay Region. ABAG itself does not have formal regulatory authority, but aids land use

[1] The floor area ratio (FAR) is the relationship between the total amount of usable floor area that a building has, or has been permitted to have, and the total area of the lot on which the building stands. A higher ratio is more likely to indicate a dense construction.

planning through intergovernmental coordination. ABAG reviews proposed infrastructure and development projects to determine their impact on regional planning programs and functions as the regional coordinator of the CEQA review process in the Bay Area.

The Metropolitan Transportation Commission (MTC) is the transportation planning and financing agency for the nine-county San Francisco Bay Area.

Plan Bay Area 2040

In July 2017, the MTC and ABAG jointly approved Plan Bay Area 2040 and certified the associated Final EIR, which includes the region's Sustainable Communities Strategy and the 2040 Regional Transportation Plan. Plan Bay Area presents a long-range road map to guide the Bay Area's transportation investments for a 25-year period.

Plan Bay Area includes thirteen goals and targets, the first two of which address the requirements of Senate Bill 375, The California Sustainable Communities and Climate Protection Act of 2008 (SB 375). The goals and targets of Plan Bay Area include:

- Climate Protection
  - Reduce greenhouse gas emissions from cars and light-duty trucks by 15 percent per capita
- Adequate Housing
  - Plan for housing sufficient to house 100 percent of the Bay Area's future workers and residents from all income levels, without displacing current low-income residents and with no increase in in-commuters over the Plan baseline year
- Healthy and Safe Communities
  - Reduce adverse health impacts associated with air quality, road safety and physical inactivity by 10 percent
- Open Space and Agricultural Preservation
  - Direct the region's growth to occur inside the established urban growth boundaries, protecting open space and agricultural land
- Equitable Access
  - Increase the share of affordable housing in PDAs, TPAs or high-opportunity areas by 15 percent
  - Decrease the share of lower-income residents' household income consumed by transportation and housing by 10 percent
  - Do not increase the share of low- and moderate-income renter households in PDAs, TPAs or high-opportunity areas that are at risk of displacement
- Economic Vitality
  - Increase by 38 percent the number of jobs in predominantly middle wage industries
  - Reduce per-capita delay on the Regional Freight Network by 20 percent

  - Increase by 20 percent the share of jobs accessible within 30 minutes by auto or within 45 minutes by transit in congested conditions
- Transportation System Effectiveness
  - Increase non-auto mode share by 10 percent
  - Reduce per-rider transit delay due to aged infrastructure by 100 percent
  - Reduce vehicle operating and maintenance costs due to pavement conditions by 100 percent

Regional Housing Need Plan for the San Francisco Bay Area: 2015-2023

In July 2013, ABAG adopted the *Regional Housing Need Plan for the San Francisco Bay Area: 2015-2023*, a Regional Housing Needs Allocations (RHNA) report. The Regional Housing Need Plan develops a Regional Housing Need Allocation for each local government in ABAG in response to total housing needs for the Bay area identified by the California Department of Housing and Community Development. The Regional Housing Needs Allocation included in this document was developed through coordination with stakeholders from throughout the Bay Area. The Regional Housing Need Plan is required to be consistent with the Plan Bay Area, described above (ABAG, 2013).

Metropolitan Transportation Commission

The MTC acts as a regional transportation planning agency and as the region's metropolitan planning organization (MPO). Because of its designation, the MTC is responsible for the Regional Transportation Plan, a compilation of plans for mass transit, highway, freight, bicycle, and pedestrian facilities. The MTC also reviews applications from local agencies for State and federal grants for transportation projects to determine their compatibility with the plan. As noted above, the most recent version of the Regional Transportation Plan (Plan Bay Area) was jointly adopted in July 2017 by MTC and ABAG. Plan Bay Area calls for greater density of development near transit nodes and major transportation corridors.

City of Mountain View 2030 General Plan

All cities and counties in California are required by State law to prepare and adopt a General Plan. The City of Mountain View's General Plan 2030 includes plans, policies, programs, to guide local decision making regarding land use.

On July 10, 2012, the City of Mountain View City Council adopted the 2030 General Plan to guide the City's sustainable growth and development. The 2030 General Plan has subsequently been amended in 2014, 2015, 2016, and 2017. The General Plan 2030 provides a comprehensive framework for guiding physical development and preservation in the City. The General Plan includes the following chapters: Planning Areas, Land Use and Design, Mobility, Infrastructure and Conservation, Parks, Open Space and Community Facilities, Noise, and Public Safety. The following policies are relevant to the proposed Project.

Policy LUD 2.5. Moffett Federal Airfield. Encourage compatible land uses within the Airport Influence Area for Moffett Federal Airfield as part of Santa Clara County's Comprehensive Land Use Plan (CLUP).

Policy LUD 3.1. Land use and transportation. Focus higher land use intensities and densities within a half-mile of public transit service, and along major commute corridors.

Policy LUD 3.2. Mix of land uses. Encourage a mix of land uses, housing types, retail and public amenities and public neighborhood open spaces accessible to the community.

Policy LUD 3.3: Health. Promote community health through land use and design.

Policy LUD 3.4. Land use conflicts. Minimize conflicts between different land uses.

Policy LUD 3.5. Diversity. Encourage residential developments serving a range of diverse households and incomes.

Policy LUD 6.1. Neighborhood character. Ensure that new development in or near residential neighborhoods is compatible with neighborhood character.

Policy LUD 6.3. Street presence. Encourage building facades and frontages that create a presence at the street and along interior pedestrian paseos or pathways.

Policy LUD 6.5. Pedestrian and bicycling improvements. Support pedestrian and bicycling improvements and connections between neighborhoods.

Policy LUD 8.1. City gateways. Emphasize city gateways that create a distinct and positive impression.

Policy LUD 8.3: Enhanced publicly-accessible bicycle and pedestrian connections. Encourage new and existing developments to enhance publicly-accessible bicycle, pedestrian and transit connections.

Policy LUD 8.5: Pedestrian and bicycle amenities. Encourage attractive pedestrian and bicycle amenities in new and existing developments, and ensure that roadway improvements address the needs of pedestrians and bicyclists.

Policy LUD 9.1. Height and setback transitions. Ensure that new development includes sensitive height and setback transitions to adjacent structures and surrounding neighborhoods.

Policy LUD 9.2. Compatible transit-oriented development. Encourage transit-oriented development that is compatible with surrounding uses and accessible to transit stations.

Policy LUD 9.5. View preservation. Preserve significant views throughout the community.

Policy LUD 9.6. Light and glare. Minimize light and glare from new development.

Policy LUD 10.2: Low-impact development. Encourage development to minimize or avoid disturbing natural resources and ecologically significant land features.

Policy MOB 10.2: Reduced travel demand. Promote effective TDM programs for existing and new development.

Policy INC 1.3: Utilities for new development. Ensure adequate utility service levels before approving new development. (See Section 4.15, *Utilities and Service Systems*, for more discussion of the Project's changes to existing utilities.)

Policy INC 5.5 Landscape efficiency. Promote water-efficient landscaping including drought-tolerant and native plants, along with efficient irrigation techniques.

Policy INC 5.6: Indoor efficiency. Promote the use of water-efficient fixtures and appliances.

Policy INC 8.5. Site-specific stormwater treatment. Require post-construction stormwater treatment controls consistent with MRP requirements for both new development and redevelopment projects.

Policy INC 15.3: Citywide green building. Support green building technologies and innovations throughout the city.

Policy POS 1.2: Recreation facilities in new residential developments. Require new development to provide park and recreation facilities.

Policy POS 6.1: Citywide network of pathways. Develop a citywide network of pedestrian and bicycle pathways to connect neighborhoods, employment centers, open space resources and major destinations within the city.

City of Mountain View Zoning Ordinance

As a long-range planning document, the General Plan outlines long-term visions, policies, and actions designed to shape future development within Mountain View. The Zoning Ordinance serves as an implementing tool for the General Plan by establishing detailed, parcel-specific development regulations and standards in each area of the City. Although the two are distinct documents, the Mountain View General Plan and Zoning Ordinance are closely related, and State law mandates that zoning regulations be consistent with the General Plan maps and policies.

City of Mountain View Greenhouse Gas Reduction Program

Developed in 2012, the Greenhouse Gas Reduction Program (GGRP) is designed to implement the Mountain View General Plan and comply with the Bay Area Air Quality Management District (BAAQMD) guidelines. The GGRP analyzes activities which result in GHG emissions and develops strategies to require future development to comply with mitigation measures. The GGRP includes an emission inventory, emissions projections, GHG reduction goals, GHG reduction strategies and measures, and an implementation and monitoring program (City of Mountain View, 2012b). The proposed Project's consistency with the City's GGRP is discussed in Section 4.7, *Greenhouse Gas Emissions*.

City of Mountain View Climate Protection Roadmap

Developed in 2015, the City of Mountain View's Climate Protection Roadmap (CPR), the CRP builds on GGRP and evaluates actions the City can use to reach the goal of reducing community emissions 80 percent below 2005 levels by 2050 (City of Mountain View, 2015a). The proposed Project's consistency with the City's CRP is discussed in Section 4.7, *Greenhouse Gas Emissions*.

Comprehensive Land Use Plan for Moffett Federal Airfield

The Comprehensive Land Use Plan (CLUP) for Moffett Federal Airfield was adopted November 2, 2012 and was amended November 18, 2016. The CLUP is intended to protect the welfare of residents near Moffett Federal Airfield. Specifically, the CLUP is intended to protect the public from aircraft noise, ensure that people and facilities are not susceptible to aircraft accidents, and to ensure that no structures or activities adversely affect navigable airspace. The CLUP establishes noise, height, overflight and safety restriction areas. Additionally, with regard to compatible land uses within the Airport Influence Area, the CLUP notes the following, "The compatibility of land uses within the AIA should be preserved to the maximum extent feasible with particular emphasis on the preservation of existing agricultural and open space uses. The conversion of land from existing or planned agricultural, industrial, or commercial use to residential uses should be the subject of careful consideration of the potential impacts of aircraft overflights." Regarding changes to General Plans in for the jurisdictions within the AIA, the CLUP notes the following, "Review all proposed amendments to the General Plans, Specific Plans, and zoning and building regulations that may affect land use in the AIA. The ALUC shall determine if the proposed amendments are consistent or inconsistent with this CLUP. The CLUP also encourages local jurisdictions to submit referrals to the ALUC for any projects with five or more dwelling units in the AIA." (SCCALUC, 2012)

Mountain View Bicycle Transportation Plan and Mountain View Pedestrian Master Plan

The Mountain View Bicycle Transportation Plan Updated was adopted in November 2015 and is a policy document which addresses all cycling related projects. Additionally, the plan provides a recommended citywide network of bicycle paths, lanes, and routes. The Bicycle Transportation Plan is intended to implement and expand the General Plan's mobility goals (City of Mountain View, 2015b).

The Mountain View Pedestrian Master Plan was adopted by City Council in January 2013 and was updated in January 2014. The Plan is designed to improve pedestrian mobility in the City and expands upon the 2030 General Plan mobility goals by more specifically addressing pedestrian-related needs of the community (City of Mountain View, 2014).

4.10.4 Land Use and Planning Impacts

4.10.4.1 Significance Criteria

Consistent with Appendix G of the State CEQA *Guidelines*, the Project would have significant adverse impacts to land use and planning if it would:

a) Physically divide an established community;

b) Cause a significant environmental impacts due to a conflict with any applicable land use plan, policy, or the regulation adopted for the purpose of avoiding or mitigating an environmental effect.

4.10.4.2 Approach to Analysis

This EIR analysis evaluates the general consistency of the proposed Project with applicable land use plans and policies. Consistent with Section 15125(d) of the CEQA *Guidelines,* inconsistency with an adopted plan, including the General Plan, does not necessarily indicate a significant impact by the Project. A general plan contains many policies which may in some cases address different goals, policies and objectives. In fact, some policies may compete with each other. The information presented in this EIR is intended to allow decision-makers to decide whether, on balance, the Project is consistent (i.e., in general harmony) with the General Plan. In the recent *Spring Valley Lake Association v. City of Victorville* decision, the court explained that in determining whether a project conflicts with a General Plan, "the nature of the policy and the nature of the inconsistency are critical factors to consider." The court went on to clarify that a project is inconsistent with a General Plan if it conflicts with a General Plan policy that is "specific, mandatory, and fundamental."

Further, this analysis focuses on the effects of physical change. As stated in Section 15358(b) of the CEQA *Guidelines*, "[e]ffects analyzed under CEQA must be related to a physical change." Appendix G of the CEQA Guidelines (Environmental Checklist Form) makes explicit the focus on *environmental* policies and plans, asking if the project would "conflict with any applicable land use plan, policy, or regulation … *adopted for the purpose of avoiding or mitigating an environmental effect*" (emphasis added). Even a response in the affirmative, however, does not necessarily indicate the Project would have a significant effect, unless an adverse physical change would occur. To the extent that physical impacts may result from such conflicts, such physical impacts are analyzed elsewhere in this EIR, in the applicable topic section of Chapter 4. The compatibility of the Project with General Plan 2030 policies that do not relate to physical environmental issues will be considered by decision-makers as part of their decision whether to approve or disapprove the Project.

Moreover, a conflict with a policy that exists today but that is amended to accommodate a proposed project does not normally constitute a significant effect on the environment under CEQA. That is, should the decision-makers (i.e., the City Planning Commission and City Council) determine that the City's policy framework—the General Plan[2] and Zoning Ordinance—should be amended to accommodate the Project, the Project would not conflict with applicable City land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and in such instance, the Project would have a less-than-significant effect under Criterion b, above, with respect to City policy.

This section considers adopted City and regional plans and the policies that are applicable to the Project, and determines whether the Project conforms to those plans and policies. Plans that were reviewed include the City's 2030 General Plan and the City's Zoning Ordinance. Some other local, regional or State plans and policies that relate to topical areas other than land use (such as air quality, water quality and biological resources) are discussed in more detail in their respective topical sections of this EIR.

[2] The City's General Plan may be amended by the City Council per Government Code Section 65388 and RMC Article 15.04.813.

This EIR analysis also evaluates the Project in terms of its potential to physically divide an existing community and its compatibility with nearby existing land uses.

4.10.4.3 Discussion of Impacts and Mitigation Measures

Impact LUP-1: The Project would not divide an established community. (*Less than Significant, No Mitigation Required*)

The Project site is located within the City's Moffett/Whisman Planning Area, which generally contains a mix of general industrial, commercial, and residential uses. The Project site is located in the northwestern most area if the Moffett/Whisman Planning Area, and is geographically separated from the adjacent North Bayshore Planning area to the north by Highway 101 and the Monta Loma/Farley/Rock Planning area by N Shoreline Boulevard, a four-lane major street. Typically, the division of an established community would result from the construction of a physical barrier to neighborhood access or the removal of a means of access. The Project would not create any barriers which could block neighborhood access and would not remove any existing forms of access. Existing uses on the Project site include parking lots and private amenity space. The Project would replace these uses with two residential buildings with retail and amenity space and a parking lot. Additionally, the Project would include interior pedestrian and bicycle pathways which would increase connectivity between the neighborhoods. The Project would establish a new residential community, adding to existing residential communities located near the Project site. As a result, the Project would facilitate connections between communities and would not physically divide an established community.

Significance: Less Than Significant.

Mitigation: None required.

Impact LUP-2: The Project would not conflict with applicable regional or local plans and policies adopted for the purpose of avoiding or mitigating environmental effects. (*Less than Significant, No Mitigation Required*)

General Plan

Table 4.10-1 presents General Plan 2030 policies relevant to the proposed Project, coupled with an analysis of whether the Project would be generally consistent with these policies. As shown in the table, the Project would be consistent with the land use policies of the General Plan 2030 relevant to CEQA.

As discussed in Chapter 3, *Project Description*, the Project would require a text and map amendment to the City of Mountain View 2030 General Plan to change the Project site land use designation from *General Industrial* to *Mixed Use Center.* This change would be required to allow the addition of the Project's residential uses in the Moffett/Whisman Planning Area.

TABLE 4.10-1
PROJECT CONSISTENCY WITH APPLICABLE GENERAL PLAN 2030 LAND USE POLICIES ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT

General Plan 2030 Land Use and Planning Element Goal, Policy, or Action	Consistency Discussion
Policy LUD 2.5: Moffett Federal Airfield. Encourage compatible land uses within the Airport Influence Area for Moffett Federal Airfield as part of Santa Clara County's Comprehensive Land Use Plan.	***Consistent.*** The Project: • Is well under height restrictions within the AIA. • Is not located within a Noise contour of 65 or greater, and is not in an Airport Safety Zone, • May require review by and permits from the Santa Clara County Airport Land Use Commission which would outline any additional permitting conditions required by the ALUC for the Project to be consistent with the CLUP
Policy LUD 3.1: Land use and transportation. Focus higher land use intensities and densities within a half-mile of public transit service, and along major commute corridors.	***Consistent.*** The Project would include multi-family residential, office, and retail uses adjacent to commuting corridors such as the 101 and North Shoreline Boulevard. Additionally, there are four VTA bus routes serving the Project vicinity. The Project is 1 mile from the Mountain View Transit Center which includes connections to Caltrain and the Mountain View-Manchester Light Rail Line
Policy LUD 3.2: Mix of land uses. Encourage a mix of land uses, housing types, retail and public amenities and public neighborhood open spaces accessible to the community.	***Consistent.*** The Project would establish a mix of land uses, retail, and public amenities including residential, office, retail, and open space. Additionally, the Project would include a mix of housing types as the Project would be required to include low-income housing in accordance with the City of Mountain View Below Market Rate (BMR) housing Program
Policy LUD 3.3: Health. Promote community health through land use and design.	***Consistent.*** The Project would include additional multi-family residential units, open space, landscaping, and amenities shared between residents and employees. The Project land use would include facilitate community connections by creating shared common space for residents and employees.
Policy LUD 3.4: Land use conflicts. Minimize conflicts between different land uses.	***Consistent.*** The Project would integrate different land uses such as residential, office, and retail uses. Additionally, land use in the neighborhood includes a mix of residential, office, and light industrial. Therefore, the Project would introduce a land use which is compatible with existing uses in the neighborhood.
Policy LUD 3.5: Diversity. Encourage residential developments serving a range of diverse households and incomes.	***Consistent.*** As described in Section 4.12, *Population and Housing*, the Project would be required to make at least 10 percent of the dwelling units Below-Market Rate units (BMR) in accordance with the City of Mountain View Below-Market Rate Housing Program. Therefore, the Project would provide housing for a range of households and incomes
Policy LUD 6.1: Neighborhood character. Ensure that new development in or near residential neighborhoods is compatible with neighborhood character	***Consistent.*** Land uses surrounding the Project site are primarily light industrial, public storage, and office uses. Residential uses are located approximately 200 feet from the Project site. The Project site would connect residential uses to existing residential uses in an a neighborhood with mixed residential and industrial uses.
Policy LUD 6.3. Street presence. Encourage building facades and frontages that create a presence at the street and along interior pedestrian paseos or pathways.	***Consistent.*** The Project includes interior pedestrian and bicycle pathways and landscaping which would create a street presence for the project site and would invite the public into the Project site.

TABLE 4.10-1 (CONTINUED)
PROJECT CONSISTENCY WITH APPLICABLE GENERAL PLAN 2030 LAND USE POLICIES ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT

General Plan 2030 Land Use and Planning Element Goal, Policy, or Action	Consistency Discussion
Policy LUD 6.5. Pedestrian and bicycling improvements. Support pedestrian and bicycling improvements and connections between neighborhoods.	***Consistent.*** The Project would include interior and exterior bicycle parking as well as interior pedestrian and bicycle pathways which would encourage residents, employees, or other visitors to access the Project site by bicycle or on foot.
Policy LUD 8.1. City gateways. Emphasize city gateways that create a distinct and positive impression.	***Consistent***. The Project would be reviewed by the City's Development Review Committee (DRC), which is responsible for reviewing the architecture and site design of new development. The Project would also require approval of a Planned Community Permit, which would ensure that the Project clearly demonstrates superior site and building design and compatibility with surrounding uses and developments.
Policy LUD 8.3: Enhanced publicly-accessible bicycle and pedestrian connections. Encourage new and existing developments to enhance publicly-accessible bicycle, pedestrian and transit connections.	***Consistent.*** The Project would include interior and exterior bicycle parking as well as interior pedestrian and bicycle pathways which would encourage residents, employees, or other visitors to access the Project site by bicycle or by foot. Additionally, within a 1-mile radius of the Project site there are stops for nine different local bus routes. Additionally, the Project is 1 mile from the Mountain View Transit Center.
Policy LUD 8.5: Pedestrian and bicycle amenities. Encourage attractive pedestrian and bicycle amenities in new and existing developments, and ensure that roadway improvements address the needs of pedestrians and bicyclists.	***Consistent.*** The Project would include interior and exterior bicycle parking and interior pedestrian and bicycle pathways which would encourage connectivity between the Project site and surrounding neighborhoods.
Policy LUD 9.1. Height and setback transitions. Ensure that new development includes sensitive height and setback transitions to adjacent structures and surrounding neighborhoods.	***Consistent.*** The Project would comply with the height restrictions of the Mixed Use Center Designation.
Policy LUD 9.2. Compatible transit-oriented development. Encourage transit-oriented development that is compatible with surrounding uses and accessible to transit stations.	***Consistent.*** The Project would include interior and exterior bicycle parking which would encourage residents, employees, or other visitors to access the Project site by bicycle. Additionally, within a 1-mile radius of the Project site there are stops for nine different local bus routes. Additionally, the Project is 1 mile from the Mountain View Transit Center. The Project would be accessible to transit stations and would be compatible with surrounding uses which include a mix of residential and industrial. The Project's connections with transit options are discussed in Section 4.14, *Transportation*.
Policy LUD 9.5. View preservation. Preserve significant views throughout the community.	***Consistent.*** As described in Section 4.1, *Aesthetics*, the Project would not impair or block any significant views in the community.
Policy LUD 9.6. Light and glare. Minimize light and glare from new development.	***Consistent.*** As described in Section 4.1, *Aesthetics*, the Project would not introduce a significant source of light or glare.
Policy LUD 10.2: Low-impact development. Encourage development to minimize or avoid disturbing natural resources and ecologically significant land features.	***Consistent.*** The Project would replace existing parking lots which have previously disturbed existing natural resources. The Project would not disturb natural resources or ecologically significant land features. See Section 4.3, *Biological Resources*, which discusses potential impacts of the Project on natural resources.
Policy MOB 10.2: Reduced travel demand. Promote effective TDM programs for existing and new development.	***Consistent***. The Project includes a Transportation Demand Management (TDM) program.

TABLE 4.10-1 (CONTINUED)
PROJECT CONSISTENCY WITH APPLICABLE GENERAL PLAN 2030 LAND USE POLICIES ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING AN ENVIRONMENTAL EFFECT

General Plan 2030 Land Use and Planning Element Goal, Policy, or Action	Consistency Discussion
Policy INC 1.3: Utilities for new development. Ensure adequate utility service levels before approving new development.	***Consistent.*** The Project would update existing utility infrastructure to ensure adequate utility service levels. See Section 4.15, *Utilities and Service Systems*, which discusses the Project's improvements to utilities.
Policy INC 5.5 Landscape efficiency. Promote water-efficient landscaping including drought-tolerant and native plants, along with efficient irrigation techniques.	***Consistent.*** The Project would be required to comply with the City of Mountain View's Water Conservation in Landscaping Regulations which would require the Project to use water efficient landscaping.
Policy INC 5.6: Indoor efficiency. Promote the use of water-efficient fixtures and appliances.	***Consistent.*** The Project would be required to comply with the various energy and water conservation measures outlines in the CALGREEN code and the Mountain View Green Building Code.
Policy INC 8.5. Site-specific stormwater treatment. Require post-construction stormwater treatment controls consistent with MRP requirements for both new development and redevelopment projects.	***Consistent.*** The Project would construct onsite bioretention areas which would treat stormwater onsite. See Section 4.15, *Utilities and Service Systems*, and Section 4.9, *Hydrology and Water Quality*, which discuss the Project's post-construction stormwater treatment infrastructure.
Policy INC 15.3: Citywide green building. Support green building technologies and innovations throughout the city.	***Consistent.*** As described in Section 3.4.8, the Project would be constructed in accordance with the Mountain View Green Building Code.
Policy POS 1.2: Recreation facilities in new residential developments. Require new development to provide park and recreation facilities.	***Consistent.*** The Project would include the installation of common open space, and landscaping, and interior pedestrian and bicycle pathways which we be open to the public.
Policy POS 6.1: Citywide network of pathways. Develop a citywide network of pedestrian and bicycle pathways to connect neighborhoods, employment centers, open space resources and major destinations within the city.	***Consistent.*** The Project would include the development of residential and employment space along with retail and open space which will make the Project site a destination within the City.

Additionally, the Project would require re-zoning amendments to the City's Zoning Ordinance and Map from *General Industrial* (MM) on the eastern portion of the Project site and *Limited Industrial* (ML) on the western portion of the Project site, to *Planned Community* (P) for the entire site. Under the *Planned Community* zoning, any use permitted in any other zoning district may be permitted. A Planned Community permit is required prior to the development of any use within a P district.

According to the General Plan 2030, the Mixed Use Center designation "promotes pedestrian-oriented mixed-use centers with integrated, complementary uses such as entertainment, restaurants, residential, department stores and other retail, office, hotels, convention/assembly and/ or civic uses and public spaces that draw visitors from surrounding neighborhoods to the region." (City of Mountain View, 2012a). Permitted land uses in this designation include: office, retail, and personal services, multi-family residential, lodging, entertainment, parks and plazas. The designation has an allowed density of approximately 70 dwelling units per acre (du/ac) and allows for building heights of up to eight stories. With 303 multi-family residential units proposed on 7.81 acres, the proposed Project density would be consistent with the Mixed-Use Center designation. The Project would introduce a use that is compatible with the designation and at 7 stories high would comply with the height guideline for the Mixed-Use Designation. As described in Section 3.6.1, the Project applicant has applied for a General Plan Amendment to change the designation of the Project site. Upon approval of this amendment, the Project would be consistent with the 2030 General Plan designation.

Implementation of the Project would require the approval of a General Plan Amendment, re-zoning application, a Planned Community Permit, and a Development Review Permit, among other local permits. Although this preliminary analysis demonstrates that the proposed Project is consistent with proposed land use designations and zoning, approval of these permits and amendments would ultimately determine whether or not the Project is consistent with local land use policies.

Mountain View Zoning Ordinance

The Project includes a request for a zoning amendment, for the City to designate the 7.81-acre Project site as *Planned Community* (P). Under the P zoning district, any use permitted in any other zoning district may be permitted. A Planned Community permit is required prior to the development of any use within a P zoning district. Per the City's Zoning Ordinance, a site zoned P must meet the minimum lot size requirement of 2 acres. The Project site is 7.8 acres, and would be consistent with the current minimum lot size.

The applicant has applied for a re-zoning of the Project site. Upon approval of the re-zoning application, the Project would be consistent with the City's Zoning Ordinance.

Land Use Regulating Plans and Regulations

Plan Bay Area

The Project is consistent with two primary goals of Plan Bay Area: development of housing, especially in urban infill areas, and development that would facilitate a long-term reduction in regional greenhouse gas emissions. As described in Section 4.7, *Greenhouse Gas Emissions*, of

this EIR, the Project would be consistent with the City's GGRP; would seek GreenPoint Rated Gold level certification, and the Project applicant has committed to include energy saving measures such as high-efficacy lighting, energy efficient appliances, and solar hot water systems to preheat domestic hot water; and would not result in any significant impacts related to greenhouse gases. Additionally, the Project is strategically located near transit connections, encouraging the use of public transit to commute by future residents. The Project would therefore be consistent with the overall goals of Plan Bay Area.

Comprehensive Land Use Plan for Moffett Federal Airfield

As described in Table 4.10-1, the proposed Project is not located within a noise contour of 60 decibels or greater where residential development is restricted. Additionally, the Project site is not located within an Airport Safety Zone and does not exceed the maximum height threshold for the areas of the AIA in which it is located. The proposed Project is consistent with all policies outlined in the CLUP for Moffett Federal Airfield. As described in Section 3.6.1, the Project may require review from the ALUC which would ensure that the Project is consistent with the requirements set out in the CLUP.

Mountain View Bicycle Transportation Plan and Mountain View Pedestrian Master Plan

The Project would improve pedestrian and bicycle connectivity within the City by providing interior and exterior bicycle parking for residents, employees, and visitors. Additionally, the Project site is located near many transit connections which would further encourage connections with existing and planned pedestrian and bicycle networks within the City. These improvements are consistent with the City's Bicycle Transportation Plan and Pedestrian Master Plan.

Summary

Based on the analysis above, including the assessment presented in Table 4.10-1 addressing consistency with applicable General Plan 2030 policies and actions, the Project would not conflict with applicable regional or local plans and policies adopted for the purpose of avoiding or mitigating environmental effects, and impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

Geographic Context

The cumulative geographic context for land use, plan and policy considerations for development of the Project consists of the Project site surrounding areas within the Moffett/Whisman Planning Area and the City of Mountain View.

Impact C-LUP-1: The Project, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, would not result in significant cumulative impacts to land use and planning. (*Less Than Significant, No Mitigation Required*)

As analyzed throughout this section, the Project would not result in a significant land use impact by physically dividing an established community; and would not conflict with applicable land use plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect. The area surrounding the Project site is largely developed with a mix of industrial, office, and residential uses. Two cumulative projects (1185 Terra Bella Avenue and 1075 Terra Bella Avenue) are located adjacent to and south of the Project site and involve commercial office development, which would be consistent with the existing office development on the Project site. Other current and reasonably foreseeable development projects are dispersed geographically throughout the City such that they would not combine with the Project to result in cumulative impacts related to land use and planning.

In addition, all other cumulative development has been, or will be, subject to development guidance contained within the General Plan 2030, prescribed by zoning, and other applicable land use plans to avoid conflicting with plans adopted to avoid or mitigate environmental effects. Based on the information in this section and for the reasons summarized above, development of the Project would not contribute to any significant adverse cumulative land use impacts when considered together with other cumulative development.

Significance: Less Than Significant.

Mitigation: None required.

4.10.5 Summary of Land Use and Planning Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact LUP-1: The Project would not divide an established community.	Less than Significant	None required	-
Impact LUP-2: The Project would not conflict with applicable regional or local plans and policies adopted for the purpose of avoiding or mitigating environmental effects.	Less than Significant	None required	-
Impact C-LUP-1: Development of the Project, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, would not result in significant cumulative impacts to land use and planning.	Less than Significant	None required	-

4.10.6 References – Land Use and Planning

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4.11 Noise and Vibration

4.11.1 Introduction

This section identifies the existing setting and evaluates potential impacts related to noise and vibration that could result from development under the Project. This section analyzes potential impacts on the ambient noise environment caused by construction and operation of the Project, and also assesses the compatibility of the Project's noise-sensitive uses, such as residences, with the existing noise environment. This analysis focuses on noise and vibration impacts on humans and structures; noise and related effects on wildlife are addressed in Section 4.3, *Biological Resources*.

This analysis uses information contained in an environmental noise study that was prepared for the Project site dated April 29, 2019, by Charles M Salter Associates, Inc. (**Appendix J**).

4.11.2 Background

4.11.2.1 Noise

Sound is mechanical energy transmitted by pressure waves through a medium such as air. Noise can be generally defined as unwanted sound. Sound, traveling in the form of waves from a source, exerts a sound pressure level (referred to as sound level) which is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing 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 sound pressure level, therefore, constitutes the additive force exerted by a sound corresponding to the frequency/sound power level spectrum.

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 instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA). Frequency A-weighting follows an international standard methodology of frequency de-emphasis and is typically applied to community noise measurements. Some representative noise sources and their corresponding A-weighted noise levels are shown in **Figure 4.11-1**.

Noise exposure is a measure of noise over a period of time. Noise level is a measure of noise at a given instant in time. Community noise varies continuously over a period of time with respect to 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 exposure, with the individual contributors unidentifiable. The background noise level changes

COMMON OUTDOOR ACTIVITIES	NOISE LEVEL (dBA)	COMMON INDOOR ACTIVITIES
	110	Rock band
Jet flyover at 1,000 feet		
	100	
Gas lawnmower at 3 feet		
	90	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80	
Noisy urban area, daytime		
Gas lawnmower at 100 feet	70	Garbage disposal at 3 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60	
		Large business office
Quiet urban daytime	50	Dishwasher in next room
Quiet urban nighttime	40	Theater, large conference room (background)
Quiet suburban nighttime		
	30	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20	
		Broadcast/recording studio
	10	
	0	

D170621

SOURCE: Caltrans

Residences @ Shoreline Gateway Project

Figure 4.11-1
Typical Noise Levels

ESA

throughout a typical day, but does so gradually, corresponding with the addition and subtraction of distant noise sources such as traffic and atmospheric conditions. Community noise varies constantly throughout the day due not only to slowly changing background noise but also to the addition of short duration single event noise sources (e.g., aircraft flyovers, motor vehicles, sirens), which are readily identifiable to the individual receptor. These successive additions of sound to the community noise environment vary the community noise level from instant to instant, requiring the measurement of noise exposure over a period of time to legitimately 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 energy-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.

L_{min}: the instantaneous minimum noise level for a specified period of time.

L_{dn}: also abbreviated DNL, it is a 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 ("penalizing" nighttime noises). Noise between 10:00 p.m. and 7:00 a.m. is weighted (penalized) by adding 10 dB to take into account the greater annoyance of nighttime noises.

CNEL: similar to L_{dn}, the Community Noise Equivalent Level (CNEL) adds a 5-dB "penalty" for the evening hours between 7:00 p.m. and 10:00 p.m. in addition to a 10-dB penalty between the hours of 10:00 p.m. and 7:00 a.m.

As a general rule, in areas where the noise environment is dominated by traffic, the L_{eq} during the peak-hour is generally within one to two decibels of the L_{dn} at that location (Caltrans, 2013).

4.11.2.2 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. 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 (Caltrans, 2013):

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived;
- Outside of the laboratory, a 3 dB change is considered a just-perceivable difference;
- A change in level of at least 5 dB is required before any noticeable change in human response would be expected; and
- A 10 dB change is subjectively heard as approximately a doubling in loudness and can cause adverse response.

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, but instead combine 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. When combining sound levels, the relationships presented in **Table 4.11-1** may be used as an approximation.

TABLE 4.11-1
DECIBEL ADDITION RELATIONSHIPS

When Two Decibel Values Differ by:	Add This Amount to the Higher Value:	Example:
0 or 1 dB	3 dB	70 + 69 = 73 dBA
2 or 3 dB	2 dB	74 + 71 = 76 dBA
4 to 9 dB	1 dB	66 + 60 = 67 dBA
10 dB or more	0 dB	65 + 55 = 65 dBA

SOURCE: Caltrans, 2013

4.11.2.3 Noise Attenuation

Stationary point sources of noise, including stationary mobile sources such as idling vehicles, attenuate, or lessen, at a rate of 6 to 7.5 dB per doubling of distance from the source, depending on the topography of the area and environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noise, such as a large industrial facility spread over many acres or a street with moving vehicles, would typically attenuate at a lower rate, approximately 3 to 4.5 dB per doubling of distance from the source.

4.11.2.4 Vibration

As described in the FTA's *Transit Noise and Vibration Impact Assessment*, ground-borne vibration can be a serious concern for neighboring receptors, causing buildings to shake and

rumbling sounds to be heard (FTA, 2018). In contrast to airborne noise, ground-borne vibration is not a common environmental problem. It is unusual for vibration from sources such as buses and trucks to be perceptible, even in locations close to major roads. Some common sources of ground-borne vibration are trains, buses and heavy trucks on rough roads, and construction activities such as blasting, sheet pile-driving and operating heavy earth-moving equipment.

There are several different methods that 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 vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (VdB) is commonly used to express RMS. The decibel notation acts to compress the range of numbers required to describe vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receptors for vibration assessment include structures (especially older masonry structures), land uses where people normally sleep (especially residential uses,), and vibration sensitive equipment such as hospital analytical equipment and equipment used in computer chip manufacturing.

The effects of ground-borne vibration include movement of building floors, rattling of windows, shaking of items on shelves or hanging on walls and rumbling sounds. In extreme cases, vibration can cause damage to buildings. Building damage is not a factor for most projects, with the occasional exception of blasting and pile-driving during construction. A vibration level that causes annoyance can be well below the damage threshold for normal buildings.

4.11.3 Regulatory Setting

Federal, State, and local agencies regulate different aspects of environmental noise. Noise regulations (for new multi-family residential developments) are addressed in Title 24 of the *California Code of Regulations*, local general plan policies, and local noise ordinance standards and municipal codes.

4.11.3.1 Federal

Truck Operations

Federal regulations establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 Code of Federal Regulations, Part 205, Subpart B. The federal truck pass-by noise standard is 80 dBA at 15 meters (approximately 50 feet) from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

Vibration

The Federal Transit Administration (FTA) has adopted vibration standards that are used to evaluate potential building damage impacts related to construction activities. The vibration damage criteria adopted by the FTA are shown in **Table 4.11-2**.

TABLE 4.11-2
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

SOURCE: FTA, 2018

In addition, the FTA has also adopted standards associated with human annoyance for ground-borne vibration impacts for the following three land-use categories: Vibration Category 1 – High Sensitivity, Vibration Category 2 – Residential, and Vibration Category 3 – Institutional. The FTA defines Category 1 as 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 refers to all residential land uses and any buildings where people sleep, such as hotels and hospitals. Category 3 refers to 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. The vibration thresholds associated with disturbance for these three land-use categories are shown in **Table 4.11-3**. No thresholds have been adopted or recommended for commercial and office uses.

TABLE 4.11-3
GROUND-BORNE VIBRATION IMPACT CRITERIA FOR GENERAL ASSESSMENT

Land Use Category	Frequent Events[a]	Occasional Events[b]	Infrequent Events[c]
Category 1: Buildings where vibration would interfere with interior operations	65 VdB[d]	65 VdB[d]	65 VdB[d]
Category 2: Residences and buildings where people normally sleep	72 VdB	75 VdB	80 VdB
Category 3: Institutional land uses with primarily daytime use	75 VdB	78 VdB	83 VdB

[a] "Frequent Events" is defined as more than 70 vibration events of the same source per day.
[b] "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.
[c] "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day.
[d] This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes.

SOURCE: FTA, 2018.

4.11.3.2 State

Vehicle Operations

The State of California establishes noise limits for vehicles licensed to operate on public roads. The pass-by standard for heavy trucks is consistent with the federal limit of 80 dBA. The 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 sanctions on vehicle operators by State and local law enforcement officials.

California Noise Insulation Standards

State regulations include requirements for the construction of new hotels, motels, apartment houses, and dwellings (other than detached single-family dwellings) that are intended to limit the extent of noise transmitted into habitable spaces. These requirements are collectively known as the California Noise Insulation Standards and are found in *California Code of Regulations*, Title 24 (known as the Building Standards Administrative Code), Part 2 (known as the California Building Code), Appendix Chapters 12 and 12A. The noise insulation criterion is 45 dBA L_{dn}/CNEL inside noise-sensitive spaces. For developments with exterior transportation noise exposure exceeding 60 dBA L_{dn}/CNEL, an acoustical analysis and mitigation (if required) must be provided showing compliance with the 45 dBA L_{dn}/CNEL interior noise exposure limit. There are no comparable noise standards for office or other commercial structures.

California Green Building Code (CALGreen)

Section 5.507.4 of the 2016 California Green Building Standards Code (CALGreen) addresses noise issues for nonresidential spaces. Where buildings are exposed to an hourly L_{eq} of 65 dBA or greater, the building envelope are required to be designed with wall and roof-ceiling assemblies designed to provide an interior noise environment not exceeding an hourly L_{eq} of 50 dBA in occupied areas during hours of operation.

4.11.3.3 Local

2030 General Plan

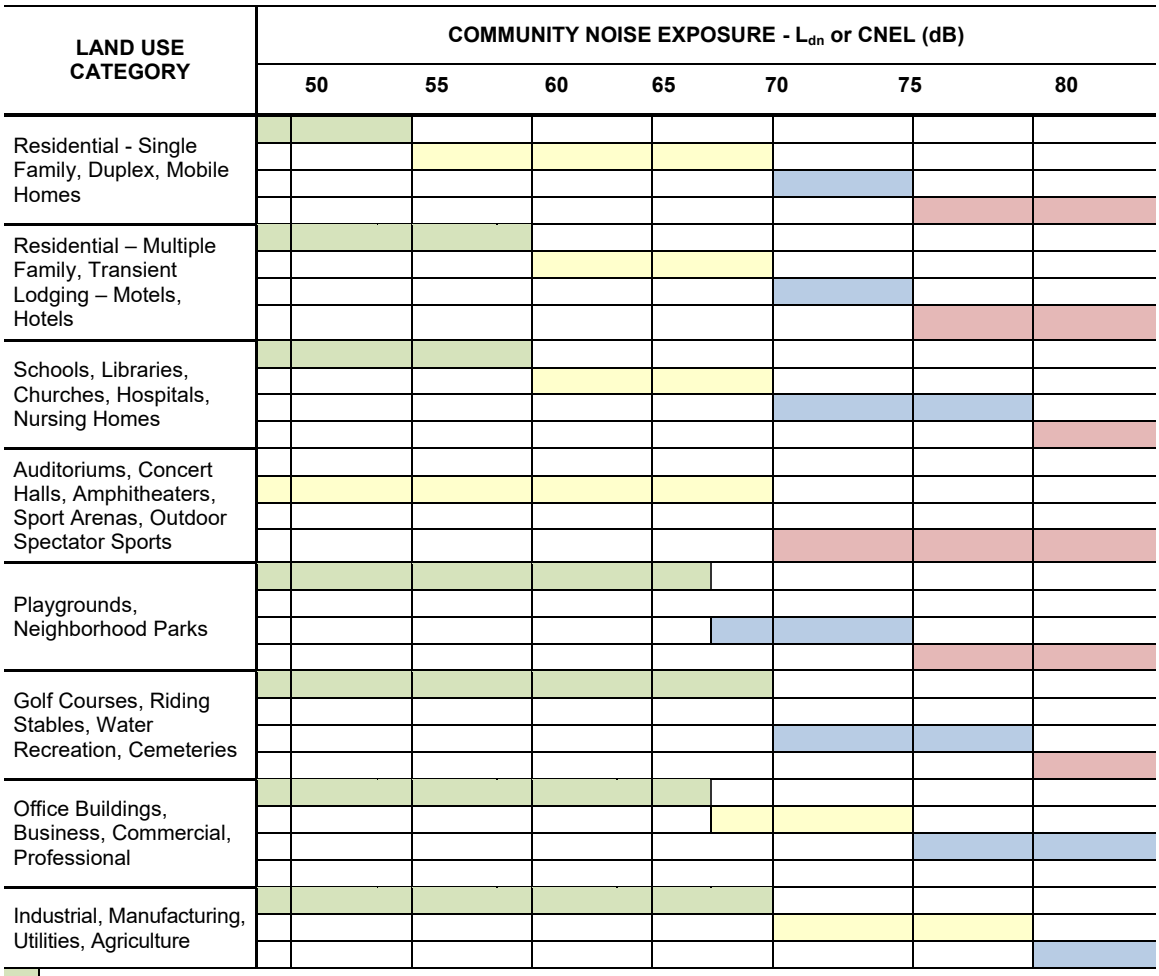
The Noise Element of Mountain View 2030 General Plan, adopted in 2012, includes land use compatibility standards which outline acceptable outdoor noise environment standards for various land use categories, as shown below in **Table 4.11-4**. For multi-family residential uses, ambient noise environments are considered “normally acceptable” if below 60 dBA L_{dn}, “conditionally acceptable” between 60 and 70 dBA Ldn, “normally unacceptable” between 70 and 75 dBA L_{dn}, and “clearly unacceptable” above 75 dBA L_{dn} (City of Mountain View, 2012).

The 2030 General Plan also identifies goals, policies and actions that the City shall implement during the environmental review of projects in order to minimize noise throughout the community. Goals and Policies in the Noise Element that are applicable to the proposed Project are as follows:

Goal NOI-1: Noise levels that Support a High Quality of Life in Mountain View.

Policy NOI 1.1: Land Use Compatibility. Use the Outdoor Noise Environment Guidelines as a guide for planning and development decisions (Table 4.11-4)

TABLE 4.11-4
ACCEPTABLE NOISE LEVELS



	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 are 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 clearly should not be undertaken.

SOURCE: City of Mountain View, 2012

Policy NOI 1.2: Noise-sensitive Land Uses. Monitor Require new development of noise-sensitive land uses to incorporate measures into the project design to reduce interior and exterior noise levels to the following acceptable levels:

- New single-family developments shall maintain a standard of 65 dBA L_{dn} for exterior noise in private outdoor active use areas.
- New multi-family residential developments shall maintain a standard of 65 dBA L_{dn} for private and community outdoor recreation use areas. Noise standards do not apply to private decks and balconies in multi-family residential developments.
- Interior noise levels shall not exceed 45 dBA L_{dn} in all new single-family and multi-family residential units.
- Where new single-family and multi-family residential units would be exposed to intermittent noise from major transportation sources such as train or airport operations, new construction shall achieve an interior noise level of 65 dBA through measures such as site design or special construction materials. This standard shall apply to areas exposed to four or more major transportation noise events such as passing trains or aircraft flyovers per day.

Policy NOI 1.3: Exceeding acceptable noise thresholds. If noise levels in the area of a proposed project would exceed normally acceptable thresholds, the City shall require a detailed analysis of proposed noise reduction measures to determine whether the proposed use is compatible. As needed, noise insulation features shall be included in the design of such projects to reduce exterior noise levels to meet acceptable thresholds, or for uses with no active outdoor use areas, to ensure acceptable interior noise levels.

Policy NOI 1.4: Site Planning. Use site planning and project design strategies to achieve the noise level standards in NOI 1.1 (Land use compatibility) and in NOI 1.2 (Noise-sensitive land uses). The use of noise barriers shall be considered after all practical design-related noise measures have been integrated into the project design.

Policy NOI 1.5: Major Roadways. Reduce the noise impacts from major arterials and freeways.

Policy NOI 1.6: Sensitive Uses. Minimize noise impacts on noise-sensitive land uses, such as residential uses, schools, hospitals and child-care facilities.

Policy NOI 1.7: Stationary Sources. Restrict noise levels from stationary sources through enforcement of the Noise Ordinance.

Policy NOI 1.8: Moffett Federal Airfield. Support efforts to minimize noise impacts from Moffett Federal Airfield in coordination with Santa Clara County's Comprehensive Land Use Plan.

City of Mountain View Municipal Code

The City of Mountain View addresses noise regulations to help protect the community from exposure to excessive noise and also specify how noise is measured and regulated. The City's codes address noise issues and protect the community from exposure to excessive noise from sources such as construction activity, animals, amplified sound and stationary equipment. These

codes specify how noise is measured and regulated. The City's Zoning Ordinance also includes noise regulations and standards for uses such as drive-in and drive-through sales, commercial, and industrial land uses and sensitive uses, such as child-care centers. In addition, noise is regulated through project conditions of approval. The Mountain View Police Department and the City Attorney's office enforce noise violations.

Section 8.70.1 of the City's Municipal Code restricts the hours of construction activity to 7:00 a.m. to 6:00 p.m., Monday through Friday. No construction activity is permitted on Saturday, Sunday, or holidays without written approval from the City. Authorized land uses and construction activity established through the discretionary land use permit process may be subject to specific noise conditions of approval that may be more restrictive. Construction activities are defined to include any physical activity on the construction site or in the project's staging area, including the delivery of materials.

Section 21.26 of the City's Municipal Code establishes quantitative noise level limits on noise from stationary equipment (such as heating, ventilation, and air conditioning mechanical systems, and air compressors). The maximum allowable noise level is 55 dBA during the day and 50 dBA at night (10:00 p.m. to 7:00 a.m.) at a residential receiving property, unless it has been demonstrated that such operation will not be detrimental to the health, safety, peace, morals, comfort or general welfare of the residents subjected to such noise, and the use has been granted a permit by the Zoning Administrator.

4.11.4 Existing Conditions

4.11.4.1 Existing Noise Environment

The Project is located approximately 300 feet southwest of U.S. 101, bounded by North Shoreline Boulevard, Terra Bella Avenue, Linda Vista Avenue, and the U.S. 101 southbound on-ramp. Moffett Federal Airfield and the Palo Alto Municipal Airport are located approximately 1.3 miles east and 3.7 miles north of the site.

The ambient noise environment at the Project site is predominantly controlled by vehicular traffic on U.S. 101 and North Shoreline Boulevard. Other noise sources in the area include occasional air traffic from the two airports. The Project site is within the Airport Influence Area, but outside the 2022 CNEL 60 dBA contour of the Moffett Federal Airfield (City of Mountain View, 2012) It is over 4,000 feet from an active railroad right-of-way used daily by Caltrain and freight trains.

To quantify the existing noise environment, a noise measurement survey was conducted by Charles M Salter Associates between February 21 – 27, 2019. The noise measurement survey consisted of four long-term noise measurements at locations shown in **Figure 4.11-2**. The meters measured continuous noise levels and recorded "loud" noise events, allowing for identification of the source of noise (e.g., truck noise, motorcycles, and plane flyovers). The noise monitors were placed at a height of 12 feet above grade. Short-term and pole measurements were also conducted to determine the change in noise levels at higher elevations. The measured noise levels are summarized in **Table 4.11-5**. The noise monitoring locations are shown in Figure 4.11-2.

SOURCE: Studio T Square; Charles M. Salter Associates, Inc.

Residences @ Shoreline Gateway Project

Figure 4.11-2
Noise Measurement Locations

ESA

TABLE 4.11-5
AMBIENT NOISE MEASUREMENT SURVEY

Monitor	Location		Hourly L_{eq}[a]	DNL
LT-1	Approximately 320 feet southwest of U.S 101 centerline and 325 feet east of N Shoreline centerline		66	73
LT-2	Approximately 25 feet west of centerline of Linda Vista Avenue		61	68
LT-3	Approximately 25 feet south of centerline of Terra Bella Avenue		61	68
LT-4	Approximately 55 feet west of N Shoreline Boulevard centerline		70	76
ST-1A	Northeast corner of Proposed Block A building approximately 340 feet southwest of U.S. 101 centerline and 325 feet east of N Shoreline Boulevard centerline – monitor placed 5 feet above ground	5 feet height	65	68
ST-1B		35 feet height	73	76
ST-2A	Northeast corner of proposed Block B building approximately 155 feet west of Linda Vista centerline	5 feet height	61	64
ST-2B		35 feet height	68	71

NOTE:
[a] Hourly L_{eq} for the long-term monitoring locations is a 24-hour average of the hourly L_{eq} measured over the day.

SOURCE: Charles Salter Associates, 2019

In addition, the typical maximum instantaneous noise level ($L_{max}30$[1]) from airplane pass by events was 77 dB at monitor LT-3. Train noise was not a component of the existing noise environment, as the nearest train tracks are over 4,000 feet away (Charles Salter Associates, 2019).

4.11.4.2 Sensitive Receptors

Some land uses are considered more sensitive to ambient noise levels than others because of the amount of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities typically involved for those uses. Residences, schools, rest homes, hospitals, and churches are generally more sensitive to noise than commercial and industrial land uses.

The closest sensitive receptors to the proposed project site is a single-family home (in a commercially zoned area along Linda Vista Avenue) about 200 feet southeast of the project site. Other sensitive receptors include residences in the townhome developments approximately 700 feet south of the project site.

[1] L_{max30} (Typical Maximum Sound Level) – There is no standardized metric to quantify "typical" maximum sound levels in an environment (instead of the absolute maximum sound level for a measurement period). The metric L_{max30} comes from a paper by Rob Greene ("Max Level Intrusive Noise Limit: 1982 National Conference on Environmental and Occupational Noise"). It is based on the logarithmic average of the noisiest 30 percent of single events (e.g., train and aircraft pass by events).

4.11.5 Noise and Vibration Impacts

4.11.5.1 Significance Criteria

Consistent with Appendix G of the State CEQA *Guidelines*, the Project would cause significant adverse impacts with respect to noise and/or ground-borne vibration if it would result in:

a) Generation of 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, noise ordinance, or applicable standards of other agencies;

b) Generation of excessive ground-borne vibration or ground-borne noise levels.

c) Exposure of people residing or working in the Project area to excessive noise levels 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.

CEQA does not define what noise level increase would be considered substantial. Typically, project generated noise level increases of three dBA L_{dn} or greater would be considered significant where exterior noise levels would exceed the normally acceptable noise level standard (60 dBA L_{dn} for residential land uses). Where noise levels would remain at or below the normally acceptable noise level standard with the project, noise level increases of five dBA L_{dn} or greater would be considered significant.

The following criteria were used to evaluate environmental noise in accordance with the thresholds listed above:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards presented in the General Plan or Municipal Code.
- A significant impact would be identified if the construction of the project would expose persons to excessive vibration levels. Ground-borne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in cosmetic damage to modern buildings.
- A significant impact would be identified if traffic generated by the project would substantially increase noise levels at sensitive receivers in the vicinity. A substantial increase would occur if: a) the noise level increase is five (5) dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or b) the noise level increase is three (3) dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater.
- A significant noise impact would be identified if construction-related noise would temporarily increase ambient noise levels at sensitive receptors. Hourly average noise levels exceeding 60 dBA L_{eq}, the acceptable exterior noise level for residential uses and the ambient by at least five (5) dBA L_{eq}, would constitute a significant temporary noise increase at adjacent residential land uses.

As previously discussed in Section 4.0, on December 17, 2015, the California Supreme Court issued an opinion in "CBIA vs. BAAQMD" holding that CEQA is primarily concerned with the impacts of a project on the environment and generally does not require agencies to analyze the impact of existing conditions on a project unless the project could exacerbate the existing environmental hazards or risks. Nevertheless, the City has policies and regulations that address

existing conditions affecting a proposed project. The City has, therefore, included information regarding the Project's exposure to ambient noise levels as a General Plan consistency analysis and planning considerations relating to these policies and regulations.

4.11.5.2 Approach to Analysis

This noise impact analysis evaluates the temporary noise increases associated with Project construction activities, operational noise generated by sound-generating equipment (e.g., HVAC condensers, ventilation fans), traffic noise associated with Project-related changes in traffic patterns, and exposure of Project residents to noise.

Estimates of construction noise are based on reference noise levels published by the FTA for various pieces of construction equipment, and the distance to nearby noise-sensitive receptors. Reference noise levels from the FTA's *Noise and Vibration Impact Assessment* were used to estimate noise levels at nearby sensitive receptors using Federal Highway Administration (FHWA)'s Roadway Construction Noise Model (RCNM). Construction noise level estimates do not account for the presence of intervening structures or topography, which could reduce noise levels at receptor locations. Therefore, the estimated construction noise levels represent a conservative estimate of actual construction noise at receptor locations.

The City of Mountain View has not adopted significance thresholds specific to groundborne vibration. The construction vibration analysis presented below is based on an assessment of vibration levels generated by construction equipment at offsite structures in comparison to the FTA's construction vibration damage criteria shown in Table 4.11-2.

Noise impacts associated with increased traffic volumes generated by the Project were evaluated for the existing, existing plus Project, cumulative no Project, and cumulative plus Project conditions, using algorithms from the FHWA traffic noise model. This modeling calculates the traffic noise levels at a fixed distance from the centerline of a roadway based on the traffic volume, speed, and truck percentage that is predicted to occur under each condition. The traffic data used in this analysis were based on the Transportation Impact Analysis for the Project prepared by Hexagon Transportation Consultants, Inc. (**Appendix K**). Traffic noise was evaluated in terms of how Project-related traffic noise increases could affect existing noise-sensitive land uses and how the Project could be affected by noise from traffic on existing roadways.

Operational noise impacts associated with the proposed onsite activities and stationary sources are evaluated based on the proposed layout and distance to nearby receptors. Noise levels from typical stationary equipment at multi-family residential buildings (i.e., HVAC units) were estimated at the nearest noise sensitive receptors using a standard noise attenuation rate of 6 dBA per doubling of distance for point sources. Attenuated noise estimates at the receptors were compared to the City's noise standards for stationary equipment: 55 dBA during the day and 50 dBA at night.

4.11.5.3 Topics with No Impact or Otherwise Not Addressed in This EIR

Based on a review and comparison of the setting circumstances and proposed Project for each of the three significance criteria stated in Section 4.11.4.1, it can be concluded that no impacts associated

with noise would result with respect to Criterion c). The Project site is located within 2 miles of Moffett Federal Airfield. However, based on the 2022 noise contours for the airport contained in the City's General Plan, the Project site though located within the aircraft noise impact zone, would be located outside the 60 dBA CNEL noise contour (City of Mountain View, 2012). The Project site is not in the vicinity of a private airstrip. Therefore, the Project would not expose people residing or working in the Project area to excessive noise levels from aircraft operations. Therefore, the potential for impacts from aircraft operations will not be discussed further.

4.11.5.4 Discussion of Impacts and Mitigation Measures

Construction Noise Impacts

Impact NOI-1: Construction of the Project would result in a temporary increase in ambient noise levels. (Criteria a) (*Less Than Significant, No Mitigation Required)*

The Project involves demolition of the existing surface parking lots to allow for development of two residential buildings and a parking structure on these areas of the site. Construction of the two Project buildings could happen simultaneously, or could be sequenced. The sequenced construction of Block B followed by Block A would occur from the years 2020-2023, while simultaneous construction of Blocks A and B would occur from the years 2020-2021.

Construction of the Project would intermittently generate high noise levels at, and adjacent to, the Project site. Demolition of the existing surface parking lots, grading and excavation, and building construction would involve the use of construction equipment that generate substantial noise. Noise impacts from construction activity would depend on the type of activity being undertaken and the distance to the receptor location. Construction noise impacts are most severe if construction activities take place during the noise sensitive hours (early morning, evening, or nighttime hours), in areas immediately adjoining noise-sensitive land uses, or when construction duration lasts over extended periods of time.

Demolition, grading and site preparation would require earth moving/excavating and compacting equipment such as backhoes, bulldozers, front loaders, rollers, scrapers, graders and water trucks. These activities are anticipated to be the loudest construction phases of the Project, mainly due to the use of larger off-road equipment which would be operated for longer periods of time as compared to later construction phases. Construction activities known to generate extreme noise levels such as impact pile driving and blasting would not be required for the Project (**Appendix H**).

The operation of each piece of off-road equipment within the Project site would not be constant throughout the day, as equipment would be turned off when not in use. Over a typical work day, equipment would be operating at different locations within the Project site and would not always be operating concurrently. However, for a more conservative approximation of construction noise levels the closest sensitive receptor would be exposed to, it is assumed for this analysis that two of the loudest pieces of construction equipment would be operating at the same time and location at the Project site boundary closest to the offsite sensitive receptor.

Table 4.11-6 shows typical noise levels produced by various types of construction equipment that are expected to be used for Project construction.

TABLE 4.11-6
TYPICAL NOISE LEVELS FROM CONSTRUCTION EQUIPMENT

Type of Equipment	L_{max}, dBA
Backhoe	80
Dozer	85
Excavator	85
Grader	85
Concrete Mixer Truck	85
Loader	80
Pneumatic Tools	85
Generator	82
Air Compressor	80
Chain Saw	85

SOURCE: FHWA, 2017

Project construction activity would generate temporary noise impacts at the nearest noise-sensitive receptors at the single-family residence on Linda Vista Avenue (200 feet southeast of the Project site). Additional receptors are located farther away south of Moonbeam Avenue along Linda Vista Avenue, approximately 700 feet from the Project site and would be affected to a lesser extent. Using the reference noise levels provided in Table 4.11-6, an excavator and grader (two noisiest pieces of equipment) running at the same time and location could generate a maximum noise level of 88 dBA at a distance of 50 feet. This noise level would attenuate to 66.8 dBA, L_{eq} at sensitive receptors nearest to the Project site assuming attenuation algorithms and equipment usage factors in the FHWA's RCNM. Though this would exceed the existing ambient noise level of 66 dBA (based on the measured value at LT-3 nearby), the increase would be less than 5 dBA L_{eq} over the two-year construction period.

Adherence to the City's allowable construction hours would restrict impacts to the less sensitive daytime hours between 7 a.m. and 6 p.m. on weekdays, with no construction activity on Saturdays, Sundays, or holidays. In addition, the following City of Mountain View Standard Conditions of Approval would be required of the Project which would further reduce construction noise levels:

> ***Standard Condition PL-106 (Construction Noise Reduction Measures):*** The following noise reduction measures shall be incorporated into construction plans and contractor specifications to reduce the impact of temporary construction-related noise on nearby properties:
>
> 1. Comply with manufacturer's muffler requirements on all construction equipment engines and ensure exhaust mufflers are in good condition;
> 2. Turn off construction equipment when not in use, where applicable;

3. Locate stationary equipment, such as air compressors or portable power generators, construction staging areas, and construction material areas, as far as practical from sensitive receptors;
4. Use temporary sound barriers or sound curtains around loud stationary equipment if the other noise reduction methods are not effective or possible and when located near adjoining sensitive land uses;
5. Shroud or shield impact tools and use electric-powered rather than diesel-powered construction equipment; and
6. Route all construction traffic via designated truck routes where possible and prohibit construction related heavy truck traffic in residential areas where feasible.

Standard Condition PL-111 (Construction Work Hours): No work shall commence on the job site prior to 7:00 a.m. nor continue later than 6:00 p.m., Monday through Friday, nor shall any work be permitted on Saturday or Sunday or any holiday unless prior approval is granted by the Chief Building Official. At the discretion of the Chief Building Official, the general contractor or the developer may be required to erect a sign at a prominent location on the construction site to advise the subcontractor and material suppliers of the working hours. Violation of this condition of approval may be subject to the penalties outlined in Section 8.6 of the City Code and/or suspension of building permits.

Standard Condition PL-112 (Construction Parking Management Plan): The applicant shall prepare a construction parking management plan to address parking demands and impacts during the construction phase of the Project. The construction parking management plan shall be subject to review and approval by the Zoning Administrator prior to the issuance of building permits.

Standard Condition PL-113 (Notice of Construction): The applicant shall notify neighbors within 300' of the project site of the construction schedule in writing, prior to construction. A copy of the notice and the mailing list shall be submitted prior to issuance of building permits.

Standard Condition PL-114 (Disturbance Coordinator): The project applicant shall designate a "disturbance coordinator" who will be responsible for responding to any local complaints regarding construction noise. The coordinator (who may be an employee of the general contractor) will determine the cause of the complaint and will require that reasonable measures warranted to correct the problem be implemented. A telephone number of the noise disturbance coordinator shall be conspicuously posted at the construction site fence and on the notification sent to neighbors adjacent to the site. The sign must also list an emergency after-hours contact number for emergency personnel.

With required implementation of these construction best management practices and adherence to the City's allowed hours of construction, the Project would have a less than significant impact from construction noise.

Significance: Less Than Significant.

Mitigation: None required.

Vibration Impacts

Impact NOI-2: Project construction would not generate excessive ground-borne vibration. (Criterion b) (*Less Than Significant Impact, No Mitigation Required*)

Construction activity can result in varying degrees of groundborne vibration, depending on the type of soil, equipment and methods employed. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings founded on the soil near the construction site respond to these vibrations with varying results, ranging from no perceptible effects at the lowest levels, low rumbling sounds and perceptible vibrations at moderate levels, and slight damage at the highest levels. While ground vibrations from construction activities do not often reach the levels that can damage structures, fragile buildings must receive special consideration. Therefore, the construction vibration criteria include consideration of the condition of nearby buildings.

Project construction activities would include demolition of existing surface parking lots, excavation, site preparation work, foundation work, and new building, framing, and finishing. Construction activities may generate perceptible vibration when heavy earth moving equipment or impact tools are used. Pile driving can cause excessive vibration. However, as noted above, pile driving would not be required as part of construction of the Project.

As discussed under *Significance Threshold*s, a significant impact would be identified if construction of the Project would expose modern structures to ground-borne vibration levels in excess of 0.3 in/sec PPV, the level at which there could be potential cosmetic damage to normal buildings. This is consistent with the FTA's vibration damage criteria shown in Table 4.11-2.

Based on groundborne vibration levels for standard types of construction equipment provided by the FTA, the use of a vibratory roller would be expected to generate the highest vibration levels during Project construction. Vibratory rollers typically generate vibration levels of 0.210 in/sec PPV at a distance of 25 feet (FTA, 2018). The closest existing off-site structure (commercial/ office building) is located approximately 25 feet from the eastern boundary of the Project site. Conservatively assuming a vibratory roller to be operating at the Project site boundary would still result in vibration levels less than 0.3 in/sec PPV at this closest offsite structure.

As explained under Impact NOI-1, the operation of each piece of construction equipment at the Project site would not be constant throughout the day, equipment would be operating at different locations within the Project site and would not always be operating concurrently. Consequently, vibration levels during the majority of the construction period at the nearest off-site building would be much lower. Therefore, the Project would have a less-than-significant impact with regard to ground-borne vibration.

Significance: Less Than Significant.

Mitigation: None required.

Operational Noise Impacts

Impact NOI-3: Project operations would not cause a long-term increase in ambient noise levels in the Project site vicinity. (Criterion a) (*Less Than Significant, No Mitigation Required*)

Long-term noise sources associated with Project operations would consist of Project-generated automobile traffic and operation of stationary sources such as HVAC systems in Project buildings.

Traffic Noise

Once operational, the Project would generate additional vehicle trips to the Project area resulting in an increase in traffic along the roadway network in and around the area. This would increase noise levels along roadway segments and intersections leading to the area as well as within the Project area. As discussed under *Significance Thresholds*, a significant increase in traffic noise would occur if traffic generated by the Project would increase noise levels at sensitive receivers in the vicinity by 5 dBA L_{dn} or greater, with a future noise level of less than 60 dBA L_{dn}, or if the noise level increase is 3 dBA L_{dn} or greater, with a future noise level of 60 dBA L_{dn} or greater. As measured ambient noise levels in the Project area are above 60 dBA L_{dn}, a traffic related ambient noise increase of 3 dBA or more would be considered a significant impact, where sensitive receptors are located along affected roadway segments.

Traffic noise levels along roadway segments most affected by Project traffic were determined using algorithms of the FHWA Traffic Noise Prediction Model Technical Manual and evening peak hour turning movements in the traffic section for Existing, Existing plus Project, Cumulative (2023) No Project and Cumulative Plus Project (2023) conditions (see Section 4.13, *Transportation*, and Appendix K). Intersections selected for analysis were based on the Project's contribution to traffic at the intersection and the presence of sensitive receptors in the vicinity. The segments analyzed and the modeled noise increases along these segments are shown in **Table 4.11-7**, below.

The increase in traffic noise from the Existing plus Project scenario compared to the Existing scenario would be less than 3 dBA at all studied roadway segments and would therefore be a less than significant impact with respect to traffic noise along these roadway segments.

Noise from other Operational Sources

Project buildings would include mechanical equipment, such as air conditioning, heating systems, exhaust fans, etc. Such mechanical equipment would be located on building rooftops and would be enclosed within screening structures to reduce visual and noise impacts. The exact number and type of units, as well as noise level information for the equipment, are not known at the time of this analysis. However, the Project would be subject to the following City Standard Condition of Approval to ensure that impacts from mechanical equipment noise would be less than significant. This condition would be implemented during the building permit process where a project-specific acoustical analysis would be required as part of the permit application. Implementation of this Standard Condition of Approval would ensure that noise impacts associated with mechanical equipment would be less than significant.

TABLE 4.11-7
PEAK-HOUR TRAFFIC NOISE LEVELS (DBA) NEAR THE PROJECT[a,b]

Roadway Segment	Existing	Existing Plus Project	Difference between Existing Plus Project and Existing	Cumulative No Project (2023)	Cumulative Plus Project (2023)	Difference between Cumulative Plus Project and Existing	Difference between Cumulative Plus Project and Cumulative No Project
Shoreline Boulevard							
N of U.S. 101 SB Ramps	71.4	71.4	0	72.3	72.4	+1.0	+0.1
S of U.S. 101 SB Ramps	70.2	70.3	+0.1	70.6	70.7	+0.5	+0.1
N of Terra Bella Ave	70.1	70.2	+0.1	70.5	70.7	+0.6	+0.2
S of Terra Bella Avenue	69.7	69.8	+0.1	70.2	70.3	+0.6	+0.1
N of Middlefield Road	69.6	69.7	+0.1	70.3	70.4	+0.8	+0.1
S of Middlefield Road	70.1	70.1	0	70.6	70.6	+0.5	0
Terra Bella Avenue							
E of Shoreline Blvd.	60.9	62.9	+2.0	61.7	63.4	+2.5	+1.7
W of Shoreline Blvd.	60.9	60.9	0	61.8	61.8	+1.9	0
Middlefield Road							
E of Shoreline Blvd.	69.0	69.0	0	69.7	69.7	+0.7	0
W of Shoreline Blvd.	68.4	68.5	+0.1	69.1	69.2	+0.8	+0.1

NOTES:
[a] Noise levels were determine using methodology described in FHWA Traffic Noise Model Technical Manual.
[b] Traffic noise increases greater than 3 dB is considered a significant increase in ambient noise levels.

Standard Condition PL-103 (Mechanical Equipment): The noise emitted by any mechanical equipment shall not exceed a level of 55 dBA during the day or 50 dBA during the night, 10:00 p.m. to 7:00 a.m., when measured at any location on the adjoining residentially used property.

Significance: Less Than Significant.

Mitigation: None required.

Noise Exposure to Project Receptors

Impact NOI-4: Occupants of the proposed residences in Project buildings would not be exposed to ambient noise levels in excess of standards established in the City's General Plan. (Criteria a) (*Less than Significant Impact, No Mitigation Required*)

The Project would construct 303 new multi-family residential units on the project site that would be exposed to ambient noise. As discussed above under Regulatory Setting, the City's General Plan 2030 has established outdoor noise environment guidelines for different land use categories and are applicable to new development within Mountain View. These standards are based on noise levels that do not interfere with people's activities or threaten their well-being. For new

multi-family residential uses, ambient noise environments are considered "normally acceptable" if below 60 dBA L_{dn}, "conditionally acceptable" between 60 and 70 dBA L_{dn}, "normally unacceptable" between 70 and 75 dBA L_{dn}, and "clearly unacceptable" above 75 dBA L_{dn} (City of Mountain View, 2012). In addition, Policy NOI 1.2 in the General Plan sets a standard of 65 dBA L_{dn} for outdoor active use areas and an interior noise standard not to exceed 45 dBA L_{dn} in all new multi-family residential units, consistent with the California Building Code. Exterior noise standards do not apply to private decks or balconies of multi-family developments.

An Environmental Noise Study for the Project was conducted by Charles M Salter Associates to determine the noise environment at the Project site, compare the measured data with applicable standards, and propose measures as necessary, to comply with standards (Charles Salter Associates, 2019). Table 4.11-5 shows the measured existing ambient noise levels at the Project site. With the addition of traffic generated by the Project, future noise level at the planned setback of the Project buildings is estimated to range from under 60 dBA, L_{dn} in the courtyards (located at the Podium level of both Project buildings) to approximately 78 dBA, L_{dn} closest to U.S. 101 (Charles M Salter Associates, 2019). Noise that reaches the courtyards would attenuate due to shielding provided by the Project structures and surrounding buildings in addition to increased setback distance from the roadways. While the noise level in the courtyards would be consistent with the General Plan's exterior noise standards for outdoor active use areas, the Project would need to incorporate noise reduction measures into the design to meet the City's indoor noise goals.

The Environmental Noise Study (included as Appendix J) concluded that the Project would be able to meet the interior noise standard of 45 dBA L_{dn} in living spaces and the CALGreen criterion of 50 dBA hourly L_{eq} in commercial spaces by using sound rated windows and doors, and upgraded exterior wall assemblies in locations most exposed to noise from U.S. 101. Exterior skin assemblies selected to meet these requirements would also reduce interior noise from individual aircraft to meet the maximum noise level requirement of Lmax30 65 dBA. The Environmental Noise Study provides details of recommended window and exterior door Sound Transmission Class (STC)[2] ratings needed to meet the interior noise standard of 45 dBA Ldn based on current Project plans (see Appendix J).

However, while the current Project design along with assumptions made show that the recommended ratings would be adequate to meet the standards, it is possible that higher or lower STC ratings and associated design refinement may be warranted based on the final Project designs. Further, according to the Environmental Noise Study, Project windows would need to be closed to meet the interior noise criteria. The final mechanical design for the Project would need to take into account the ventilation requirements with windows in the closed position, and the ventilation system would need to be designed such that it would not compromise sound insulation of the building shell.

The specific approach to meeting the interior noise standards and providing proper ventilation with the windows in the closed position would need to be reviewed by the City and potentially refined during the final design phase. The Project would be subject to the following City Standard

[2] Sound Transmission Class (STC) is an integer rating of how well a building partition attenuates airborne sound. It is widely used to rate interior partitions, ceilings and floors, doors, windows and exterior wall configurations.

Conditions of Approval, which would ensure review of final Project designs is undertaken and refined, as needed, by a qualified acoustical consultant prior to issuance of a building permit for the Project. These City Standard Conditions of Approval would ensure that interior noise standards are met and that occupants of the proposed residences in Project buildings would not be exposed to ambient noise levels in excess of standards established in the City's General Plan.

> ***Standard Condition PL-105 (Interior Noise Levels):*** Construction drawings must confirm that measures have been taken to achieve an interior noise level of 45 dBA L_{dn} that shall be reviewed and approved by a licensed acoustical engineer prior to building permit submittal.
>
> ***Standard Condition PL-107 (Site-Specific Building Acoustical Analysis):*** A qualified acoustical consultant will review final site plans, building elevations, and floor plans prior to construction to calculate expected interior noise levels as required by State noise regulations. Project-specific acoustical analyses are required by the California Building Code to confirm that the design results in interior noise levels reduced to 45 dBA L_{dn} or lower. The specific determination of what noise insulation treatments are necessary will be completed on a unit-by-unit basis. Results of the analysis, including the description of the necessary noise control treatments, will be submitted to the City along with the building plans, and approved prior to issuance of a building permit. Building sound insulation requirements will include the provision of forced-air mechanical ventilation for all residential units as recommended by the qualified acoustical consultant, so that windows can be kept closed at the occupant's discretion to control noise.
>
> Special building techniques (e.g., sound-rated windows and building facade treatments) will be implemented as recommended by the qualified acoustical consultant, to maintain interior noise levels at or below acceptable levels. These treatments will include, but are not limited to, sound-rated windows and doors, sound-rated wall construction, acoustical caulking, protected ventilation openings, etc.
>
> **Significance:** Less Than Significant.
>
> **Mitigation:** None required.

Cumulative Impact Analysis

Geographic Context

The geographic scope of analysis for cumulative noise and vibration impacts encompasses sensitive receptors within approximately 500 feet of the proposed Project site. Beyond 500 feet, the contributions of noise from other projects would be greatly attenuated through both distance and intervening structures, and their contribution would be expected to be minimal.

Cumulative Noise and Vibration Impacts

Cumulative Construction Noise

Impact C-NOI-1: Project construction activities combined with cumulative construction noise in the vicinity of the Project site would not cause a substantial temporary or periodic increase in ambient noise levels in the Project site vicinity during construction. (*Less than Significant Impact, No Mitigation Required*)

Table 4.0-1 in Section 4.0 summarizes reasonably foreseeable future projects in the vicinity of the Project site that have either been approved or are under review. Of the projects listed, the two office development projects on Terra Bella Avenue (1075 and 1185 Terra Bella Avenue) would contribute to cumulative construction noise impacts in the Project vicinity as they are located within 200 feet south of the Project site. In addition, the nearest receptor to the Project on Linda Vista Avenue would also be the most affected receptor from construction noise from these two projects.

When and if construction activities associated with the Project take place simultaneously as the projects on Terra Bella Avenue, nearby sensitive receptors on Linda Vista Avenue would be exposed to higher levels of construction noise than from the Project alone. The two cumulative projects on Terra Bella Avenue are closer to the affected receptor and would have a bigger contribution to the noise environment at the receptor. As discussed under Impact NOI-1, construction noise due to the Project at the receptor would be 66.8 dBA (without taking into account any reductions from the implementation of the City's standard conditions of approval), imperceptibly above the measured existing ambient noise level of 66 dBA in the area. Therefore, the Project's contribution to cumulative noise at the receptor would be minimal and not considered cumulatively considerable even if Project construction were to coincide with the two cumulative projects on Terra Bella Avenue. Other approved projects or projects under review listed in Table 4.0-1 are located at least 0.3 miles from the Project site and are not expected to contribute to the cumulative noise environment at and around the Project site. Further, all projects would be subject to the City's standard conditions of approval which would reduce cumulative noise in the Project area. With implementation of the required standard conditions of approval, cumulative noise from construction in the Project area and at affected receptors would be less than significant.

Significance: Less than Significant

Mitigation: None required.

Cumulative Operational Noise

Impact C-NOI-2: Traffic associated with the Project when considered with other cumulative development would not cause a substantial permanent increase in ambient noise levels in the Project vicinity. (*Less Than Significant Impact, No Mitigation Required*)

The geographic area considered for cumulative noise analysis includes areas surrounding the Project Area and roadways examined in the transportation analysis in Section 4.13, *Transportation*.

Long-term noise from cumulative development, which includes the Project combined with past, present, pending, and reasonably foreseeable development in the area, would primarily occur from motor vehicle traffic. When considered alone, the Project would generate long-term noise mainly by adding more traffic to the area. Other anticipated projects would also contribute to noise in the area due to increased traffic volumes. Notably, any project that would individually have a significant project level noise impact would also be considered to have a significant cumulative noise impact.

As noted under Significance Thresholds, a traffic related noise increase of 3 dBA or more above levels existing without the Project would be considered to generate a significant impact. Traffic noise levels at intersections most impacted by Project traffic were modeled using algorithms from the FHWA Traffic Noise Prediction Model and the turning movements for Cumulative No Project and Cumulative plus Project (2023) conditions. The segments analyzed and the results of the noise modeling are also shown in Table 4.11-7 for Cumulative No Project and Cumulative plus Project traffic, which includes Project traffic combined with traffic from other approved or pending projects by the cumulative year.

As shown in Table 4.11-7, the increase in peak hour traffic noise between Existing and Cumulative Plus Project scenario would be less than 3 dBA at all analyzed roadway segments. Consequently, the proposed Project's cumulative roadside noise impact would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

4.11.6 Summary of Noise and Vibration Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact NOI-1: Construction of the Project would result in a temporary increase in ambient noise levels.	Less than Significant	None required	-
Impact NOI-2: Project construction would not generate excessive ground-borne vibration.	Less than Significant	None required	-
Impact NOI-3: Project operations would not cause a long-term increase in ambient noise levels in the Project site vicinity.	Less than Significant	None required	-
Impact NOI-4: Occupants of the proposed residences in Project buildings would not be exposed to ambient noise levels in excess of standards established in the City's General Plan.	Less than Significant	None required	-
Impact C-NOI-1: Project construction activities combined with cumulative construction noise in the vicinity of the Project site would not cause a substantial temporary or periodic increase in ambient noise levels in the Project site vicinity during construction.	Less than Significant	None required	-
Impact C-NOI-2: Traffic associated with the Project when considered with other cumulative development would not cause a substantial permanent increase in ambient noise levels in the Project vicinity.	Less than Significant	None required	-

4.11.7 References – Noise and Vibration

Caltrans, 2013. *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. September 2013.

Charles M. Salter Associates, *Environmental Noise Study – The Residences at Shoreline Gateway*, April 29, 2019 (Appendix J).

City of Mountain View, 2012. *Mountain View 2030 General Plan: Noise Element*. Adopted July 10, 2012.

Federal Transit Administration (FTA), 2018. *Transit Noise and Vibration Impact Assessment Manual*, September 2018.

Rockridge Geotechnical, 2018. *Geotechnical Investigation – Proposed Mixed Use Development Residences at Shoreline Gateway - Phase II*, July 13, 2018 (Appendix H).

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4.12 Population and Housing

4.12.1 Introduction

This section identifies and evaluates the potential impacts related to population and housing that could result from the Project. The demographic information presented in this section provides the statistical basis for determining population-related inputs and/or impacts in other sections of this Draft EIR. In general, demographic data presented below is rounded according to significant digits, or rounded to the nearest tenth, unless otherwise indicated.

4.12.2 Existing Setting

4.12.2.1 Project Site

The Project site is located in the Moffett/Whisman Planning Area, in the north central portion of Mountain View, within U.S. Census Tract 5092.01. As of 2010, this Census tract had a population of approximately 4,603 living in approximately 2,263 households (U.S. Census, 2018). The Project site does not currently include housing or residents.

4.12.2.2 Regional and Local Setting

The population of the Bay Area, which consists of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties, was approximately 7.2 million in 2010. Population in the Bay Area is growing rapidly, with approximately 33.3 percent growth expected to occur from 2010 to 2040, from 7.2 million people to 9.6 million people (ABAG, 2017a).

Long-term projections for the City of Mountain View by the Association of Bay Area Governments (ABAG) indicate sizable growth of households and employment, as shown in **Table 4.12-1**. However, these rates generally fall short of those forecasted for growth for Santa Clara County and the Bay Area overall.

Population and Housing

Approximately 79,278 people were living in Mountain View in 2017, with approximately 35,595 housing units, and an average household size of 2.4 persons per household. The overall housing vacancy rate increased for the City of Mountain View between 2010 and 2017, from 5.7 percent in 2010, to 7.5 percent in 2017. The overall housing vacancy rate remained the same for Santa Clara County at 4.4 percent (DOF, 2017).

Population counts for 2010, 2017, and housing unit vacancies are presented in **Tables 4.12-2** for Santa Clara County and the City of Mountain View.

TABLE 4.12-1
ESTIMATED DEMOGRAPHIC DATA FOR CITY OF MOUNTAIN VIEW, SANTA CLARA COUNTY, AND BAY AREA – 2010 TO 2040

	2010	2040	Growth from 2010-2040
City of Mountain View			
Total households	32,000	58,300	**26,300**
Total employment	48,500	73,300	**24,800**
Santa Clara County			
Total households	604,300	860,900	**256,600**
Total employment	911,500	1,289,900	**378,300**
Bay Area[a]			
Total households	2,608,000	3,426,700	**818,700**
Total employment	3,422,800	4,698,400	**1,275,500**

NOTE:
[a] Includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties.
SOURCE: ABAG, 2017b.

TABLE 4.12-2
POPULATION AND HOUSING VACANCY, MOUNTAIN VIEW AND SANTA CLARA COUNTY – 2010 TO 2040

	Population		Housing Vacancy	
	2010	2017	2010	2017
City of Mountain View	74,066	79,278	**5.7%**	**7.5%**
Santa Clara County	1,781,642	1,938,180	**4.4%**	**4.4%**

SOURCE: DOF, 2017

Overall Relationship of Jobs and Housing

Jobs/housing balance evolves over time and reflects the role and location of particular areas within a larger regional context. The current and projected total numbers of jobs and employed residents in the City indicates that the jobs-housing ratio for the City has been, and is expected to be, imbalanced, at about 1.52 in 2010 and 1.26 projected in 2040. These ratios indicate that the growth of housing stock in the City is not occurring, or expected to occur, at a rate that matches existing and projected job growth in the City. This imbalance is similar to but larger than an existing projected imbalance between jobs and housing for Santa Clara County (1.51 in 2010 and 1.50 in 2040) (ABAG, 2017b).

4.12.3 Regulatory Setting

4.12.3.1 Regional and Local

Regional Housing Needs Allocation

On July 18, 2013, ABAG adopted the Final Regional Housing Need Plan (RHNP) for the period of 2015 to 2023. The RHNP outlines the Regional Housing Needs Allocation (RHNA), which allocates housing needs for communities within the nine-county Bay Area for an eight-year period. Cities and counties are required by State law to account for the RHNA in the housing elements of their General Plans.

The City's Housing Element discusses the City's "fair share allocation" of regional housing, as projected by ABAG and presented in the RHNA. For the 2015-2023 period, per the RHNA, the City of Mountain View is responsible for 2,926 new housing units, out of a total of 187,990 units identified as needed for the entire Bay Area for this period (ABAG, 2013).

City of Mountain View 2030 General Plan

The General Plan includes the following policy related to population and housing in Mountain View (City of Mountain View, 2012b):

> ***Policy LUD 3.2: Mix of Land Uses***. Encourage a mix of land uses, housing types, retail and public amenities, and public neighborhood open spaces accessible to the community.

City of Mountain View Housing Element

The City of Mountain View Housing Element 2015–2023 (City of Mountain View, 2014) includes plans and policies to address the housing needs of the City of Mountain View. The relevant policies are:

> ***Policy 1.3:*** Encourage a mix of housing types at a range of densities that serves a diverse population, including units serving both young and mature families, singles, young professionals, single-parent households, seniors, and both first-time and move-up buyers.
>
> ***Policy 1.4:*** Provide higher-density housing near transit, in downtown, near employment centers, and within walking distance of services.
>
> ***Policy 1.5:*** Support the development of both rental and ownership housing, serving a broad range of incomes, particularly extremely low-, very low-, and low-income households.
>
> ***Policy 1.6:*** Ensure new residential development integrates with and improves the character of existing neighborhoods.
>
> ***Policy 3.1:*** Maintain and improve housing in Mountain View to meet health, safety, fire, and other applicable codes and standards.
>
> ***Policy 3.2:*** Continue and/or create programs to maintain or improve the character and quality of existing housing and neighborhood environments.

> ***Policy 4.2:*** Provide incentives, such as reduced parking standards and/or flexibility in other development standards, to facilitate the development of housing that is affordable to lower and moderate-income households.

City of Mountain View Below-Market-Rate Housing Program

The City of Mountain View Municipal Code (City of Mountain View 2017) includes a Below-Market-Rate (BMR) Housing Program (Chapter 36, Article XIV, Division 2). The BMR Housing Program requires developers of residential projects with three or more ownership units or five or more rental units or mixed projects with six or more residential units to make at least 10 percent of the total number of dwelling units or parcels within the development BMR units or pay a fee in lieu thereof.

4.12.4 Population and Housing Impacts

4.12.4.1 Contributions to Citywide Growth from the Project

This section describes and quantifies the potential growth in population and households that could occur from development of the Project. The description of population changes that follows is included to provide context for considering and understanding potential physical environmental impacts associated with changes in housing and population that are analyzed later in this section and in other sections of this EIR (e.g., traffic, public services, and air quality).

Housing, Population, and Employment Growth

Buildout of the proposed Project would introduce residential growth. The Project would include up to 303 new housing units. Considering vacancy rates and persons per household, the new units are estimated to accommodate approximately 281 households, with 675 residents. If all housing units were occupied, the maximum residential population on the Project site would be approximately 728 residents. Estimates of potential housing and population growth are presented in **Table 4.12-3**. Additionally, the Project would include 3,000 square feet of retail space, which would generate approximately nine new employees.[1]

TABLE 4.12-3
PROJECT HOUSING DEVELOPMENT AND ESTIMATED DIRECT POPULATION GROWTH

Potential Development	Housing Units	Occupied Households[a]	Population[b]	Maximum Population[c]
Total (rounded to whole numbers)	303	281	675	728

NOTES:
[a] Assumes an average 7.5 percent vacancy factor.
[b] Assumes an average of 2.4 persons per household consistent with persons per household in the City.
[b] The maximum residential population assumes all housing units are occupied.

[1] Based on 2.8 employees per 1,000 square feet as derived from employment estimates for retail and restaurant use found in the 2017 North Bayshore Precise Plan SEIR (Appendix J) (City of Mountain View, 2017).

4.12.4.2 Significance Criteria

Consistent with Appendix G of the CEQA *Guidelines*, the Project would cause significant adverse impacts to population and housing if it would:

a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere;

4.12.4.3 Topics with No Impact or Otherwise Not Addressed in This EIR

The proposed Project would not result in significant impacts pursuant to Criterion b) (displacement of existing people or housing), listed above. The Project site currently does not include any housing, and the Project would not result in the displacement of any existing housing or people; therefore, the proposed Project would not result in an impact.

4.12.4.4 Population and Housing Impacts from the Project

Impact POP-1: The Project would not directly or indirectly induce substantial unplanned population growth. (Criterion a.) (*Less than Significant, No Mitigation Required)*

The Project would result in the construction of up to 303 new residential units on the Project site. As discussed above, this new development could induce population growth of up to 675 residents on the site as new homes are created. Additionally, the Project would include 3,000 square feet of retail space, which would generate approximately nine new employees.

Trends of growth for the City and the region presented in this section are based largely on regional projections data published by ABAG in its *Plan Bay Area 2040 Land Use Modeling Report*. ABAG's methodology considers existing and planned land use data provided by local jurisdictions (typically, assumptions underlying the jurisdictions' general plans) in formulating local and regional projections. ABAG estimates that between 2010 and 2040, approximately 26,300 new households would be established in the City of Mountain View, representing an 82.9 percent increase (ABAG, 2017b). The addition of 303 housing units associated with the Project would be within the anticipated housing growth through 2040 anticipated by ABAG.

Direct Inducement of Population Growth

The growth of households and population due to the development of the Project would contribute to population growth expected in the City of Mountain View, Santa Clara County, and the region. According to the EIR for the City's 2030 General Plan, buildout under the General Plan would theoretically allow for development of 8,790 new housing units for a total of 42,240 housing units in the City by 2030, and an increase in population of 14,504 to 88,570 total by 2030 (City of Mountain View, 2012a). The proposed Project would include an application for a General Plan Land Use Map amendment to change the land use designation of the site from General Industrial to General Mixed-Use, and to rezone the Project site, from General Industrial (MM) for the parcels to the east and Limited Industrial (ML) to Planned Community (P) for the entire site. The

new population associated with the Project would represent approximately 5 percent of the citywide population growth anticipated by the City's 2030 General Plan. While the Project site is not identified as a housing opportunity site in the Housing Element of City's 2030 General Plan, the Project's housing increase represents a small increment of the ABAG-projected growth within the City, which would not constitute substantial unplanned population growth. In addition, the site is an infill site served by existing infrastructure and public services. It should be noted that the addition of residential units on the site would incrementally benefit the City's jobs-housing imbalance. Therefore, the Project would support and facilitate the housing goals of the regional RHNA for the 2015-2023 period (i.e., establishment of 2,926 new housing units within the City).

The Project would also include 3,000 square feet of retail space, which would generate approximately nine new employees. The Project's employment increase represents a small increment of the ABAG-projected growth within the City (as shown in Table 4.12-1), which would not constitute substantial unplanned employment growth within the City.

The Project would incrementally expand residential and retail development in an area of Mountain View close to existing and planned job centers. Therefore, although the Project would result in population growth, it would not directly induce substantial unplanned population growth not previously contemplated in the City's 2030 General Plan, or in regional projections.

Indirect Inducement of Population Growth

Indirect inducement of growth may occur if the proposed Project could encourage or spur growth in areas outside of the Project site due to the construction of infrastructure – such as roads or utilities – that would open undeveloped areas to new growth, or stimulate additional growth in existing developed areas. As described in Chapter 3, *Project Description*, and in Section 4.15, *Utilities and Service Systems*, the Project would include new or upgraded water, sanitary sewer, and storm drain connections that would be installed within the Project site and would connect to existing utilities on the site or in the right of way of the adjacent streets. The Project site is within an already-developed area surrounded predominantly by industrial and office uses as well as residential uses within one block of the Project site The extension of infrastructure to the site to support the Project is not likely to induce other growth in the vicinity of the Project site. Therefore, the Project's impacts with respect to the indirect inducement of population growth would be less-than-significant.

Other Secondary and Temporary Effects of Growth

Construction of the proposed Project would require temporary construction employment. It is expected that most Project construction workers would come from the regional labor pool; thus, Project construction would not generate a permanent increase in population or cause a decrease in permanent housing availability. Because such employment would be limited to the period of construction, the duration of which would be relatively short. Long-term population growth is not likely to ensue because sufficient construction workers are available in the local labor force. Therefore, the impact with respect to secondary growth effects would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

Geographic Context

To encompass Mountain View's sphere of influence, the geographic context for the cumulative consideration of population and housing effects addresses citywide and regional growth, and includes the Project site and its surroundings, the City of Mountain View, and Santa Clara County. Section 4.0, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR includes a list of cumulative projects and plans.

Impact C-POP-1: Development of the Project, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, would not result in a significant impact on population and housing. (*Less Than Significant, No Mitigation Required*)

Significance Criterion a) (whether the Project would induce substantial population growth, directly or indirectly, such that additional infrastructure is required) is inherently a cumulative consideration, as it considers the Project growth relative to past, present and future data trends and plans. Much of the cumulative context is embedded in the *Plan Bay Area 2040* and the City's 2030 General Plan development forecasts as described above, and in the cumulative projects list (projects that are past, approved, pending, under construction) included in Table 4.0-1 in Section 4.0, *Introduction to the Environmental Analysis,* of this chapter. The analysis above is based on these projections, which take into account cumulative growth through 2040 for the geographic context described above.

As discussed above under Impact POP-1, development of the proposed Project would not contribute to substantial population growth. The addition of 303 housing units associated with the Project would be within the anticipated housing growth through 2040 anticipated by ABAG. The EIR for the City's 2030 General Plan (City of Mountain View, 2012a) assumes that there will be population growth in the City, including infill and redevelopment. The EIR for the 2030 General Plan also identified that the development of new housing units throughout the City would be supported and promoted by General Plan policies, which encourage the development of mixed uses and transit-oriented development. The new population associated with the Project would represent approximately five percent of the citywide population growth anticipated by the City's 2030 General Plan, and the Project's housing increase represents a small increment of the ABAG-projected growth within the City, which would not constitute substantial unplanned population growth.

When considered in combination with other cumulative development, growth from development under the proposed Project would not induce substantial additional population growth, nor displace substantial numbers of people or housing units.

Significance: Less Than Significant.

Mitigation: None required.

4.12.5 Summary of Population and Housing Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact POP-1: The Project would not directly or indirectly induce substantial unplanned population growth.	Less than Significant	None required	-
Impact C-POP-1: Development of the Project, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, would not result in a significant impact on population and housing.	Less than Significant	None required	-

4.12.6 References – Population and Housing

Association of Bay Area Governments (ABAG), 2017a. *Plan Bay Area 2040,* adopted July 26, 2017. Available at: http://2040.planbayarea.org/cdn/farfuture/u_7TKELkH2s3AAiOhCyh9Q9QlWEZIdYcJzi2QDCZuIs/1510696833/sites/default/files/2017-11/Final_Plan_Bay_Area_2040.pdf, accessed April 22, 2019.

ABAG, 2017b. *Plan Bay Area 2040 Final Supplemental Report, Land Use Modeling Report*, July 2017. Available at: http://2040.planbayarea.org/cdn/farfuture/gQd1_mgJUGbaxL1874Xco9fpCvy4oKcWPsFp3smWIoI/1500486087/sites/default/files/2017-07/Land_Use_Modeling_PBA2040_Supplemental%20Report_7-2017.pdf, accessed April 22, 2019.

ABAG, 2013. *Regional Housing Need Plan, San Francisco Bay Area, 2015-2023*. Adopted by ABAG Executive Board July 18, 2013. Available at: https://abag.ca.gov/planning/housingneeds/pdfs/2015-23_RHNA_Plan.pdf, accessed April 22, 2019.

California Department of Finance (DOF), 2017. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011 -2017, with 2010 Census Benchmark*. Accessed January 4, 2018.

City of Mountain View, 2017. *North Bayshore Precise Plan Draft Subsequent Environmental Impact Report*, Appendix J, Transportation Impact Analysis, March 2017.

City of Mountain View, 2014. *City of Mountain View 2015-2023 Housing Element*, adopted October 14, 2014.

City of Mountain View, 2012a. *City of Mountain View Draft 2030 General Plan and Greenhouse Gas Reduction Program Final Environmental Impact Report.* September, 2012.

City of Mountain View, 2012b. *Mountain View 2030 General Plan*, adopted July 10, 2012.

U.S. Census Bureau (U.S. Census), 2018. *2010 Demographic Profile Data, Profile of General Population and Housing Characteristics.* Accessed January 4, 2018.

4.13 Public Services and Recreation

4.13.1 Introduction

This section identifies the existing setting and evaluates potential impacts related to public services and recreation, including police protection services, fire protection and emergency services, parks and recreation facilities, and public schools that could result from the Project. The regulatory framework section discusses State and local policies and regulations that pertain to public services and recreation. The impact analysis determines impacts based on the significance criteria as outlined by CEQA *Guidelines* Appendix G.

Comments received on the Notice of Preparation (NOP) included concerns with emergency access and safety. Comments also contained concerns regarding per capita open space ratios and cumulative impacts on schools. All of these issues are discussed in this section. Emergency access is also discussed in Section 4.14, *Transportation*.

4.13.2 Existing Setting

4.13.2.1 Fire Protection and Emergency Medical Services

The Mountain View Fire Department (MVFD) provides fire protection and emergency medical services in Mountain View. The MVFD also participates in an automatic aid program with the cities of Palo Alto, Los Altos, and Sunnyvale, in addition to State-wide and mutual aid programs. MVFD staff are organized into three divisions: Administration, Suppression, and Fire and Environmental Protection. The Administration Division contains 1.5 full-time positions. The Suppression Division contains 68 Operations positions (firefighters and paramedics), two Training/Safety positions, and one Office of Emergency Services position. The Fire and Environmental Protection Division contains 11 positions, including staff for the Environmental Safety and Fire and Building Safety sub-divisions. During the 2016 to 2017 fiscal year, the MVFD had 87 full-time staff, and 1.5 permanent part-time staff, including 21 paramedics.

The Project site is approximately 1-mile north of Fire Station No. 1, at 251 South Shoreline Boulevard, and 1.2 miles south of Fire Station No. 5, at 2195 North Shoreline Boulevard. Each MVFD fire station is staffed daily by a total of 21 personnel, which is a MVFD standard.

The MVFD has an established response time goal of six minutes (from dispatch) for “Medical Code Three” calls (i.e., those requiring expedited transport). During the 2010 to 2011 fiscal year (July 1, 2010 to June 30, 2011), a recent year for which records are available, the MVFD achieved this goal 100 percent of the time.

4.13.2.2 Police Protection

The Mountain View Police Department (MVPD) provides police services in Mountain View. MVPD has a staff of 87 sworn and 53.5 non-sworn personnel. The MVPD conducts an active volunteer program (non-officers), which consists of approximately 14 non-sworn volunteers.

MVPD is budgeted for a total of 147 personnel for the 2017 to 2018 fiscal year. The MVPD does not maintain a staffing ratio goal based directly on population or employment (staffing levels are instead identified based on service demand and other factors).

MVPD operates out of one police station, located at 1000 Villa Street, approximately 1.1 miles south of the Project site.

4.13.2.3 Schools

The City's public schools are operated by the Mountain View-Whisman School District (MVWSD), Mountain View-Los Altos Union High School District (MVLA UHSD), and the Los Altos School District (LASD). The MVWSD and MVLA UHSD would serve the Project site.

MVWSD currently operates ten schools: eight elementary schools (kindergarten through fifth grade) and two middle schools (sixth through eighth grades). The District's resident enrollment for the 2016-2017 school year was 5,125 students (CDE, 2018a). MVLA UHSD provides high school educational services to schools in Mountain View and Los Altos. The MVLA UHSD currently operates three high schools: Mountain View High School, Los Altos High, and Alta Vista High School. The District's resident enrollment for the 2016-2017 school year was 4,101 students (CDE, 2018b).

MVWSD uses a student generation rate of 0.159 elementary and middle school students per detached single-family residential unit and 0.03 elementary and middle school students per attached single-family and multi-family residential unit. MVLA UHSD uses a student generation rate of 0.115 students per single-family detached residential unit and 0.046 per apartment/attached residential unit.

4.13.2.4 Parks and Open Space

The City of Mountain View encompasses almost 1,000 acres of parks and open spaces, among them approximately 18 mini-parks (14 total acres), 13 school district-owned neighborhood parks (105 total acres), 5 City-owned neighborhood parks (27 total acres), 2 community parks (50 total acres), and one regional park (797 total acres). The majority of parkland and open space in the City of Mountain View is located in the Shoreline Regional Park and Stevens Creek Trail (City of Mountain View, 2014).

Parks and recreational facilities closest to the Project site include the following: the *Whisman Sports Center*, located 0.5 mile west of the Project site; the *San Veron Park*, located at San Veron Avenue & Middlefield Road, 0.5 mile south of the Project site; *Charleston Park* approximately 1 mile northwest of the Project site; and *Whisman School Park* located 1 mile southeast of the Project site. Combined, these facilities include play structures, picnic areas, restrooms, sports fields, basketball courts, tennis courts, and other sports facilities and passive green areas. *Devonshire Park* is located approximately 2 miles east of the Project site, and amenities include play equipment, picnic tables and turf area.

In addition to these parks, the Stevens Creek Trail is located approximately 0.5 mile from the Project site. The Hetch-Hetchy Trail (maintained by the City with a revocable easement with the San Francisco Public Utility Commission) is located 1 mile southeast of the Project site.

4.13.3 Regulatory Setting

4.13.3.1 State

California Fire Code

The California Fire Code (Title 24, Part 9) is based on the 2015 International Fire Code and includes amendments from the State of California fully integrated into the code. The California Fire Code contains fire safety related building standards referenced in other parts of Title 24 of the California Code of Regulations (CCR), also known as the California Building Standards Code.

Quimby Act (California Government Code 66477)

The Quimby Act was established by California legislature in 1975 to ensure that parks and parkland would be provided for new and growing communities in California. As part of the Subdivision Map Act, the Quimby Act authorizes cities and counties to require the dedication of land or to impose fees for parkland, open space and/or recreational facilities and improvements, through the approval of a tentative or parcel subdivision map. The Act requires the provision of three acres of park area per 1,000 persons residing within a subdivision, unless the amount of existing neighborhood and community park area exceeds that limit. The City has adopted an ordinance that implements the Quimby Act.

Senate Bill 50

The Leroy F. Greene School Facilities Act of 1998, or Senate Bill 50 (SB 50), restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate. School impact fees are collected at the time when building permits are issued. Payment of school fees is required by SB 50 for all new residential development projects and is considered full and complete mitigation of any school impacts. School impact fees are payments to offset capital cost impacts associated with new developments, which result primarily from costs of additional school facilities, related furnishings and equipment, and projected capital maintenance requirements. Accordingly, agencies cannot require additional mitigation for any school impacts.

4.13.3.2 Local

Mountain View City Code

Fire Code

The California Fire Code, discussed above under state regulations, is adopted by the City under Chapter 14 of the Mountain View City Code. Article I addresses specific fire-related concerns for the City.

Parkland Dedication Ordinance

The City established a standard of three acres of park space per 1,000 residents in the Park Land Dedication Ordinance (Chapter 41, Park Land Dedication or Fees in Lieu Thereof, of the Mountain View City Code). The ordinance requires developers of either single lot residential development projects or subdivisions to dedicate new park land or pay an in-lieu fee to be used for the purpose of providing nearby park land or recreational facilities. An in-lieu fee can be substituted for park land dedication under the following circumstances: (1) the development or subdivision site is not identified as a location for future park land in the General Plan, a Precise Plan, or in the Park and Open Space Plan; (2) City staff determines that park land dedication is infeasible or undesirable; or (3) the proposed development or subdivision includes fewer than 50 residential units. A combination of park land dedication and payment of in-lieu fees is acceptable for certain developments or subdivisions in excess of 50 residential units.

Based on a 2017 population of 79,278 (per the CA Department of Finance [DOF, 2017]), the City's approximately 993 acres of parkland is in excess of the three-acre standard, at 12.5 acres per 1,000 residents (City of Mountain View, 2014).

Parks and Open Space Plan

The City of Mountain View's Parks and Open Space Plan offers a long-range vision intended to guide decisions made to advance park and open space resources, as well as environmental conservation efforts that enhance the quality of life for all people who live and work in the City (City of Mountain View, 2014). The most recent 2014 version of the Plan provides an evaluation of open space resources in the City and its neighborhoods and prioritizes recommendations for the acquisition, improvement, and preservation of parks and open space.

Mountain View 2030 General Plan

The Public Safety, Land Use, and Parks, Opens Space and Community Facilities elements of 2030 General Plan contain goals and policies related to public services and recreation (City of Mountain View, 2012b). Applicable goals and policies include:

> ***Policy PSA 1.1. Adequate staffing***. Maintain adequate police and fire staffing, performance levels and facilities to serve the needs of the community.
>
> ***Policy PSA 1.2. Design for safety***. Support and promote crime prevention and fire safety strategies in the design of new developments.
>
> ***Policy PSA 2.7: Police service levels and facilities***. Ensure Mountain View Police Department service levels and facilities meet demands from new growth and development.
>
> ***Policy PSA 3.1. Minimize losses***. Minimize property damage, injuries, and loss of life due to fire.
>
> ***Policy PSA 3.3: Development review.*** Carry out development review procedures that encourage effective identification and remediation of contamination and protection of public and environmental health and safety.

Policy LUD 16.6: Open Space Amenities. Encourage development to include open space amenities, plazas and parks that are accessible to the surrounding transit, bicycle and pedestrian network.

Policy POS 1.2: Recreation facilities in new residential developments. Require new development to provide park and recreation facilities.

4.13.4 Public Services and Recreation Impacts

4.13.4.1 Significance Criteria

Consistent with Appendix G of the CEQA *Guidelines*, the Project would cause adverse impacts related to public services if it would:

Public Services

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

   1. Fire Protection
   2. Police Protection
   3. Schools
   4. Parks
   5. Other public facilities

Recreation

b) 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.

c) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.13.4.2 Discussion of Impacts and Mitigation Measures

Impact PSR-1: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services. (Criteria a., b., c.) (*Less Than Significant, No Mitigation Required*)

The Project would result in the construction of up to 303 residential units. As discussed in Section 4.12, *Population and Housing*, the Project could induce population growth of approximately 728 residents on the Project site as new homes are created.

Fire Protection (MVFD)

The Project site is an infill site, which is surrounded by existing and occupied development and within an area already served by the MVFD. In addition, the Project's accompanying increase in population represents approximately 0.9 percent of the MVFD's service population. The increased population attributable to the Project would be expected to result in an incremental increase in the number of emergency calls at the Project site. However, this increase would be minor given the Project's relatively small contribution to total growth within the context of the larger community, which is accounted for in the City's 2030 General Plan and the City's Housing Element. The Project is not expected to affect service ratios or response times or increase the use of existing MVFD facilities such that substantial physical deterioration, alteration, or expansion of these facilities would be required. The impact associated with the Project would be less than significant.

The City's Fire Protection Engineer would review the proposed site plan to ensure that Fire Department personnel would have adequate access to all buildings at the site. Emergency access to the Project site is discussed further in Section 4.14, *Transportation*. City and MVFD review of all project designs at the time building permits are issued would ensure that adequate fire and life safety measures, including fire alarm systems, fire sprinkler and extinguishing systems, stairway signs, exit signs and illumination, elevator size requirements, and hydrants, are incorporated into the Project in compliance with all applicable State and City fire safety requirements.

The proposed Project would not create a need for new or altered facilities to maintain adequate service ratios, response times and other objective standards, and would not, therefore, result in significant environmental impacts to fire protection and emergency medical response provisions.

Police Protection (MVPD)

The Project site is an infill site, which is surrounded by existing and occupied development and within the MVPD service area, therefore, the proposed Project would not increase the urban area already served by the MVPD. As discussed in Section 4.12, Population and Housing, of the EIR, the new population associated with the Project would represent a small percentage of the growth anticipated by the City's 2030 General Plan. The Project could incrementally increase the demand for police services, but the increase in population from the Project represents approximately 0.85 percent of the MVPD's service population, would not be substantial, and has been accounted for in the City's 2030 General Plan. Given the infill site location and the small increase in population proposed, the Project is not expected to affect service ratios or response times or increase the use of existing police facilities such that substantial physical deterioration, alteration, or expansion of these facilities would be required. Therefore, the impact would be less than significant.

Schools

As described in the Environmental Setting above, MVWSD uses a student generation rate of 0.03 elementary and middle school students per multi-family residential unit. MVLA UHSD uses a student generation rate of 0.046 per apartment/attached residential unit. Based on these student generation rates for the type of residential development proposed as a part of the Project, the development of up to 303 new residential units would result in approximately 10 new elementary and middle school students, and 14 new high school students, a total of 24 students.

The MVWSD and MVLA UHSD each charge project developers a school impact fees per square foot of residential development, which the project applicant would be required to pay. These fees are used for the construction of new school facilities, which would be built to accommodate increased student enrollment resulting from development in Mountain View.

As described above under Regulatory Setting, the Project would comply with Senate Bill (SB) 50 and California Government Code Section 65996, which fully mitigate the potential effect of new student population that may be generated by the Project on public school facilities. School districts are authorized under California Government Code Section 65996 and Education Code 17620 to levy a development fee on new residential and commercial projects to offset costs associated with new students in the districts as a result of new development. School impact fees are also required per the City's Standard Conditions of Approval. Section 65996 states that the payment of school impact fees that may be required by any state or local agency is deemed to constitute full and complete mitigation for school impacts from development. Because the Project would be required to pay a developer fee to offset the cost of expanding or constructing new school facilities and engaging new personnel, including teachers, this impact would be less than significant. No mitigation is required.

> ***Standard Condition of Approval BID-28 (School Impact Fee):*** Project shall be subject to School Impact fees. To obtain information, fee estimates, and procedures, please contact the following local school districts: Mountain View Los Altos High School District and Mountain View Whisman School District or Los Altos Elementary School District.

Parks

As described above, there are several parks and recreational facilities within 1 mile of the Project site. Combined, these facilities include play structures, picnic areas, restrooms, sports fields, basketball courts, tennis courts, and other sports facilities and passive green areas. The additional residential population that would be generated by the Project would incrementally increase the use of area parks and recreational facilities. However, the Project also includes the creation of recreational facilities and open space on-site that would serve Project residents and accommodate some of the potential increase in demand for recreational opportunities that would be generated. The Project would include recreational amenities for new residents including a swimming pool and spa, and fitness center. Rather than private open space for each residential unit, common open space would be provided on the Project site. Open space would include roof decks on both the residential buildings, as well as plazas with seating, pathways, and a park.

As discussed above, Shoreline Regional Park, other neighborhood parks, and open space on the Project site would reasonably accommodate the additional resident population generated by the proposed Project. As such, the Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered recreational facilities, nor would it 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.

To meet the Mountain View's demand for parks and open space, the City uses the Quimby Act (California Government Code, Section 66477), which allows cities to require builders of residential subdivisions to dedicate land for parks and recreational areas, or pay an open space fee

to the City. As the Project includes residential development, it would be required to dedicate parkland or pay in-lieu fees, in compliance with the City of Mountain View Parkland Dedication Ordinance and City's Standard Condition of Approval. Any increased use of park facilities as a result of Project implementation that could cause physical deterioration of recreational resources would be offset by the in-lieu fee. Therefore, the impact would be less than significant.

> ***Standard Condition PW-14 (Park Land Dedication Fee)*:** Prior to issuance of any building permits, the applicant shall pay the Park Land Dedication Fee (approximately $15,000 to $30,000 per unit) for each new residential unit in accordance with Chapter 41 of the City Code prior to the issuance of the building permit. No credit against the Park Land Dedication Fee will be allowed for private open space and recreational facilities. Provide the most current appraisal or escrow closing statement of the property with the following information to assist the City in determining the current market value of the land: (1) a brief description of the existing use of the property; (2) square footage of the lot; and (3) size and type of each building located on the property at the time the property was acquired.

Other Public Facilities

The increase in population represented by the Project could incrementally increase the demand for other public services and facilities such as libraries; however, these increases in demand compared to existing conditions would not be substantial, would be addressed by development fees required by the City, and would directly result in the construction of new unplanned public facilities, and the impact would be less than significant.

> **Significance:** Less Than Significant.
>
> **Mitigation:** None required.

Cumulative Impacts

Geographic Context

The cumulative geographic context for public services and recreation considerations for development of the Project consists of the Project site in addition to all areas of the City, as public services and recreation facilities are provided citywide. Section 4.0, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR includes a list of cumulative projects and plans.

Impact C-PSR-1: The Project, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects with the vicinity of the Project site, would not contribute considerably to a cumulative impact related to public services and recreation. (*Less than Significant, No Mitigation Required*)

Cumulative projects considered are those in the Project site vicinity that would also involve construction activity and other approved, pending, and reasonably foreseeable future projects citywide. These cumulative development projects would increase demand for police and fire protection services. These developments, however, would also provide additional tax revenue and other development fees that would contribute to funding of public services.

As noted above, the Project would result in demand for public services such that construction of new facilities or expansion of existing facilities would be required. The MVPD and MVFD do not foresee the need to construct a new police or fire station through the 2030 General Plan horizon (City of Mountain View, 2012a). Therefore, cumulative development, in combination with development under the Project, would not result in a cumulative impact on police and fire services.

Regarding schools, as stated above pursuant to Senate Bill 50 (SB 50), individual project applicants would be required to pay school impact fees established to offset potential impacts from new development on school facilities. Considering the existing educational facilities citywide and in the vicinity of the Project site, the Project, in combination with past, present and reasonably foreseeable future projects, would not result in the need for new or physically altered school facilities. Therefore, cumulative development, in combination with development under the Project, would not result in a cumulative impact on schools.

The City's Park Land Dedication Ordinance requires dedication of new park land or payment of an in-lieu fee to be used for the purpose of providing nearby park land or recreational facilities. The City is also currently exceeding its three-acre parkland standard. Therefore, the residential population generated with development under the Project, in combination with past, present and reasonably foreseeable future projects, would not result in the substantial or accelerated physical deterioration of existing parks and recreational facilities due to increased use or demand and cause a significant cumulative impact.

Therefore, the Project's impact on public services, in combination with other cumulative development, would not be cumulatively significant. The impact is less than significant.

Significance: Less Than Significant.

Mitigation: None required.

4.13.5 Summary of Public Services and Recreation Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact PSR-1: The Project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services.	Less than Significant	None required	-
Impact C-PSR-1: The Project, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects with the vicinity of the Project site, would not contribute considerably to a cumulative impact related to public services and recreation.	Less than Significant	None required	-

4.13.6 References – Public Services and Recreation

California Department of Education (CDE), 2018a. DataQuest District Enrollment by Grade for 2016-2017: Mountain View Whisman District. Available at: https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=4369591&agglevel=district&year=2016-17. Accessed January 3, 2018.

California Department of Education (CDE), 2018b. DataQuest School Enrollment by Grade for 2016-2017: Mountain View-Los Altos Union High District. Available at: https://dq.cde.ca.gov/dataquest/dqcensus/EnrGrdLevels.aspx?cds=4369609&agglevel=district&year=2016-17. Accessed January 3, 2018.

California Department of Finance (DOF), 2017. *E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011 -2017, with 2010 Census Benchmark*. Accessed January 4, 2018.

City of Mountain View, 2012a. *City of Mountain View Draft 2030 General Plan and Greenhouse Gas Reduction Program Final Environmental Impact Report.* September, 2012.

City of Mountain View, 2012b. *Mountain View 2030 General Plan*, adopted July 10, 2012.

City of Mountain View, 2014. *Parks and Open Space Plan*. Updated 2014.

4.14 Transportation

4.14.1 Introduction

This section describes transportation conditions, including transit services, and pedestrian and bicycle facilities in the vicinity of the Project site. This section also provides the regulatory context relevant to transportation. Potential impacts that would result from implementation of the Project are discussed and evaluated, and appropriate mitigation measures are identified, as necessary, followed by an identification of any residual impact significance after mitigation measures are implemented.

Information used in this section is primarily based on the Transportation Impact Analysis (TIA) prepared by Hexagon Transportation Consultants, Inc. for the Project dated September 24, 2019, which is included as **Appendix K** of this Draft EIR. Note the TIA also provides an analysis of transportation issues beyond the purview of CEQA, including vehicle miles traveled (VMT), neighborhood traffic conditions, freeway on-ramp traffic operations, transit delay, intersection vehicle queuing, and vehicular site access and circulation. These transportation issues are included in the TIA for informational purposes only as they are not considered measures used to determine the significance of a traffic impact under CEQA. However, as discussed in more detail in Section 4.14.3.2 below, the City is in the process of developing standards and thresholds related to VMT in preparation for replacing the level of service significance criterion with VMT. In accordance with requirements of Senate Bill (SB) 743, the City is required to adopt VMT as a significance criterion by July 2020. In the interim, a generalized VMT assessment was conducted for the Project. It is presented in the Appendix K and summarized in this section following the CEQA impact analysis.

Comments received on the Notice of Preparation (NOP) included concerns with traffic congestion, emergency access, bicycle and pedestrian safety, including safe routes to schools, and cumulative traffic. These issues are discussed in this section. Comments were also received regarding the amount of proposed parking spaces and the potential for parking spillover into adjacent neighborhoods. Parking supply in and of itself is not identified in Appendix G of the CEQA *Guidelines* as a significance criterion to be considered for a potential adverse physical environmental impact; however, parking is an important planning consideration that will be evaluated by the City in its decision-making process. The amount of parking proposed as part of the Project is described fully in Chapter 3, *Project Description*. This section briefly describes the amount of parking provided, describes the City's Standard Condition of Approval (PL-112) regarding parking by construction workers during construction of the Project, and evaluates the potential for hazards to occur due to the Project's parking design features. Additionally, per City Standard Condition of Approval PL-72 (Parking Shortage), should a parking shortage arise at the Project site, the Zoning Administrator may hold a public hearing to review the parking problem and require the Project applicant to implement appropriate means to resolve the shortage.

4.14.2 Existing Conditions

The Project site is located at the corner of North Shoreline Boulevard and Terra Bella Avenue in the north central portion of the City of Mountain View. The site contains an office building, surface parking lots, and associated landscaping and amenities. Surrounding land uses are predominantly industrial and office/research and development. There are currently two existing driveways on the Project site: one full-access (two-way) driveway on Terra Bella Avenue, and one full-access (two-way) driveway on Linda Vista Avenue.

4.14.2.1 Existing Street and Highway System

Regional vehicular access to the Project site is provided by U.S. 101 and State Route (SR) 85, while local access is provided via N. Shoreline Boulevard, Middlefield Road, Terra Bella Avenue, and Linda Vista Avenue. These roadways, along with their General Plan classification, are described below (City of Mountain View, 2012).

U.S. 101 is a north-south eight-lane freeway that extends northward to San Francisco and southward through Santa Clara County, and points beyond. One lane in each direction is designated as a high-occupancy vehicle (HOV) lane in the Project vicinity. U.S. 101 provides access to the Project site via a full interchange at N. Shoreline Boulevard.

SR 85 is a north-south freeway that begins at U.S. 101, east of N. Shoreline Boulevard and extends south towards San Jose and terminates at U.S. 101 east of the Silicon Valley Boulevard/Bernal Road interchange. SR 85 is six-lanes wide (two mixed-flow lanes and one HOV lane in each direction) in the vicinity of the Project.

N. Shoreline Boulevard is a north-south Avenue that extends northward from El Camino Real (SR 82) across U.S. 101 to the San Francisco Bay. The four-lane roadway has a landscaped median with left-turn pockets, bike lanes and sidewalks on both sides of the street. South of Terra Bella Avenue, a two-way left-turn lane is provided. On-street parking is prohibited. N. Shoreline Boulevard provides direct access to the Project site.

Middlefield Road is an east-west four-lane Avenue that runs parallel to U.S. 101. It begins at the intersection of Central Expressway in Mountain View and traverses west through Redwood City. Middlefield Road has a landscaped median with left-turn pockets, bike lanes and sidewalks on both sides of the street. On-street parking is permitted only between the hours of 7:00 PM and 2:00 AM in certain areas.

Terra Bella Avenue is a two-lane Avenue with on-street parking on both sides of the street. It extends eastward from Middlefield Road to east of San Rafael Avenue, at which point it transitions into San Leandro Avenue. Sidewalks are present on both sides of the street. Terra Bella Avenue provides direct access to the Project site.

Linda Vista Avenue is a two-lane Flexible Street with on-street parking on both sides of the street. It extends northward from Middlefield Road to a dead-end just south of U.S. 101. Sidewalks are present on both sides of the street. Linda Vista Avenue provides direct access to the Project site.

4.14.2.2 Study Roadway and Freeway Locations

The analysis of impacts to traffic in the study area were evaluated at 12 signalized intersections, three freeway segments, and three freeway ramps in the vicinity of the Project site during the weekday morning (AM) and afternoon (PM) peak hours. In the Project study area, the AM peak hour typically occurs between 7:00 AM and 10:00 AM, and the PM peak hour typically occurs between 4:00 PM and 7:00 PM on weekdays. These are the peak commute hours during which most weekday traffic congestion occurs on Project study area roadways. The study intersections, freeway segments, and freeway ramps were selected to represent locations where Project-related traffic has the potential to cause an impact. The study intersections are listed below and shown on **Figure 4.14-1**.

Study Intersections

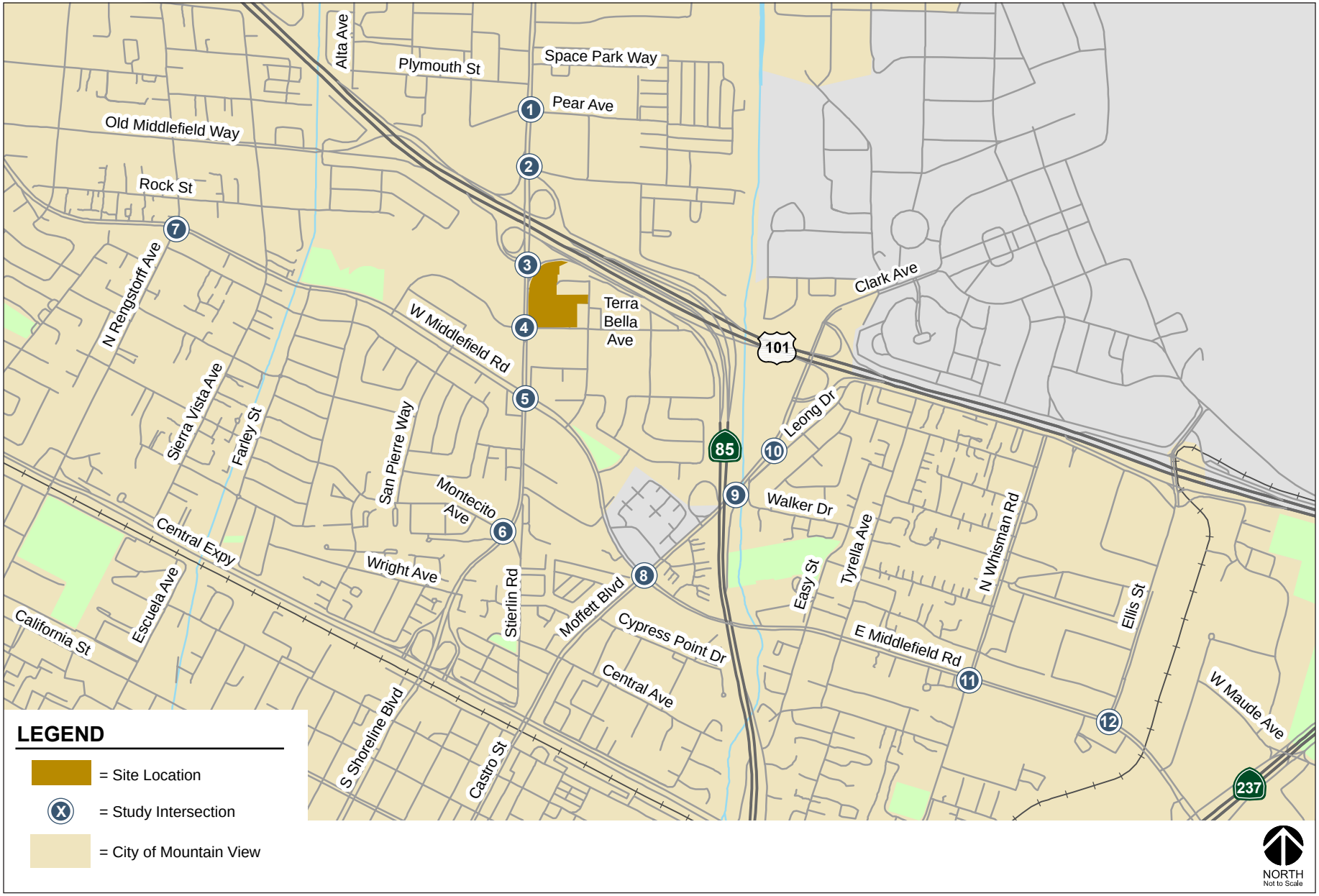
1. N. Shoreline Boulevard and Pear Avenue
2. N. Shoreline Boulevard and U.S. 101 Northbound Off-Ramps/La Avenida Street
3. N. Shoreline Boulevard and U.S. 101/SR 85 Southbound Ramps
4. N. Shoreline Boulevard and Terra Bella Avenue
5. N. Shoreline Boulevard and Middlefield Road
6. N. Shoreline Boulevard and Montecito Avenue
7. Rengstorff Avenue and Middlefield Road
8. Moffett Boulevard and Middlefield Road
9. Moffett Boulevard and SR 85 Northbound Off-Ramp
10. Moffett Boulevard and Leong Drive
11. Whisman Road and Middlefield Road
12. Ellis Street and Middlefield Road

Study Freeway Segments

1. U.S. 101 between Moffett Boulevard and SR 85
2. U.S. 101 between SR 85 and N. Shoreline Boulevard
3. U.S. 101 between N. Shoreline Boulevard and Rengstorff Avenue

Study Freeway Ramps

1. U.S. 101 Southbound On-Ramp from Northbound N. Shoreline Boulevard
2. SR 85 Southbound On-Ramp from Northbound N. Shoreline Boulevard
3. U.S. 101 Northbound On-Ramp from Northbound N. Shoreline Boulevard



SOURCE: Hexagon, 2019

Residences @ Shoreline Gateway Project

Figure 4.14-1
Site Location and Study Intersections

ESA

4.14.2.3 Transit Service

Existing public transit services in the Project study area are provided by the Santa Clara Valley Transportation Authority (VTA), the Mountain View Transportation Management Association (TMA), the City, the San Joaquin Joint Powers Authority (SJJPA), and the Peninsula Corridor Joint Powers Board (JPB). The VTA operates bus and light-rail transit (LRT) services in Santa Clara County. The TMA provides free MVgo shuttle service between the Mountain View Transit Center and corporate campuses in the North Bayshore and Whisman areas, The City, in partnership with Google, provides free community shuttle service in Mountain View; the SJJPA operates the Altamont Corridor Express (ACE), a commuter rail service between Stockton, Tracy, Pleasanton, and San Jose; and the JPB operates Caltrain, which provides commuter rail service between San Francisco and Gilroy. The Project site is also within easy biking distance (1 mile) of the Mountain View Caltrain and LRT stations at the Mountain View Transit Center, which is served by numerous connecting buses. The VTA bus routes, MVgo shuttle routes, MV community shuttle route, and Caltrain/LRT stations in the Project vicinity and the bus/shuttle stops near the Project site are shown on **Figure 4.14-2**.

Santa Clara County Valley Transportation Authority

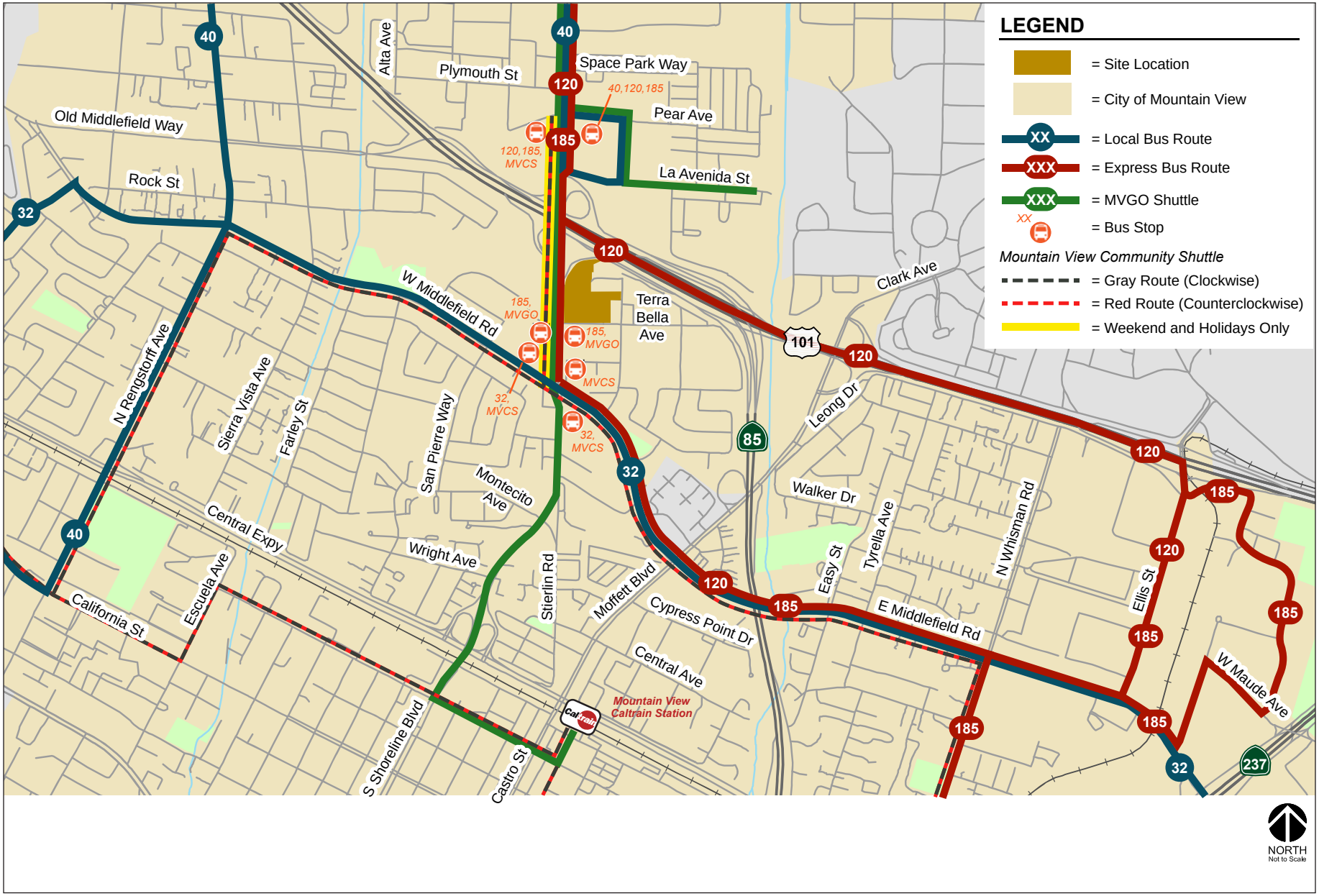
Bus Service

There are four VTA bus routes serving the Project vicinity: Routes 32, 40, 185 and 120, with bus stops located at: N. Shoreline Boulevard and Terra Bella Avenue (100 feet from the Project site), N. Shoreline Boulevard and Middlefield Road (1,000 feet from the Project site), N. Shoreline Boulevard and La Avenida Street (1,800 feet from the Project site), and N. Shoreline Boulevard and Pear Avenue (0.5 miles from the Project site).

Route 40 operates on N. Shoreline Boulevard, Pear Avenue, Inigo Way, and La Avenida in the Project vicinity, providing service between Foothill College and the VTA Maintenance Facility on La Avenida between 6:00 AM and 10:30 PM with 30- to 40-minute headways during the AM and PM peak hours. Within the Project study area, Route 40 stops at the intersection of N. Shoreline Boulevard and La Avenida Street, approximately 1,800 feet north of the Project site.

Route 32 operates on Middlefield Road in the Project vicinity, providing service between the San Antonio Shopping Center and the Santa Clara Transit Center. Route 32 operates between 5:45 AM and 8:00 PM with 30-minute headways during the AM and PM peak hours. The bus stops closest to the Project site are at the intersection of N. Shoreline Boulevard and Middlefield Road.

Route 185 operates on N. Shoreline Boulevard in the Project vicinity, providing service between the Gilroy Transit Center and Mountain View during commute hours. Route 185 operates three northbound trips during the AM peak period (60-minute headways) and three southbound trips during the PM peak period (60-minute headways). The closest bus stop is located at the intersection of N. Shoreline Boulevard and Terra Bella Avenue, approximately 100 feet south of the Project site.



SOURCE: Hexagon, 2019

Residences @ Shoreline Gateway Project

Figure 4.14-2
Existing Transit Service

ESA

Route 120 provides express service between the Fremont Bay Area Rapid Transit (BART) station and the North Bayshore area in Mountain View. Service is limited to five southbound trips in the morning and five northbound trips in the afternoon/evening with 30- to 60-minute headways. Within the Project vicinity, Route 120 operates on N. Shoreline Boulevard with a bus stop at Pear Avenue, approximately 0.5 miles north of the Project site.

Light-Rail Transit Service

The VTA operates the 42.2-mile LRT system extending from south San Jose through downtown to the northern areas of San Jose, Santa Clara, Milpitas, Mountain View and Sunnyvale. The service operates nearly 24 hours a day with 15-minute headways during much of the day. The Mountain View-Winchester LRT line (Route 902) operates along Central Expressway within the Project vicinity and stops at the Mountain View Transit Center.

MVgo Shuttle

The TMA currently provides three MVgo shuttle routes that start and end at the Mountain View Transit Center: East Bayshore, West Bayshore, and East Whisman. The shuttle schedule is coordinated with Caltrain arrivals in the morning and departures in the afternoon. The East and West Bayshore Routes serve the Project site, with the nearest shuttle stops on N. Shoreline Avenue at Terra Bella Avenue approximately 100 feet south of the Project site. The service runs on weekdays, primarily during the peak commute periods with average headways of 15 to 25 minutes.

Mountain View Community Shuttle

The Mountain View Community Shuttle provides free bus service between many residential neighborhoods, senior residences and services, city offices, library, park and recreational facilities, medical offices, shopping centers, and entertainment venues throughout Mountain View. The shuttle service runs from 10 AM to 6 PM with 30-minute headways on weekdays and 60-minute headways on weekends. The shuttle stop closest to the Project site is on W. Middlefield Road at N. Shoreline Boulevard, approximately 1,000 feet from the Project site.

Altamont Corridor Express Shuttle

The ACE Orange Shuttle (Route 824) also serves the Project area. This free shuttle, funded by the Bay Area Air Quality Management District, transports Mountain View passengers to and from the ACE Great America Station in Santa Clara. Service is limited to four westbound trips in the morning and four eastbound trips in the afternoon/evening with headways averaging 60 minutes. The shuttle stop closest to the Project site is located at N. Shoreline Boulevard and Pear Avenue, approximately 0.5 miles north of the Project site.

Caltrain

Caltrain provides frequent commuter train service between San Jose and San Francisco seven days a week, with stops at most cities in between. During the morning peak period between 7:00 AM and 10:00 AM, There are ten northbound trains (two baby bullet trains, seven limited-stop trains, and one local train) and 11 southbound trains (five baby bullet trains and six limited-stop trains) serving

the Mountain View station. During the afternoon/evening peak period between 4:00 PM and 7:30 PM, there are 13 northbound (five baby bullet trains, seven limited-stop trains, and one local train) and 12 southbound trains (three baby bullet trains, eight limited-stop trains, and one local train) serving the Mountain View station. Bicycles are permitted on Caltrain, and there are bicycle racks and bicycle lockers available at the Mountain View Transit Center.

4.14.2.4 Pedestrian and Bicycle Facilities

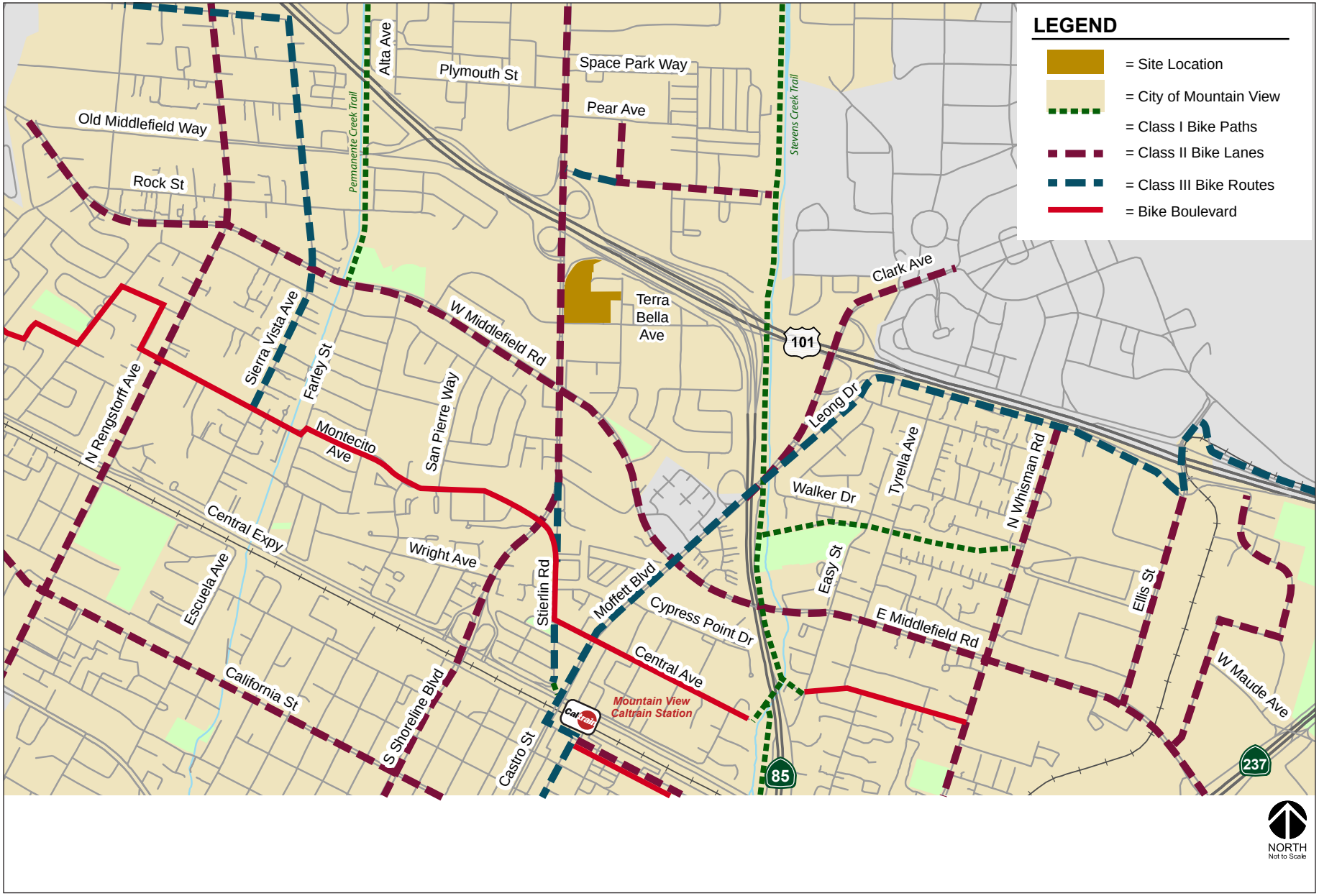
Bicycle Facilities

According to the City's Bicycle Transportation Plan (City of Mountain View, 2015), bicycle facilities that exist within 1 mile of the Project site (see **Figure 4.14-3**) include multi-use trails (Class I bikeway), striped bike lanes (Class II bikeway) and shared bike routes/boulevards (Class III bikeway). Bike paths or multi-use trails are shared between pedestrians and bicyclists and separated from motor vehicle traffic. Bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes are existing streets that accommodate bicycles but are not separate from the existing travel lanes. Routes are typically designated only with signs. Bike boulevards are modified bike routes offering especially convenient and efficient through-routes for bicyclists of all skill levels.

Within the Project area, bike lanes are present along the entirety of Middlefield Road, N. Shoreline Boulevard, Inigo Way, La Avenida Street east of Inigo Way, and Moffett Boulevard north of SR 85. The remainder of Moffett Boulevard is designated as a bike route. Montecito Avenue, Stierlin Road, and Central Avenue are designated as bike boulevards. Although not designated as a bike route, local and collector streets like Linda Vista Avenue and Terra Bella Avenue carry low traffic volumes and are conducive to bicycle travel.

Multi-use trails in the project vicinity include the Stevens Creek Trail and the Permanente Creek Trail. The Stevens Creek Trail, located 1 mile east of the Project site, extends from Shoreline at Mountain View Park to Dale Avenue/Heatherstone Way, south of El Camino Real. This paved multi-use path is ideal for bike commuters as it connects to the North Bayshore businesses, the area east of Downtown Mountain View, and residential areas adjacent to the trail. The Stevens Creek Trail provides connections to other bike lanes and routes such as Moffett Boulevard, Middlefield Road and Evelyn Avenue, as well as major bus routes, Caltrain, and LRT stations. The trail can be accessed from Middlefield Road and Moffett Boulevard in the Project vicinity. Both access points are approximately 1 mile from the Project site. There are continuous bicycle facilities from both trail access points to the Project site. The Permanente Creek Trail extends from the San Francisco Bay over U.S. 101, under Old Middlefield Road, and ends at W. Middlefield Road, about 0.8 miles from the Project site.

Bicycle counts were conducted during the peak commute hours at all study intersections, and are provided in Appendix K. The counts indicate that bicycle activity within the Project study area is relatively light. The largest amount of bicycle traffic observed during the AM peak hour was at the intersection of Rengstorff Avenue and Middlefield Road, with 22 bicycles. During the PM peak hour, the intersection of Shoreline Boulevard and Montecito Avenue had the most bicycle activity with 30 bicycles observed. Within the immediate vicinity of the Project site, less than



SOURCE: Hexagon, 2019

Residences @ Shoreline Gateway Project

Figure 4.14-3
Existing Bicycle Facilities

ESA

10 bicycles were observed at the intersection of N. Shoreline Boulevard and Terra Bella Avenue during both peak hours.

Pedestrian Facilities

Sidewalks are present along both sides of all Project study area roadways. The study intersections on N. Shoreline Boulevard at Pear Avenue, Terra Bella Avenue and at Middlefield Road have signalized crosswalks with pedestrian push buttons on all legs. The Shoreline/La Avenida/U.S. 101 Northbound Ramp intersection has crosswalks on all approaches except the south leg, while the Shoreline/U.S. 101/SR 85 Southbound Ramp intersection has crosswalks on only the east and west legs.

Pedestrian traffic is moderate within the Project study area. During the AM peak hour, the highest pedestrian volume was observed at the intersection of Moffett Boulevard and Middlefield Road where 66 pedestrians crossed the intersection. Within the immediate vicinity of the Project site, 49 pedestrians were observed crossing the intersection of Shoreline Boulevard and Terra Bella Avenue. During the PM peak hour, the highest pedestrian volume was observed at the intersection of N. Shoreline Boulevard and Pear Avenue where 66 pedestrians crossed the intersection. Within the immediate vicinity of the Project site, 16 pedestrians were observed crossing the intersection of Shoreline Boulevard and Terra Bella Avenue. The pedestrian counts are included in Appendix K.

4.14.2.5 Existing Traffic Operating Conditions

Intersection Operations

The existing lane configurations at the 12 study intersections were obtained from field observations. Existing traffic volumes were obtained from manual peak-hour turning-movement counts conducted on September 25, 2018. All intersection traffic counts were conducted while nearby schools and colleges were in session. Study intersection lane configurations and existing traffic volumes are included in Appendix K.

Traffic conditions were evaluated using level of service (LOS). Level of service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or forced-flow conditions with extreme delays. The City's level of service methodology for signalized intersections is the 2000 Highway Capacity Manual (HCM) method. This method is applied using the TRAFFIX software. The 2000 HCM operations method evaluates signalized intersection operations based on average control delay time for all vehicles at the intersection. Since TRAFFIX is also the Congestion Management Plan (CMP) designated intersection level of service methodology, the City's methodology employs the CMP default values for the analysis parameters. The City's level of service standard for signalized intersections is LOS D or better, except for CMP intersections and intersections in the Downtown and the San Antonio Center planning areas, where the standard is LOS E. All the signalized intersections evaluated for this Project are subject to the LOS D standard. The correlation between average control delay and level of service is shown in **Table 4.14-1**.

TABLE 4.14-1
DEFINITIONS FOR INTERSECTION LEVEL OF SERVICE

Level of Service Grade	Signalized Intersections	
	Average Control Vehicle Delay (Seconds)	Description
A	≤10.0	*Free Flow or Insignificant Delays*: Operations with very low delay, when signal progression is extremely favorable and most vehicles arrive during the green light phase. Most vehicles do not stop at all.
B	>10.0 and ≤20.0	*Stable Operation or Minimal Delays*: Generally occurs with good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average delay. An occasional approach phase is fully utilized.
C	>20.0 and ≤35.0	*Stable Operation or Acceptable Delays*: Higher delays resulting from fair signal progression and/or longer cycle lengths. Drivers begin having to wait through more than one red light. Most drivers feel somewhat restricted.
D	>35.0 and ≤55.0	*Approaching Unstable or Tolerable Delays*: Influence of congestion becomes more noticeable. Longer delays result from unfavorable signal progression, long cycle lengths, or high volume to capacity ratios. Many vehicles stop. Drivers may have to wait through more than one red light. Queues may develop, but dissipate rapidly, without excessive delays.
E	>55.0 and ≤80.0	*Unstable Operation or Significant Delays*: Considered to be the limit of acceptable delay. High delays indicate poor signal progression, long cycle lengths and high volume to capacity ratios. Individual cycle failures are frequent occurrences. Vehicles may wait through several signal cycles. Long queues form upstream from intersection.
F	>80.0	*Forced Flow or Excessive Delays*: Occurs with oversaturation when flows exceed the intersection capacity. Represents jammed conditions. Many cycle failures. Queues may block upstream intersections.

SOURCE: Transportation Research Board, 2000 Highway Capacity Manual.

Applying the methodology described above, the level of service was calculated at the 12 study intersections for both AM and PM peak hours. **Table 4.14-2** presents the existing AM and PM peak-hour intersection level of service and delays. The results of the intersection level of service analysis and field observations show that most of the study intersections currently operate at an acceptable LOS D or better. The following two study intersections currently operate at unacceptable level of service during one or both peak hours of traffic:

1. N. Shoreline Boulevard and Pear Avenue (AM peak hour)
2. N. Shoreline Boulevard and U.S. 101 Northbound Off-Ramp/La Avenida (AM and PM peak hours)

The intersection levels of service calculation sheets are included in Appendix K.

Traffic conditions were observed in the field in order to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions. Overall, field observations were consistent with the level of service analysis; details of these observations are included in Appendix K.

TABLE 4.14-2
EXISTING CONDITIONS INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Avg. Delay (sec/veh)	LOS
1	N. Shoreline Blvd and Pear Ave[a]	AM PM	**80+** 35.6	**F** D+
2	N. Shoreline Blvd and U.S. 101 NB Off-Ramp/La Avenida[a]	AM PM	**80+** **80+**	**F** F
3	N. Shoreline Blvd/U.S. 101/SR 85 SB Ramps[b]	AM PM	17.7 17.9	B B
4	N. Shoreline Blvd and Terra Bella Ave[b]	AM PM	20.8 17.6	C+ B
5	N. Shoreline Blvd and Middlefield Rd[b]	AM PM	44.7 50.9	D D
6	N. Shoreline Blvd and Montecito Ave	AM PM	22.5 28.5	C+ C
7	Rengstorff Ave and Middlefield Rd	AM PM	31.0 35.3	C D+
8	Moffett Blvd and Middlefield Rd	AM PM	35.7 38.8	D+ D+
9	Moffett Blvd and SR 85 NB Ramps	AM PM	7.7 9.0	A A
10	Moffett Blvd and Leong Dr	AM PM	22.8 19.2	C+ B-
11	Whisman Rd and Middlefield Rd	AM PM	31.7 35.2	C D+
12	Ellis St and Middlefield Rd	AM PM	18.5 21.5	B- C+

NOTES:
Bold indicates a substandard LOS.
NB = northbound; SB = southbound

[a] The calculated LOS does not reflect the unmet vehicle demand that cannot get through the intersection during the peak hour. Field observations indicate that the intersection operates at LOS F with 80+ seconds of average delay during one or both peak hours.

[b] The calculated LOS is based on the overall average traffic delay for all movements. While the intersection currently operates at an acceptable level overall, the northbound through movements during the AM peak hour are affected by queue spillback from downstream intersections. However, observations show that generally the queues clear during each cycle and do not significantly affect the operation of the intersection overall.

SOURCE: Hexagon, 2019.

Freeway Segment Operations

As prescribed in the CMP technical guidelines, the level of service for freeway segments is estimated based on vehicle density. Vehicle density is calculated by dividing the peak hour volume by the product of the number of travel lanes and the average travel speed. The CMP requires that mixed-flow lanes and auxiliary lanes be analyzed separately from high-occupancy vehicle (HOV) lanes (otherwise known as carpool lanes). The CMP specifies that a capacity of 2,300 vehicles per hour per lane (vphpl) be used for segments three lanes or wider in one direction and a capacity of 2,200 vphpl be used for segments two lanes wide in one direction. HOV lanes are specified as having a capacity of 1,650 vphpl. The CMP defines an acceptable level of service for freeway segments as LOS E or better.

Existing traffic volumes and level of service on the study freeway segments were obtained from the 2016 Santa Clara County CMP Annual Monitoring Report, which contains the most recent data collected for freeway segments located in Santa Clara County. **Table 4.14-3** presents the existing AM and PM peak-hour freeway level of service and vehicle densities. The CMP data show that the following mixed-flow and HOV freeway segments currently operate at an unacceptable LOS F during at least one peak hour of traffic.

TABLE 4.14-3
EXISTING CONDITIONS FREEWAY LEVEL OF SERVICE

U.S. 101 Freeway Segment	Direction	Peak Hour	Mixed-Flow Lanes					HOV Lanes				
			Avg. Speed[a]	# of Lanes[a]	Volume	Density	LOS	Avg. Speed[a]	# of Lanes[a]	Volume	Density	LOS
Moffett Blvd to SR 85	NB	AM	15	3	4,370	**97**	**F**	28	1	1,880	**67**	**F**
		PM	16		4,470	**93**	**F**	70		2,520	36	D
SR 85 to N. Shoreline Blvd	NB	AM	24	4	7,200	**75**	**F**	63	1	2,150	34	D
		PM	27		7,350	**68**	**F**	70		2,380	34	D
N. Shoreline Blvd to Rengstorff Ave	NB	AM	26	3	5,460	**70**	**F**	63	2	4,290	34	D
		PM	11		3,700	**112**	**F**	70		2,520	18	B
Rengstorff Ave to N. Shoreline Blvd	SB	AM	58	3	6,620	38	D	66	2	2,910	22	C
		PM	29		5,750	**66**	**F**	70		3,500	25	C
N. Shoreline Blvd to SR 85	SB	AM	58	3	6,620	38	D	59	1	2,190	37	D
		PM	27		5,510	**68**	**F**	50		2,550	51	E
SR 85 to Moffett Blvd	SB	AM	65	3	6,050	31	D	67	1	1,140	17	B
		PM	15		4,280	95	**F**	20		1,680	**84**	**F**

NOTES:
Bold indicates a substandard level of service.
NB = northbound; SB = southbound

[a] Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2016.

SOURCE: Hexagon, 2019.

Mixed-Flow Freeway Segments

- U.S. 101 northbound from Moffett Boulevard to SR 85 (AM and PM peak hours)
- U.S. 101 northbound from SR 85 to N. Shoreline Boulevard (AM and PM peak hours)
- U.S. 101 northbound from N. Shoreline Boulevard to Rengstorff Avenue (AM and PM peak hours)
- U.S. 101 southbound from Rengstorff Avenue to N Shoreline Boulevard (PM peak hour)
- U.S. 101 southbound from N. Shoreline Boulevard to SR85 (PM peak hour)
- U.S. 101 southbound from SR85 to Moffett Boulevard (PM peak hour)

HOV Freeway Segments

- U.S. 101 northbound from Moffett Boulevard to SR 85 (AM peak hour)
- U.S. 101 southbound from SR 85 to Moffett Boulevard (PM peak hour)

4.14.2.6 Planned Transportation Network Changes

Shoreline Boulevard Bus Lane Improvement Project

The Shoreline Boulevard Bus Lane Improvement project includes a reversible transit-only lane on N. Shoreline Boulevard that extends northward from Middlefield Road to Pear Avenue. The single lane would operate northbound on weekday mornings and southbound in the afternoon. On N. Shoreline Boulevard at the intersections with Middlefield Road and Pear Avenue, dedicated transit signals are proposed to facilitate bus transitions in and out of the transit lane. On N. Shoreline Boulevard between Middlefield Road and Terra Bella Avenue, the transit lane would occupy the existing center left-turn lane. All vehicles currently using the center turn lane would perform a U-turn at either the Middlefield Road or Terra Bella Avenue intersections. The left-turn lane that provides access to the southbound SR 85 on-ramp from northbound Shoreline Boulevard would be removed to provide space for the bus lane. Traffic bound for southbound SR 85 is expected to divert to the SR 85/Moffett Boulevard interchange. The improvement project will result in the following changes to study intersections. These changes were included in the background conditions in this analysis.

- N. Shoreline Boulevard and Pear Avenue: The traffic signal would be modified to include an additional transit signal phase in the morning to facilitate the northbound buses getting out of the transit lane. The transit phase would increase the total intersection lost time and the cycle length in the morning.

- N. Shoreline Boulevard and U.S. 101 Southbound Off-Ramp: The northbound left-turn lane onto the southbound SR 85 on-ramp and the associated signal phase would be removed.

- N. Shoreline Boulevard and Terra Bella Avenue: The signal phasing for the eastbound and westbound approaches is expected to be modified from permitted to split phase. Split phase operation would increase the total intersection lost time and the cycle length.

- N. Shoreline Boulevard and Middlefield Road: The traffic signal would be modified to include an additional transit signal phase in the afternoon to facilitate the southbound buses getting out of the transit lane. The transit phase would increase the total intersection lost time and the cycle length in the afternoon. A second left-turn lane would be added to the eastbound and westbound approaches by reducing the width of the existing landscaped medians.

Next Network 2018-2019 Transit Service Plan

As part of VTA's Next Network 2018-2019 Transit Service Plan, Route 32 would be discontinued and replaced by Route 21, which would not be within walking distance of the Project site. In addition, Route 120 would be discontinued due to the extension of BART to Santa Clara County. Route 40 service that currently ends in the North Bayshore area would be extended south on N. Shoreline Boulevard to connect with the Mountain View Transit Center reducing the distance from the Project site to the nearest bus stop on this route. Route 902 LRT Line will be renamed as the Green Line and change the northern end to Old Ironsides Light Rail Station. A new LRT route called the Orange Line will be created to connect Downtown Mountain View with the Alum Rock Transit Center. These changes were included in the background conditions in this analysis.

4.14.3 Regulatory Framework

4.14.3.1 State

Senate Bill 743

On September 27, 2013, SB 743 was signed into law. SB 743 started a process that could fundamentally change transportation impact analysis as part of California Environmental Quality Act (CEQA) compliance. These changes include the elimination of auto delay, Level of Service, and other similar measures of vehicular capacity or traffic congestion as a basis for determining significant impacts in many parts of California (if not statewide). SB 743 required the Governor's Office of Planning and Research (OPR) to propose revisions to the CEQA *Guidelines* establishing new criteria to "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." (Public Resources Code Section 21099(b)(1).)

The new CEQA *Guidelines* section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the CEQA *Guidelines* criteria for determining the significance of transportation impacts are primarily focused on projects within transit priority areas, and shifts the focus from driver delay to reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses (which in turn reduces vehicle trips). VMT, is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person.

The newly adopted guidance provides that a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section shall apply statewide. The City is currently engaged in this process and has not yet formally adopted its updated transportation significance thresholds or its updated transportation impact analysis procedures. Since the regulations of SB 743 have not been finalized or adopted by the City, automobile delay remains the measure used to determine the significance of a traffic impact. However, a generalized VMT assessment was conducted for the Project. This is included in Appendix K and summarized in this section following the CEQA impacts analysis.

4.14.3.2 Regional

Santa Clara County Valley Transportation Authority

The Project is located within the City of Mountain View, in Santa Clara County. The VTA is the Congestion Management Agency for the County and has policies and regulations that are relevant to the project. The VTA is responsible for ensuring local government conformance with the CMP, a program aimed at reducing regional traffic congestion. The CMP requires that each jurisdiction identify existing and future transportation facilities that will operate at an acceptable service level and provide mitigation where future growth degrades that service level. VTA has review responsibility for proposed development projects that are expected to generate 100 or more peak hour trips.

Santa Clara Countywide Bicycle Plan

The Santa Clara Countywide Bicycle Plan synthesizes other local and county plans into a comprehensive 20-year cross-county bicycle corridor network and expenditure plan. The long-range countywide transportation plan and the means by which projects compete for funding and prioritization are documented in the Valley Transportation Plan (VTP) 2035. The VTA has adopted the Santa Clara Countywide Bicycle Plan, which includes a planned bicycle network of 24 routes of countywide or intercity significance.

4.14.3.3 Local

City of Mountain View

2030 General Plan

The following transportation-related policies from the Land Use and Design; Mobility; and Parks, Open Space and Community Facilities Elements of the General Plan are applicable to the Project.

> ***Policy LUD 3.1: Land use and transportation.*** Focus higher land use intensities and densities within 0.5 miles of public transit service and along major commute corridors.
>
> ***Policy LUD 6.5: Pedestrian and bicycling improvements.*** Support pedestrian and bicycling improvements and connections between neighborhoods.
>
> ***Policy LUD 8.3: Enhanced publicly-accessible bicycle and pedestrian connections.*** Encourage new and existing developments to enhance publicly accessible bicycle, pedestrian and transit connections.
>
> ***Policy LUD 8.5: Pedestrian and bicycle amenities.*** Encourage attractive pedestrian and bicycle amenities in new and existing developments, and ensure that roadway improvements address the needs of pedestrians and bicyclists.
>
> ***Policy LUD 17.2: Transportation Demand Management strategies.*** Require development to include and implement Transportation Demand Management strategies.
>
> ***Policy MOB 4.1: Bicycle network.*** Improve facilities and eliminate gaps along the bicycle network to connect destinations across the City.
>
> ***Policy MOB 4.2: Planning for bicycles.*** Use existing planning processes to identify or implement improved bicycle connections and bicycle parking facilities.
>
> ***Policy MOB 4.3: Public bicycle parking.*** Increase the amount of well-maintained, publicly accessible bicycle parking and storage throughout the City.
>
> ***Policy MOB 8.3: Multi-modal transportation monitoring.*** Monitor the effectiveness of policies to reduce vehicle miles traveled (VMT) per service population by establishing transportation mode share targets and periodically comparing travel survey data to established targets.
>
> ***Policy POS 2.3: Pedestrian and bicycle access.*** Improve pedestrian and bicycle access to parks, and create new connections to parks to minimize pedestrian and bicycle travel distances.

Bicycle Transportation Plan

The Mountain View Bicycle Transportation Plan Update summarizes goals for improving the bicycle network, existing and proposed facilities, and programs involving education, enforcement. The plan was developed in conformance with several other plans including the General Plan, VTA Countywide Bicycle Plan, Metropolitan Transportation Commission (MTC) Regional Bicycle Plan, the Santa Clara County Trails Master Plan, and Caltrans Streets and Highways Code Section 891.2.

Pedestrian Master Plan

The Mountain View Pedestrian Master Plan summarizes goals for the pedestrian network, existing and proposed facilities, and priority of pedestrian improvements (City of Mountain View, 2014). The plan was developed in conformance with the Mountain View 2030 General Plan.

4.14.4 Project Transportation Characteristics

Various characteristics of the Project are described below.

4.14.4.1 Project Description

The Project is Phase II of a 7.81-acre mixed-use development. Phase I, which is currently fully occupied, contains a 111,443 square foot office building with surface parking for 371 cars. Phase II would include 203 residential units in one building on Block A and 100 residential units in a separate building on Block B. It would also include 3,000 square feet of retail space on the ground level of the Block A building. Both proposed residential buildings would be constructed over two floors of podium parking. In addition, the Project would include surface parking and a separate parking garage serving the Phase I office space. The lower floors of the office parking garage would be available for use by residents and their guests outside of normal business hours. Vehicular access to and from the Project site would be provided via one full-access driveway on Terra Bella Avenue and one full-access driveway on Linda Vista Avenue.

4.14.4.2 Project Trip Generation

Trip generation estimates for the Project were based on trip rates published in the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition (2017). Trips generated by the proposed residential land uses were estimated by applying the average rates for multifamily family (mid-rise) to the proposed/existing number of units. The retail tenant is unknown at this time. It is unknown whether a coffee shop would be viable or desirable at this location, but for the purpose of the traffic analysis, the proposed retail component was assumed to be a coffee shop, which is a conservative assumption in that a coffee shop would generate more trips than other retail uses that might occupy the space. Trips generated by the proposed retail component were estimated by applying the average rates for a coffee shop to the proposed square footage.

The gross Project trip estimates were reduced to account for the mixed-use development and for retail pass-by trips. The proposed Transportation Demand Management (TDM) Plan has not yet been finalized or approved by the City, so the potential trip reduction that would be achieved by

TDM is uncertain. For this reason, and for the purposes of a conservative analysis, the traffic analysis does not assume any TDM trip reductions. **Table 4.14-4** presents the trip generation estimates for the Project. After applying the trip reductions, the Project is estimated to generate 2,597 net new daily trips, with 291 net new trips (123 inbound trips and 168 outbound trips) occurring during the AM peak hour and 178 net new trips (103 inbound trips and 75 outbound trips) occurring during the PM peak hour.

TABLE 4.14-4
PROJECT TRIP GENERATION

Land Use	ITE Code[a,b]	Size	AM Peak Hour			PM Peak Hour			Daily Total
			In	Out	Total	In	Out	Total	
Proposed									
Block A Multi-Family	221	203 DU	19	54	73	54	35	89	1,104
Block B Multi-Family	221	100 DU	9	27	36	27	17	44	544
Retail	936	3,000 SF	155	149	303	54	54	109	2,062
Gross New Project Trips			***183***	***230***	***413***	***136***	***106***	***242***	***3,710***
Trip Reduction									
Mixed-Use Reduction (Housing & Employment)[c]			(1)	(2)	(3)	(3)	(2)	(4)	(49)
Housing/Retail Mixed-Use Reduction - Housing[d]			(4)	(12)	(16)	(8)	(8)	(16)	(247)
Housing/Retail Mixed-Use Reduction - Retail[d]			(12)	(4)	(16)	(8)	(8)	(16)	(247)
Pass-by Reduction[e]			(43)	(43)	(86)	(14)	(14)	(28)	(569)
Total Reduction			***(60)***	***(62)***	***(122)***	***(33)***	***(32)***	***(64)***	***(1,113)***
NET NEW PROJECT TRIPS			**123**	**168**	**291**	**103**	**75**	**178**	**2,597**

NOTES: DU = dwelling unit; SF = square feet

[a] Trip generations rate for the proposed residential units are based on the ITE's Trip Generation Manual, 10th Edition rates for Land Use Code 221 "Multifamily Housing (Mid-Rise)."

[b] Trip generation rates for the proposed retail space are based on the ITE's Trip Generation Manual, 10th Edition rates for Land Use Code 936 "Coffee/Donut Shop without Drive-Through Window"

[c] As prescribed by the VTA Transportation Impact Analysis Guidelines, 2014, a maximum trip reduction of 3 percent for mixed-use development with housing and employment was applied to the housing trip generation.

[d] As prescribed by the VTA Transportation Impact Analysis Guidelines, 2014, a 15 percent trip reduction was applied to the smaller trip generator. The same number of trips were then subtracted from the larger trip generator to account for both trip ends.

[e] As prescribed by the VTA Transportation Impact Analysis Guidelines, 2014, a 30 percent pass-by trip reduction was applied to the retail component of the project. The reduction was applied to the net retail trips after applying the mixed-use reduction.

SOURCE: Hexagon, 2019.

4.14.4.3 Project Trip Distribution and Assignment

The trip distribution patterns for the proposed uses were estimated based on existing travel patterns on the surrounding roadway system and the location of complimentary land uses. The trip distribution pattern for the residential and retail components of the Project are illustrated graphically in Appendix K. For residential trips, it was assumed that approximately 50 percent would travel to/from the Project site via U.S. 101 or SR 85, 22 percent via N. Shoreline Boulevard, 9 percent via Middlefield Road, 8 percent via Moffett Boulevard/Clark Avenue, and the

remaining trips via other local roadways. For retail trips, it was assumed that approximately 25 percent would travel to/from the Project site via N. Shoreline Boulevard, 15 percent via U.S. 101 or SR 85, 12 percent via Middlefield Road, and the remaining trips via other local roadways.

Project trips were assigned to the roadway network based on the direction of approach and departure, roadway network connections, freeway access points, and locations of Project driveways. The Project trip assignment at the intersection of N. Shoreline Boulevard and Terra Bella Avenue includes the effect of retail pass-by trips that would be subtracted from the through traffic on N. Shoreline Boulevard and added to the turning movements to and from the east leg of Terra Bella Avenue. Note that the Project trip assignment differs under background conditions due to the elimination of access to southbound SR 85 from N. Shoreline Boulevard as part of the North Shoreline Boulevard bus lane improvement project. Instead, Project trips bound for southbound SR 85 were assigned to use the southbound SR 85 on-ramp at Moffett Boulevard.

4.14.5 Transportation Impacts

4.14.5.1 Significance Criteria

Consistent with Appendix G of the State CEQA *Guidelines*, the Project would cause adverse impacts to transportation if it were to:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

City of Mountain View Significance Thresholds

The City of Mountain View 2030 General Plan and Greenhouse Gas Reduction Program (GGRP) EIR established the following interim level of service policy standards:

> **Interim level of service (LOS) standards:** Until adoption of the mobility plans described in Action MOB 1.1.1 [and adoption of alternative impact thresholds in Action MOB 8.1.2], maintain the Citywide vehicle LOS standards from the 1992 General Plan, which include a

target peak hour LOS policy of LOS D for all intersections and roadway segments, with the following exceptions in high-demand areas:

- Use LOS E for intersections and street segments within the Downtown Core and San Antonio areas where vitality, activity and multi-modal transportation use are primary goals; and
- Use LOS E for intersections and street segments on CMP designated roadways in Mountain View (e.g., El Camino Real, Central Expressway and San Antonio Road).

This transportation impact analysis will follow the interim LOS standards as written.

Significant impacts at signalized City of Mountain View intersections are said to occur when the addition of project traffic causes one of the following:

1. The level of service at the intersection drops below its respective level of service standard when project traffic is added, or
2. The intersection is already operating at an unacceptable level of service under background conditions and the addition of project traffic causes both the critical-movement delay at the intersection to increase by four or more seconds and the volume-to-capacity ratio (v/c) to increase by 1 percent (0.01) or more.

The exception to this threshold is when the addition of project traffic reduces the amount of average control delay for critical movements, i.e., the change in average control delay for critical movements are negative. In this case, the threshold is when the project increases the critical v/c value by 0.01 or more.

A significant impact is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to its acceptable level of service or to an average delay that is better than no-project conditions.

Freeway Segments

A project would create a significant adverse impact on traffic conditions on a CMP freeway segment if for either peak hour:

1. The level of service on the freeway segment degrades from an acceptable LOS E or better under existing conditions to an unacceptable LOS F under project conditions; or
2. The level of service on the freeway segment is an unacceptable LOS F under project conditions, and the number of project trips on that segment constitutes at least 1 percent (0.01) of capacity on that segment.

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions to background conditions or better.

Transit Facilities

Per Santa Clara County and VTA's CMP, significant impacts to transit service would occur if the project:

- Creates demand for public transit services in excess of the capacity which is provided, or planned; or
- Disrupts existing transit services or facilities; or
- Conflicts with an existing or planned transit facility; or
- Conflicts with transit policies adopted by the City of Mountain View, VTA, or Caltrans for their respective facilities in the study area.

Pedestrian and Bicycle Facilities

Using the General Plan as a guide, significant impacts to bicycle and pedestrian facilities would occur if a project:

- Creates a hazardous condition for pedestrians and bicyclists that currently does not exist, or otherwise interferes with pedestrian accessibility to the site and adjoining areas; or
- Conflicts with an existing or planned pedestrian or bicycle facility; or
- Conflicts with policies related to bicycle and pedestrian activity adopted by the City of Mountain View, VTA, or Caltrans for their respective facilities in the study area.

4.14.5.2 Approach to Analysis

The analysis evaluates the traffic-related impacts of the Project during the weekday morning and evening peak hours. The analysis includes the results of field reconnaissance performed in September 2018 to collect volume data (traffic counts) and signal operations data, document intersection lane configurations, and record observations of pedestrian and bicycle activity. The analysis was conducted in compliance with City and VTA guidelines. Traffic conditions were assessed for the following six scenarios:

- **Existing** – Represents existing conditions with volumes obtained from recent traffic counts and the existing roadway system.
- **Existing with Project** – Existing conditions plus traffic generated after completion of the Project.
- **Background** – Background conditions were estimated by adding to existing traffic volumes the projected volumes from approved but not yet constructed developments in the vicinity of the Project. The roadway network under background conditions is assumed to include the Shoreline Boulevard bus lane improvement project.
- **Background with Project** – Background conditions plus traffic generated after completion of the Project.
- **Cumulative** – Cumulative conditions were estimated by applying a 2 percent annual growth factor for five years to existing traffic volumes and adding trips associated with approved developments in the Project vicinity. The roadway network under cumulative conditions would be the same as the Background roadway network.
- **Cumulative with Project** – Cumulative conditions plus traffic generated after completion of the Project.

4.14.5.3 Topics with No Impact or Otherwise Not Addressed in This EIR

Due to the nature of the Project, the Project would not result in impacts related to Criterion c) (result in a change in air traffic patterns) listed above. The Project site is located near the Moffett Federal Airfield (approximately 1 mile from the Project site), and is located within the Moffett Federal Airfield Airport Influence Area (Santa Clara County Airport Land Use Commission, 2016). However, the development of the Project would not involve aircraft, nor would development of the Project intrude into aircraft flight paths or air traffic spaces or result in substantial safety risks.

4.14.5.4 Discussion of Impacts and Mitigation Measures

This section discusses potential impacts to transportation and circulation that could result from the implementation of the Project, based on application of significance thresholds, described above, which are used to determine whether an impact is significant. This section presents the impacts associated with the Project and identifies mitigation measures, as appropriate. With respect to transportation, the Project would have a significant impact on the environment if it were to meet or exceed the City's CEQA transportation thresholds of significance detailed above.

Impact TRA-1: The Project would not conflict with an applicable plan, ordinance or policy addressing the circulation system, including all modes of transportation and relevant components of the circulation system. (Criterion a) (*Less than Significant, No Mitigation Required)*

Construction Analysis

Based on the construction details provided by the applicant and the CalEEMod data (see Section 4.2, *Air Quality*), during the simultaneous construction scenario during which the maximum traffic impacts could occur, approximately 237 hauling trips and 30 worker vehicle trips would occur as part of demolition (over 20 work days) and 780 hauling trips and 30 worker vehicle trips (over approximately 20 work days) would occur as a part of excavation and grading construction phase. This would result in approximately two vehicle trips per hour for demolition and approximately five vehicle trips per hour during the excavation and grading.

As part of the City's Standard Conditions of Approval, the applicant and construction contractor are required to meet with the Public Works department to determine traffic management strategies to reduce, to the maximum extent feasible, traffic congestion and the effects of parking demand by construction workers during construction of the Project. The applicant would be required to develop a construction management plan (CMP) for review and approval by the Public Works department and Zoning Administrator. The CMP should include (at a minimum) the following items:

- A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak periods of vehicular and pedestrian activity, detour signs if required, lane closure procedures, sidewalk closure procedures, signs, cones for drivers, and designated construction access routes.
- Notification procedures for adjacent property owners and public safety personnel regarding when major deliveries, detours, and lane closures will occur.

- Location of construction staging areas for materials, equipment, and vehicles (must be located on the Project site).
- Identification of haul routes for movement of construction vehicles that would minimize impacts on vehicular and pedestrian traffic, circulation and safety; and provision for monitoring surface streets used for haul routes so that any damage and debris attributable to the haul trucks can be identified and corrected by the project applicant. Construction vehicles should be required to use designated truck/haul routes wherever possible.
- Provisions for removal of trash generated by Project construction activity.
- A process for responding to and tracking complaints pertaining to construction activity.
- Provisions for monitoring surface streets used for truck routes so that any damage and debris attributable to the trucks can be identified and corrected.
- Construction vehicles would not be allowed to park in adjacent residential neighborhoods. Construction vehicles will be required to park either in the construction zone or in designated temporary parking lots to the extent possible.

Because the level of construction-related vehicular activity will be less than that anticipated after completion of the Project (see Operations analysis, below), and because the CMP will address and reduce localized adverse effects of construction-related traffic, this Project's construction-related traffic impacts would be less than significant.

Existing with Project Operations Analysis

For the Existing with Project scenario, the total new trips generated by the Project were added to the existing traffic volumes to establish the Existing with Project traffic volumes. The results of the intersection level of service analysis under Existing with Project conditions are summarized in **Table 4.14-5**. The results show that most of the study intersections would operate at acceptable levels during both the AM and PM peak hours. The N. Shoreline Boulevard/Pear Avenue intersection (Intersection No. 1) would continue to operate at LOS F during the AM peak hour and the N. Shoreline Boulevard/U.S. 101 northbound off-ramp intersection (Intersection No. 2) would continue to operate at LOS F during both the AM and PM peak hours. However, the Project would not result in a significant project impact at either of these two intersections because Project traffic would not cause an increase in critical-movement delay of four or more seconds or an increase in critical v/c of 1 percent (0.01) or more. The intersection level of service calculation sheets are provided in Appendix K.

Background with Project Operations Analysis

Background traffic volumes for the study intersections were estimated by adding to the existing traffic volumes (1) the trips generated by nearby approved projects that have not been constructed or occupied and (2) the reassigned traffic resulting from the Shoreline Boulevard bus lane improvement project. The approved projects considered in the traffic analysis are listed in Appendix K. Vehicle trips from the approved projects were obtained from the project's traffic study or environmental document (initial study or EIR), if available. For projects without a traffic study, trip estimates were developed using rates published in the ITE Trip Generation Manual, 10th Edition. The estimated trips were assigned to the study intersections according to distributions identified in the development traffic studies, if available, or knowledge of the study area.

TABLE 4.14-5
EXISTING WITH PROJECT INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Existing		Existing w/ Project	
			Avg. Delay (sec/veh)	LOS	Avg. Delay (sec/veh)	LOS
1	N. Shoreline Blvd and Pear Ave[a]	AM PM	**80+** 35.6	**F** D+	**80+** 35.6	**F** D+
2	N. Shoreline Blvd and U.S. 101 NB Off-Ramp/ La Avenida[a]	AM PM	**80+** **80+**	**F** **F**	**80+** **80+**	**F** **F**
3	N. Shoreline Blvd/U.S. 101/SR 85 SB Ramps[b]	AM PM	17.7 17.9	B B	17.9 18.0	B B-
4	N. Shoreline Blvd and Terra Bella Ave[b]	AM PM	20.8 17.6	C+ B	25.9 19.3	C B-
5	N. Shoreline Blvd and Middlefield Rd[b]	AM PM	44.7 50.9	D D	45.5 51.3	D D-
6	N. Shoreline Blvd and Montecito Ave	AM PM	22.5 28.5	C+ C	22.4 28.5	C+ C
7	Rengstorff Ave and Middlefield Rd	AM PM	31.0 35.3	C D+	31.3 35.4	C D+
8	Moffett Blvd and Middlefield Rd	AM PM	35.7 38.8	D+ D+	36.0 39.1	D+ D
9	Moffett Blvd and SR 85 NB Ramps	AM PM	7.7 9.0	A A	7.7 9.0	A A
10	Moffett Blvd and Leong Dr	AM PM	22.8 19.2	C+ B-	22.8 19.2	C+ B-
11	Whisman Rd and Middlefield Rd	AM PM	31.7 35.2	C D+	31.8 35.2	C D+
12	Ellis St and Middlefield Rd	AM PM	18.5 21.5	B- C+	18.5 21.5	B- C+

NOTES:
Bold indicates a substandard LOS.
NB = northbound; SB = southbound

[a] The calculated LOS does not reflect the unmet vehicle demand that cannot get through the intersection during the peak hour. Field observations indicate that the intersection operates at LOS F with 80+ seconds of average delay during one or both peak hours.

[b] The calculated LOS is based on the overall average traffic delay for all movements. While the intersection currently operates at an acceptable level overall, the northbound through movements during the AM peak hour are affected by queue spillback from downstream intersections. However, observations show that generally the queues clear during each cycle and do not significantly affect the operation of the intersection overall.

SOURCE: Hexagon, 2019.

For the Background with Project scenario, the project trips generated by the project were added to the background traffic volumes to establish the Background with Project traffic volumes. The results of the intersection level of service analysis under Background with Project conditions are summarized in **Table 4.14-6**. The results show that most of the study intersections would operate at acceptable levels during both the AM and PM peak hours. The N. Shoreline Boulevard/Pear Avenue intersection (Intersection No. 1) would continue to operate at LOS F during the AM peak hour and the N. Shoreline Boulevard/U.S. 101 northbound off-ramp intersection (Intersection No. 2) would continue to operate at LOS F during both the AM and PM peak hours. However, the Project would not result in a significant project impact at either of these two intersections because Project traffic would not cause an increase in critical-movement delay of four or more seconds or

an increase in critical v/c of 1 percent (0.01) or more. The intersection level of service calculation sheets are provided in Appendix K.

TABLE 4.14-6
BACKGROUND WITH PROJECT INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Background		Background w/ Project	
			Avg. Delay (sec/veh)	LOS	Avg. Delay (sec/veh)	LOS
1	N. Shoreline Blvd and Pear Ave[a]	AM PM	**80+** 35.6	**F** D+	**80+** 35.7	**F** D+
2	N. Shoreline Blvd and U.S. 101 NB Off-Ramp/ La Avenida[a]	AM PM	**80+** **80+**	**F** **F**	**80+** **80+**	**F** **F**
3	N. Shoreline Blvd/U.S. 101/SR 85 SB Ramps[b]	AM PM	18.5 16.0	B- B	18.5 16.3	B- B
4	N. Shoreline Blvd and Terra Bella Ave[b]	AM PM	27.9 27.3	C C	34.2 30.8	C- C
5	N. Shoreline Blvd and Middlefield Rd[b]	AM PM	45.3 52.3	D D-	45.8 52.8	D D-
6	N. Shoreline Blvd and Montecito Ave	AM PM	22.3 28.7	C+ C	22.2 28.6	C+ C
7	Rengstorff Ave and Middlefield Rd	AM PM	31.5 35.4	C D+	31.8 35.5	C D+
8	Moffett Blvd and Middlefield Rd	AM PM	38.5 41.4	D+ D	39.2 41.9	D D
9	Moffett Blvd and SR 85 NB Ramps	AM PM	9.3 8.7	A A	9.3 8.7	A A
10	Moffett Blvd and Leong Dr	AM PM	20.9 28.4	C+ C	20.9 28.5	C+ C
11	Whisman Rd and Middlefield Rd	AM PM	31.4 36.5	C D+	31.5 36.5	C D+
12	Ellis St and Middlefield Rd	AM PM	18.7 21.5	B- C+	18.7 21.5	B- C+

NOTES:
Bold indicates a substandard LOS.
NB = northbound; SB = southbound

[a] The calculated LOS does not reflect the unmet vehicle demand that cannot get through the intersection during the peak hour. Field observations indicate that the intersection operates at LOS F with 80+ seconds of average delay during one or both peak hours.

[b] The calculated LOS is based on the overall average traffic delay for all movements. While the intersection currently operates at an acceptable level overall, the northbound through movements during the AM peak hour are affected by queue spillback from downstream intersections. However, observations show that generally the queues clear during each cycle and do not significantly affect the operation of the intersection overall.

SOURCE: Hexagon, 2019.

Cumulative with Project Operations Analysis

Cumulative traffic volumes reflect traffic generated by approved development projects and traffic growth contributed by the pending developments in the study area. The Cumulative (no Project) traffic volumes were estimated by first applying a 2 percent growth factor per year for five years to existing 2018 traffic volumes; this presents a near-term cumulative scenario around the time the Project would be constructed and occupied. The annual growth factor accounts for the volumes from known pending development projects, smaller ministerial activities, as well as general growth in the

area, and is evaluated yearly by the City's Public Works Department. The trips generated by the approved projects in the vicinity were then added to obtain Cumulative (no Project) traffic volumes.

Cumulative with Project conditions were evaluated relative to Cumulative (no Project) conditions in order to determine potential Project impacts. The results of the intersection level of service analysis are provided in **Table 4.14-7**. The following three study intersections would operate at unacceptable levels of service (LOS E or F) under both Cumulative (no Project) conditions and Cumulative with Project conditions:

1. N. Shoreline Boulevard/Pear Avenue (AM peak hour)
2. N. Shoreline Boulevard/U.S. 101 Northbound Off-Ramp (AM and PM peak hours)
5. N. Shoreline Boulevard/W. Middlefield Road (PM peak hour)

TABLE 4.14-7
CUMULATIVE WITH PROJECT INTERSECTION LEVEL OF SERVICE

No.	Intersection	Peak Hour	Cumulative		Cumulative w/ Project	
			Avg. Delay (sec/veh)	LOS	Avg. Delay (sec/veh)	LOS
1	N. Shoreline Blvd and Pear Ave[a]	AM PM	**80+** 37.0	**F** D+	**80+** 37.0	**F** D+
2	N. Shoreline Blvd and U.S. 101 NB Off-Ramp/ La Avenida[a]	AM PM	**80+** **80+**	**F** **F**	**80+** **80+**	**F** **F**
3	N. Shoreline Blvd/U.S. 101/SR 85 SB Ramps[b]	AM PM	19.0 16.6	B- B	19.1 16.8	B- B
4	N. Shoreline Blvd and Terra Bella Ave[b]	AM PM	29.1 28.5	C C	35.8 32.0	D+ C-
5	N. Shoreline Blvd and Middlefield Rd[b]	AM PM	47.7 **59.0**	D **E+**	48.5 **59.7**	D **E+**
6	N. Shoreline Blvd and Montecito Ave	AM PM	23.0 30.6	C C	23.0 30.6	C C
7	Rengstorff Ave and Middlefield Rd	AM PM	32.2 36.3	C- D+	32.5 36.4	C- D+
8	Moffett Blvd and Middlefield Rd	AM PM	41.3 44.9	D D	42.6 45.5	D D
9	Moffett Blvd and SR 85 NB Ramps	AM PM	9.8 9.3	A A	9.8 9.3	A A
10	Moffett Blvd and Leong Dr	AM PM	22.3 37.0	C+ D+	22.3 37.1	C+ D+
11	Whisman Rd and Middlefield Rd	AM PM	31.8 37.9	C D+	32.0 38.0	C D+
12	Ellis St and Middlefield Rd	AM PM	20.2 21.9	C+ C+	20.2 22.0	C+ C+

NOTES:
Bold indicates a substandard LOS.
NB = northbound; SB = southbound

[a] The calculated LOS does not reflect the unmet vehicle demand that cannot get through the intersection during the peak hour. Field observations indicate that the intersection operates at LOS F with 80+ seconds of average delay during one or both peak hours.

[b] The calculated LOS is based on the overall average traffic delay for all movements. While the intersection currently operates at an acceptable level overall, the northbound through movements during the AM peak hour are affected by queue spillback from downstream intersections. However, observations show that generally the queues clear during each cycle and do not significantly affect the operation of the intersection overall.

SOURCE: Hexagon, 2019.

However, the added Project traffic would not result in a significant project impact at these intersections because the Project traffic would not cause an increase in critical-movement delay of four or more seconds or an increase in critical v/c of 1 percent (0.01) or more.

Significance: Less Than Significant.

Mitigation: None required.

Impact TRA-2: The Project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways. (Criterion b) (*Less than Significant, No Mitigation Required*)

Traffic volumes on the study freeway segments under Project conditions were estimated by adding Project trips to the existing volumes obtained from the 2016 CMP Annual Monitoring Report (see Table 4.14-3). The results of the freeway segment impact analysis indicate that all the study freeway segments currently operating at LOS F would continue operating at an unacceptable LOS F with the addition of Project trips. The Project would contribute trips equivalent to less than 1 percent of the capacity on each of the studied freeway segments under every traffic scenario. Thus, the Project would have a less-than-significant impact on nearby freeway segments under Existing with Project, Background with Project, and Cumulative with Project conditions.

Significance: Less Than Significant.

Mitigation: None required.

Impact TRA-3: The Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., use of large farm equipment). (Criterion d) (*Less than Significant, No Mitigation Required)*

On-site circulation is presented on Figure 3-6. Vehicular access to the Project site would be provided via one driveway on Terra Bella Avenue and one driveway on Linda Vista Avenue. The Terra Bella Avenue driveway would be 30 feet wide, measured at the throat, and would allow full access. The Linda Vista Avenue driveway would be 26 feet wide, measured at the throat, and would also allow full access. Both of these driveways would be designed in compliance with applicable City codes and standards. The Project driveways would be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on Terra Bella Avenue and Linda Vista Avenue. Any landscaping, parking, and signage would be located in such a way to ensure an unobstructed view for drivers entering and exiting the site.

On-site parking for the Project would be provided via surface parking (52 spaces) and parking garages (731 spaces). As proposed, the width of all drive aisles and parking ramps and the parking space dimensions meet City standards. The proposed aisle widths would be adequate for two-way traffic and to allow maneuvering in and out of the adjacent parking spaces. The ramps in the proposed residential garages are shown to have a maximum slope of 20 percent, with 10 percent transitions on each side. Commonly cited parking publications recommend grades of up to 16 percent on ramps where no parking is permitted, but grades of up to 20 percent are cited as acceptable when ramps are covered (i.e., protected from weather) and not used for pedestrian walkways. These dimensions are acceptable since the ramps are covered (i.e., protected from weather) and not used for pedestrian walkways. It should be noted that most ramp users will be residents, and thus, will quickly become accustomed to steeper grades.

A loading zone would be provided at the southwest corner of the Block A building. At the dead-end driveway separating the existing office building and Block A at the western side of the Project site, there is sufficient space on site to allow trucks to conduct a three-point turn in order to turn around on site. Thus, trucks will not have to back into or out of the site driveway. A trash staging area would be located within the parking lot. Trash trucks would enter via the Terra Bella Avenue driveway and exit via the Linda Vista Avenue driveway. Delivery trucks would enter the site via Terra Bella Avenue, turn left at the first cross aisle, and then back into the loading space.

As such, the Project would not substantially increase hazards due to a design feature or incompatible uses, and thus the Project would not result in a significant impact related to transportation hazards or safety.

Significance: Less Than Significant.

Mitigation: None required.

Impact TRA-4: The Project would not result in inadequate emergency access. (Criterion e) (*Less than Significant, No Mitigation Required)*

On-site circulation is presented on Figure 3-6. Emergency vehicle access to the Project site would be provided via one driveway on Terra Bella Avenue and one driveway on Linda Vista Avenue. As described above under the discussion of Impact TRA-3, both driveways would allow full access and would be designed in compliance with applicable City codes and standards, and the designs would be reviewed by the Mountain View Fire Department for adequacy in providing emergency access and egress. In the unlikely event that one driveway was blocked (by, for example, a disabled vehicle or as the result of an unforeseen or catastrophic event), the other driveway could be used to access the Project site.

All internal driveways would be designed and subject to these same standards and reviews. A hammerhead turnaround would be provided explicitly for emergency vehicle use at the dead-end driveway separating the existing office building and Block A at the western side of the Project site.

An existing easement between the fire lane located on the south side of the Church of Scientology site and the Project's internal driveway network provides additional emergency vehicle access.

Based on the above discussion, the Project would not cause a significant impact on emergency access.

Significance: Less Than Significant.

Mitigation: None required.

Impact TRA-5: The Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities. (Criterion f) (*Less than Significant, No Mitigation Required*)

Pedestrian and Bicycle Facilities Analysis

Overall, the existing sidewalks and pedestrian paths described above in Section 4.14.2.4, *Pedestrian and Bicycle Facilities*, would provide pedestrians with safe routes to surrounding land uses including Downtown Mountain View, the Mountain View Transit Center, and nearby schools and bus stops. Pedestrian routes to nearby schools including Theuerkauf Elementary School and Crittenden Middle School have adequate sidewalks and pedestrian pathways with crosswalks provided. The Project would also enhance pedestrian circulation with a public pedestrian/bicycle pathway through the site connecting Shoreline Boulevard and Linda Vista Avenue.

The Project site is adjacent to bike lanes along N. Shoreline Boulevard and would provide a public pedestrian/bicycle pathway through the site connecting Shoreline Boulevard and Linda Vista Avenue. Although not designated as a bike route, Linda Vista Avenue and Terra Bella Avenue carry low traffic volumes and would, therefore, be conducive to bicycle activity. In addition, the Project is located about 1 mile from the Stevens Creek Trail and about 0.8 miles from the Permanente Creek Trail. It is expected that the Project would generate some bicycle trips because of its proximity to the bike lanes and complementary land uses, including the Mountain View Transit Center, and corporate campuses in the North Bayshore and Whisman areas. However, based on observations of existing bicycle activity in the vicinity of the Project site, bicycle trips generated by the Project could be safely accommodated by these existing facilities without degrading conditions for existing bicyclists.

Transit Facilities Analysis

Because of the local VTA buses serving the Project site and the Project's location near the Mountain View Transit Center and the North Bayshore area, it is expected that the Project would generate some commuter transit trips that would utilize the MVgo shuttles or VTA Routes 40 and 185 on N. Shoreline Boulevard to get to the North Bayshore area or the VTA Light Rail/Caltrain at the Mountain View Transit Center to get to other destinations. The transit center is approximately 1 mile from the Project site and could be easily accessed by bicycle. Residents who choose to take buses to the transit center could utilize the MVgo shuttles or VTA Routes 40

or 185 on N. Shoreline Boulevard. Based on the 2012-2016 American Community Survey 5-Year Estimates for 2016, an average of approximately 6 percent of Mountain View residents use transit to commute to and from work. Assuming a 6 percent transit mode share, the Project would generate approximately 17 new transit riders during the AM peak hour and 11 riders during the PM peak hour. This new ridership generated by the Project could be accommodated by these existing and planned transit services.

Significance: Less Than Significant.

Mitigation: None required.

Vehicle Miles Traveled (Informational Only)

In accordance with SB 743, the new CEQA Guidelines section 15064.3, subdivision (b) was adopted in December 2018 by the California Natural Resources Agency. These revisions to the CEQA Guidelines change the way transportation impacts will be analyzed in environmental documents. With SB 743, the criteria for determining the significance of transportation impacts are primarily focused on projects within transit priority areas, and shift the focus from vehicle congestion and delay to a reduction of greenhouse gas emissions, creation of multimodal networks, and promotion of a mix of land uses. VMT is a measure of the total number of miles driven to or from a development and is sometimes expressed as an average per trip or per person. As stated in the Governor's Office of Planning and Research Technical Advisory (2018):

> *SB 743 (Steinberg, 2013), which was codified in Public Resources Code section 21099, required changes to the guidelines implementing CEQA (CEQA Guidelines) (Cal. Code Regs., Title 14, Div. 6, Ch. 3, § 15000 et seq.) regarding the analysis of transportation impacts. As one appellate court recently explained: "During the last 10 years, the Legislature has charted a course of long-term sustainability based on denser infill development, reduced reliance on individual vehicles and improved mass transit, all with the goal of reducing greenhouse gas emissions. Section 21099 is part of that strategy … ." (Covina Residents for Responsible Development v. City of Covina (2018) 21 Cal.App.5th 712, 729.) Pursuant to Section 21099, the criteria for determining the significance of transportation impacts must "promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses." (Id., subd. (b)(1); see generally, adopted CEQA Guidelines, § 15064.3, subd. (b) [Criteria for Analyzing Transportation Impacts].) To that end, in developing the criteria, OPR has proposed, and the California Natural Resources Agency (Agency) has certified and adopted, changes to the CEQA Guidelines that identify vehicle miles traveled (VMT) as the most appropriate metric to evaluate a project's transportation impacts. With the California Natural Resources Agency's certification and adoption of the changes to the CEQA Guidelines, automobile delay, as measured by "level of service" and other similar metrics, generally no longer constitutes a significant environmental effect under CEQA. (Pub. Resources Code, § 21099, subd. (b)(3).)*

The newly adopted guidance provides that a lead agency may elect to be governed by the provisions of this section immediately. Beginning on July 1, 2020, the provisions of this section

shall apply statewide. The City is currently engaged in this process and has not yet formally adopted its updated transportation significance thresholds or its updated transportation impact analysis procedures. Since the regulations of SB 743 have not been finalized or adopted by the City, delay and LOS are the measures used in this EIR to determine the significance of transportation impacts (see Impact TRA-1 discussion, above). However, an analysis of VMT for the Project is presented for informational purposes to aid decision makers during this transition period from LOS to VMT. It is not intended to provide any indication of the transportation impacts of the project under SB 743. The results of the VMT analysis are summarized below; additional detail can be found in Appendix K.

An analysis of a project's VMT impacts typically compares the VMT per trip or per person to the average VMT of a region or area, and whether that project will improve or worsen that average. While the VTA is in the process of developing a VMT analysis tool and in anticipation of the City potentially developing their own tool to estimate VMT for development projects, the MTC is currently the best source to obtain VMT data for areas within the nine counties of the San Francisco Bay Area. The VMT by place of residence for the Year 2020 was obtained from MTC's website and was used to calculate the average VMT per capita for (a) the traffic analysis zone (TAZ) in which the project is located, (b) the City of Mountain View, and (c) Santa Clara County.

The Project site is located immediately south of U.S. 101, which is the boundary between TAZ 377 and TAZ 401. TAZ 401 represents the portion of Mountain View north of U.S. 101, otherwise known as the North Bayshore area. The average VMT per capita in the North Bayshore area (12.82) is substantially less than the average VMT per capita for TAZ 377 (16.13). Thus, compared to other parcels within TAZ 377, the Project is expected to have a lower than average VMT per resident due to its proximity to the North Bayshore employment area. Furthermore, the Project site is located immediately adjacent to multiple transit routes and bike lanes on N. Shoreline Boulevard. The Project site's accessibility via transit and bike would also result in a lower than average VMT compared to other parcels within TAZ 377.

The City of San Jose has developed a VMT evaluation tool to quantify the average VMT per capita for specific development projects. San Jose's VMT tool uses data from the VTA model to estimate the average VMT per capita for the project site and then estimates the effect of specific characteristics of the proposed project on VMT. Currently, the City of Mountain View does not have any tools available to estimate the average VMT by parcel within a TAZ. However, the San Jose VMT tool was used to estimate the effect of the Project's density on VMT. The Project is expected to increase the residential density of TAZ 377 by approximately 12 percent. The increase in development density is estimated to result in a 5 percent reduction in VMT.

Reductions in vehicle trips and VMT are also expected due to the mixed-use nature of the Project. The Project will add residential and retail uses on a site that is currently occupied entirely by office use. Based on VTA's Transportation Impact Analysis Guidelines, a mixed-use site containing housing and employment could reduce residential trips by up to 3 percent. Likewise, a mixed-use site containing housing and retail could reduce residential trips by up to 15 percent. The retail trip reductions may vary depending upon the specific tenant. Reductions in VMT may

not equal the trip reductions because trip lengths vary by purpose. Nevertheless, internal (captured) trips are expected to result in a reduction in the Project's VMT.

Furthermore, the project will implement a TDM Plan with a combination of services, incentives, facilities, and actions that reduce single–occupant vehicle trips to help relieve traffic congestion, parking demand, and air pollution problems. The TDM Plan has not yet been finalized so the potential reduction in VMT due to TDM is uncertain and has not been quantified.

Due to the Project site's proximity to the North Bayshore employment area, the presence of transit routes and bike lanes immediately adjacent the Project site on N. Shoreline Boulevard, the Project's development density, and the mix of land uses on the Project site, the Project is expected to result in an average VMT per capita between 11.9 and 14.0, which is lower than the citywide average VMT per capita (14.37).

4.14.6 Summary of Transportation Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact TRA-1: The Project would not conflict with an applicable plan, ordinance or policy addressing the circulation system, including all modes of transportation and relevant components of the circulation system.	Less than Significant	None required	-
Impact TRA-2: The Project would not conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	Less than Significant	None required	-
Impact TRA-3: The Project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., use of large farm equipment).	Less than Significant	None required	-
Impact TRA-4: The Project would not result in inadequate emergency access.	Less than Significant	None required	-
Impact TRA-5: The Project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Less than Significant	None required	-

4.14.7 References – Transportation

City of Mountain View, 2015. *Mountain View Bicycle Transportation Plan Update*. Adopted November 17, 2015. Available online at https://www.mountainview.gov/civicax/filebank/blobdload.aspx?BlobID=18294. Accessed May 2019.

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Hexagon Transportation Consultants, Inc., 2019. *1001 North Shoreline Boulevard Residential Development Transportation Impact Analysis*. September 24, 2019.

Santa Clara County Airport Land Use Commission, 2016. *Comprehensive Land Use Plan – Moffett Federal Airfield*. Amended November 18, 2016.

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4.15 Utilities and Service Systems

4.15.1 Introduction

This section addresses potential impacts that development of the Project could have to public utility and service systems. Project impacts related to surface water and stormwater runoff are also discussed in Section 4.9, *Hydrology and Water Quality*, and impacts related to electricity and natural gas supply and demand are also discussed in Section 4.5, *Energy*.

Primary resources used in this analysis include the Project-specific *The Residences @ Shoreline Gateway Utility Impact Study* prepared by Schaaf & Wheeler Consulting Civil Engineers in August 2019 (Utility Impact Study), which is presented as an appendix to this EIR (**Appendix L**), and resources from the California Department of Resources Recycling and Recovery (CalRecycle).

4.15.2 Existing Setting

The Project site is located in a developed area within the City of Mountain View and is currently served by existing water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications service systems. The Project site is currently developed with a 111,443-square-foot, four-story office building, surface parking lots, landscaping, and private amenity space.

4.15.2.1 Water

Water Supply

The City owns and operates its own water utility which serves the majority of the City. Approximately 86 percent of the City's potable and non-potable water comes from the San Francisco Public Utilities Commission (SFPUC). SFPUC's primary source of water is the Tuolumne River which is transported via the Hetch Hetchy Water System. The remainder of SFPUC water is provided by surface water which is treated in facilities in Alameda and San Mateo Counties (SFPUC, 2019). The City purchases approximately 7 percent of its drinking water supply from the Santa Clara Valley Water District (SCVWD). SCVWD's obtains water from the Sacramento-San Joaquin River Delta and from local rainwater captured in local reservoirs. Approximately 2 percent of City water comes from groundwater wells in the Santa Clara Valley Groundwater Subbasin maintained by the City (City of Mountain View, 2019a). The remaining 5 percent of the City's water is supplied as tertiary treated recycled water from the Regional Water Quality Control Plan (RWQCP) owned and operated by the City of Palo Alto. The City has divided its service area into three zones. The Project site is located in Zone 1 which receives treated water from the SFPUC which is supplemented with water from City-operated groundwater wells (City of Mountain View, 2016a).

Municipal Water Supply and Infrastructure

The City of Mountain View's *2015 Urban Water Management Plan* (UWMP) forecasts that water supplies would be available to meet the City's projected future water demands during normal

and wet years until 2040, based on general growth estimates and supplier projections. As of 2015, residential customers in Mountain View accounted for approximately 57 percent of the City's total water use and approximately 23 percent of water use was for landscape irrigation. The remaining 20 percent was used between commercial, institutional, and industrial uses, with construction meters accounting for less than one-tenth of one percent of total use (City of Mountain View, 2016a).

The 2015 UWMP utilizes base daily water use estimates from 2010. In 2010 the base daily water use was approximately 9.78 million gallons per day (mgd) and 132 gallons per capita per day (gpcd). The UWMP established a 2020 target daily water use of 146 gpcd. During 2015, it was determined that conservation measures resulted in an average daily water use of 105 gpcd, which is well below the 2020 target per capita water use. According to the UWMP, the City anticipates being able to accommodate water demand through 2040 during normal, single- and multiple-dry year scenarios. City strategies to meet such demand through a combination of potable supply sources, recycled water, water conservation, and water shortage contingency measures (City of Mountain View, 2016a).

Existing City water mains surround the eastern, western, and southern Project site boundaries. These existing water mains include: a 12-inch water main in Terra Bella Avenue, a 12-inch water main in N Shoreline Boulevard, and an 8-inch water main in Linda Vista Avenue. Water supply to serve the existing office building on the Project site is provided from the 12-inch water main in Terra Bella Avenue.

City Water System Improvements

As part of its Capital Improvement Program, the City is proposing multiple upgrades to the water system surrounding the Project site as a part of a Capital Improvement Project (CIP) crossing State Highway 101 near N Shoreline Boulevard (Shoreline/101 CIP). These upgrades include a new 16-inch City transmission water main from N Shoreline Boulevard that would enter the Project site at the Project's east-west internal road between Block A and the existing office building. The water main would run along the eastern and southern border of Block A, located beneath Project internal streets, and would eventually cross under Highway 101 into the North Bayshore Specific Plan area, with a 12-inch pipe along La Avenida, Inigo Way, and Pear Avenue to N Shoreline Boulevard (Appendix L). The proposed new water main alignment is depicted in **Figure 4.15-1**.

4.15.2.2 Wastewater Collection and Treatment

The City of Mountain View is the primary sanitary service provider for the city. The Wastewater Section of the City of Mountain View Public Works Department operates and maintains the City's wastewater collection (sewer) system. Wastewater is collected through 159 miles of mains and two pump stations which deliver the City's wastewater to the RWQCP in Palo Alto for treatment (City of Mountain View, 2018a). The RWQCP, owned and operated by the City of Palo Alto, collects and treats water for the communities of Los Altos, Los Altos Hills, Mountain View, Palo Alto, and Stanford University. The RWQCP has a design capacity of 39 mgd. Average daily flow for the RWQCP in 2018 was 17.4 mgd. The total annual flow in 2018 was 6,337 million gallons (City of Palo Alto, 2019).

SOURCE: Schaaf & Wheeler, 2019

Residences @ Shoreline Gateway Project

Figure 4.15-1
Proposed Shoreline/101 CIP Water Main

ESA

The City entered into a joint agreement with the cities of Palo Alto and Los Altos, which is known as the "Basic Agreement," for the construction and maintenance of the joint sewer system, addressing the need for conveyance, treatment, and disposal of wastewater to meet Regional Water Quality Control Board requirements. The Basic Agreement also outlines the wastewater capacity rights for each participating jurisdiction. According to the Basic Agreement, the City's annual wastewater capacity allotment is 15.1 mgd (Appendix L). In 2015, the City generated approximately 6.4 mgd of wastewater (City of Mountain View, 2016a). According to the Basic Agreement, when the City reaches 80 percent of its contractual capacity rights, the City will conduct an engineering study to redefine anticipated future needs of the treatment plant (Appendix L).

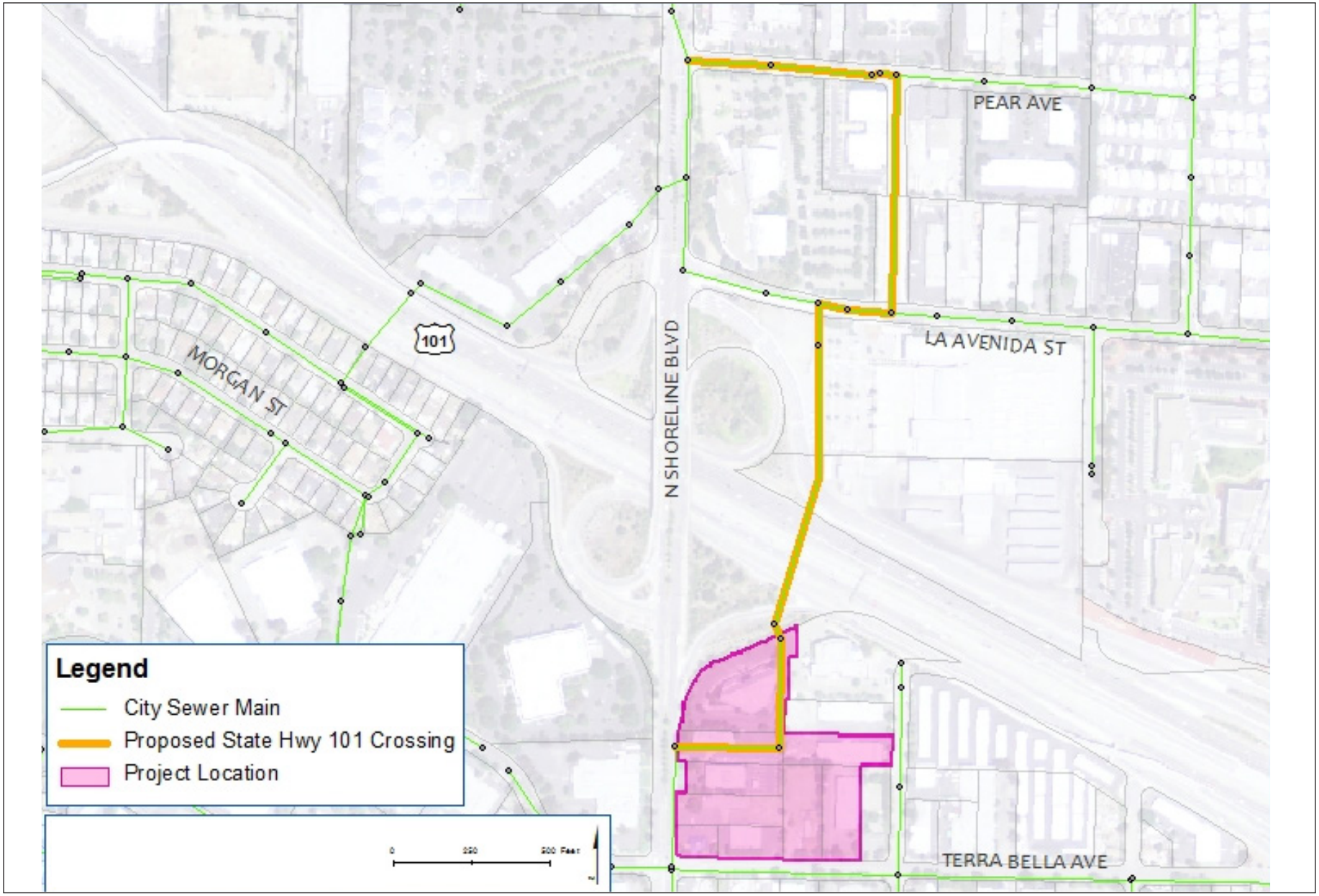
Existing 18-inch sewer mains surround the eastern, western, and southern Project site boundaries. Sewer flow from the existing office building is discharged into the 18-inch diameter City sewer main in Terra Bella Avenue.

City Wastewater System Improvements

As part of its Capital Improvement Program, the City is proposing multiple upgrades to the wastewater system surrounding the Project site. The Shoreline/101 CIP includes a new 21-inch City sanitary sewer main will run from N Shoreline Boulevard and enter the Project site at the Project's east-west internal road between Block A and the existing office building. Similar to the proposed new water main, the sewer main would run along the eastern and southern border of Block A, located beneath Project internal streets, and would eventually cross under Highway 101 into the North Bayshore Specific Plan area (Appendix L). New City Sanitary Sewer System Manholes (SSMH) would be installed at the north end of the Project site, at the intersection of east-west and north-south Project internal roads, and within N Shoreline Boulevard. The proposed new sewer main alignment is depicted in **Figure 4.15-2**.

4.15.2.3 Stormwater Collection and Treatment

The stormwater collection and treatment system within the vicinity of the Project site is owned and operated by the City of Mountain View Public Works Department. The City's storm drainage system includes an underground gravity piping network, cross culverts, drywells, a detention pond, and five pump stations (City of Mountain View, 2012). Approximately 80 percent of the storm drain system discharges to Stevens and Permanent creeks. The remainder discharges to the Permanente Diversion Channel, Adobe Creek, and other sloughs which eventually drain into the bay (City of Mountain View, 2012). Existing drains and infrastructure on the Project site constructed as a part of the 2015 Office Project convey stormwater directly into the City's stormwater system. A portion of the Project site at the northern end flanking the southbound on-ramp to U.S. 101, which was acquired by the applicant from the California Department of Transportation ("Caltrans"), contributes to the Caltrans stormwater system at the northeast end of the Project site.



SOURCE: Schaaf & Wheeler, 2019

Residences @ Shoreline Gateway Project

Figure 4.15-2
Proposed Shoreline/101 CIP Sewer Main

ESA

4.15.2.4 Solid Waste

Solid waste collection and recycling services for residents and businesses in Mountain View are provided by Recology Mountain View. Once collected, solid waste and recyclables are transported to the Sunnyvale Materials Recovery and Transfer station in Sunnyvale to be sorted. Non-recyclable waste is transported to Kirby Canyon Sanitary Landfill in south San Jose. Kirby Landfill has a permitted capacity of 36,400,000 cubic yards and a permitted throughput of 2,600 tons/day. In 2015, the Kirby Canyon Landfill had an estimated remaining capacity of 16,191,600 cubic yards and an estimated closure date of December 31, 2022. The Newby Island Landfill, also located in Santa Clara County, has a remaining capacity of 21,200,000 cubic yards and an estimated closure date of 2041 (CalRecycle, 2019).

Beginning in 2009, the City of Mountain View adopted a Zero Waste Plan which identified programs to reduce waste. In 2018, the City Council adopted a Zero Waste Policy which established a goal of diverting 90 percent of materials from a landfill by 2030. The County is in the process of developing a Zero Waste Plan for 2019 and currently has a 78 percent diversion rate (City of Mountain View, 2019b). The City of Mountain View also began a pilot compost collection program for multi-family apartment and condo complexes (City of Mountain View, 2019d).

Recology Mountain View currently provides trash and recycling collection for the office building at the Project site.

4.15.2.5 Power, Gas, and Telecommunications

Electricity in the City is provided by Pacific Gas & Electric (PG&E) and Silicon Valley Clean Energy (SVCE). SVCE, is a Community Choice Energy Agency governed by 13 communities in Santa Clara County. SCVE purchases energy directly from the energy source and delivers to customers through existing PG&E infrastructure. Customers are automatically enrolled in the Carbon Free program which includes electricity generated from renewable and carbon-free sources. Customers can also choose a 100 percent renewable plan or can opt out and choose PG&E generation service which is approximately 80 percent carbon free (SVCE, 2019). Customers who choose to opt out of SVCE's energy plans receive electricity from PG&E. Only a small percentage of customers opt out of SVCE service, amounting to approximately 1.8 percent of combined residential and commercial accounts (City of Mountain View, 2018d). PG&E also provides natural gas service to the City.

Existing electrical infrastructure on the Project site includes underground power lines that serve the existing office building and lighting for surface parking lots. An existing natural gas transmission line currently enters the site from N Shoreline Boulevard and serves the existing office building.

The City has two main telecommunications providers which are widely available within the City: AT&T and Xfinity from Comcast. There are eight residential internet providers in the City. The average household in the City is determined to have 4-5 choices for residential internet providers, which is considered to be above average (Broadband Now, 2019). As of February 19, 2014, the City of Mountain View and Google announced that Google would provide free, public outdoor

Wi-Fi in Mountain View along the downtown corridor (City of Mountain View, 2019c). There is also an existing monopole located on the Project site, which is owned by Verizon and contains telecommunications equipment, located on the northeastern portion of development area.

4.15.3 Regulatory Setting

Regulations related to water quality are described in more detail in Section 4.9, *Hydrology and Water Quality*. Regulations related to energy are described in Section 4.5, *Energy*.

4.15.3.1 State

Senate Bill 610 and Senate Bill 221

The purpose and legislative intent of Senate Bill 610 (SB 610) and Senate Bill 221 (SB 221) is to preclude projects 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 large-scale development projects.[1] The WSA evaluates the water supply available for new development based on anticipated demand. The Project does not meet the definition of a large-scale project under SB 610, and a WSA would not be required for the Project.

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 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.

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.

[1] 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 ft^2 of floor space; 3) a proposed commercial office building employing more than 1,000 persons or having more than 250,000 ft^2 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 (sf) 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.

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.

Water Code Sections 10608 et seq. ("SB 7" or "SB X7 7")

Water Code Sections 10608 et seq. require urban retail water suppliers to set and achieve water use targets that will help the State achieve 20 percent per capita urban water use reduction by 2020.

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 4.9, *Hydrology and Water Quality*, *Regulatory Setting* for additional requirements).

Assembly Bill 939

Assembly Bill 939 (AB 939), enacted in 1989 and known as the Integrated Waste Management Act, requires each city and/or county in the State to prepare a Source Reduction and Recycling Element to demonstrate reduction in the amount of waste being disposed to landfills, with diversion goals of 50 percent by the year 2000. Diversion includes waste prevention, reuse, and recycling. Senate Bill (SB) 1016 revised the reporting requirements of AB 939 by implementing a per capita disposal rate based on a jurisdiction's population (or employment) and its disposal.

In 2011, AB 341 amended AB 939 to include a provision declaring that it is the policy goal of the State that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020, and annually thereafter.

California Integrated Waste Management Act

The Integrated Waste Management Act of 1989 (Pub. Res. Code Section 40050 et seq.), as amended, required each local agency to divert 50 percent of all solid waste generated within the local agency by January 1, 2000. The Act requires local agencies to maximize the use of all feasible source reduction, recycling, and composting options before using transformation (incineration of solid waste to produce heat or electricity) or land disposal. The Act also resulted in the creation of the State agency now known as CalRecycle. Under the Act, local governments develop and implement integrated waste management programs consisting of several types of plans and policies, including local construction and demolition ordinances described in more detail below. The Act also set into place a comprehensive statewide system of permitting, inspections, and maintenance for solid waste facilities, and authorized local jurisdictions to impose fees based on the types and amounts of waste generated.

California Green Building Standards Code

As amended, California's Green Building Standards Code (CALGreen; Title 24 Cal. Code Regs., Part 11) requires that residential and nonresidential building projects recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste, or meet a local construction and demolition waste management ordinance, whichever is more stringent (§ 5.408.1). Additionally, 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing must be reused or recycled unless contaminated by disease or pest infestation (§ 5.408.3). The 2016 version of the code increased the minimum diversion requirement for nonhazardous construction and demolition waste to 65 percent from 50 percent (in the 2013 and earlier versions) in response to Assembly Bill 341, which declared that it is the policy goal of the State that not less than 75 percent of solid waste generated be source reduced, recycled, or composted by the year 2020. Therefore, some local ordinances still list minimums that are less stringent than (and therefore overridden by) the statewide requirement. The City of Mountain View has adopted the California Green Building Code requirements and requires the submittal of a waste management plan as well as waste tracking (City of Mountain View, 2018).

AB 341 and 1826

AB 341, signed into law in 2012 requires that commercial establishments such as business schools, and apartments to recycle. AB 1826, 2014, furthered mandatory diversion and recycling requirements by requiring that all residential projects with more than 5 units also divert organic material. Under AB 1826 residential properties are not required to divert organic food waste.

4.15.3.2 Local

City of Mountain View Water Conservation in Landscaping Regulations

The City of Mountain View adopted the Water Conservation in Landscaping Regulations and the in 2010 in order to reduce water waste in landscaping by establishing standards for irrigation efficiency. These regulations were updated in 2016 and apply generally to new and rehabilitated landscapes of 500 sf or greater (City of Mountain View, 2016b).

City of Mountain View Green Building Code

The City of Mountain View Green Building Code (MVGBC), approved by City Council in 2011 and amended in 2016 sets local standards for energy efficiency, water conservation, indoor environmental quality, and waste reduction (City of Mountain View, 2019e).

City of Mountain View Zero Waste Policy and Plan

On June 19, 2018, the City Council adopted a Zero Waste Policy which "establishes an overall quantitative goal to reduce the amount of generated and disposed waste such that 90 percent of materials are diverted from landfill by 2030." (City of Mountain View, 2018c). The City of Mountain View is in the process of developing a Zero Waste Action Plan which will support the attainment of the Zero Waste Policy (City of Mountain View, 2019f).

City of Mountain View Urban Water Management Plan

The City of Mountain View adopted the 2015 UWMP in May of 2016 in compliance with the Urban Water Management Planning Act. The UWMP analyzes the City's water supply during normal and dry-year scenarios compared to existing and future water demand (City of Mountain View, 2016a).

City of Mountain View Sewer System Management Plan

The 2018 Sewer System Management Plan (SSMP) includes policies and procedures necessary for the planning, management, operation, and maintenance of the City's sewer system. The SSMP is intended to meet the requirements of the SWRCB General Waste Discharge Requirements (GWDR) for Wastewater Collection Agencies (City of Mountain View, 2018a)

General Plan 2030

The General Plan 2030 Infrastructure and Conservation Element contains the following policy applicable to the proposed Project and water, sewer, stormwater, and services.

> ***Policy INC-1: Utilities for New Development.*** Ensure adequate utility service levels before approving new development.
>
> ***Policy INC 2.4: Emergency Preparedness and Critical Infrastructure.*** Ensure emergency preparedness for all critical infrastructure including potable water, wastewater, stormwater, recycled water, telecommunications, energy and streets.
>
> ***Policy INC 4.1: Water Supply.*** Maintain and reliable water supply
>
> ***Policy INC 5.2: Citywide water conservation.*** Reduce water waste and implement water conservation and efficiency measures throughout the city.
>
> ***Policy INC 6.1: Citywide wastewater.*** Ensure high-quality wastewater collection services and a well-maintained wastewater system.
>
> ***Policy INC 6.2: Pollution Source Control.*** Implement an effective and comprehensive industrial pretreatment program and industrial, commercial and residential pollution source control programs.
>
> ***Policy INC 8.2: National Pollutant Discharge Elimination System Permit.*** Comply with requirements in the Municipal Regional Stormwater National Pollutant Discharge Elimination System Permit (MRP).
>
> ***Policy INC 8.5: Site-specific stormwater treatment.*** Require post-construction stormwater treatment controls consistent with MRP requirements for both new development and redevelopment projects.
>
> ***Policy INC 8.6: Green Streets.*** Require post-construction stormwater treatment controls consistent with MRP requirements for both new development and redevelopment projects.
>
> ***Policy INC 8.7: Stormwater quality.*** Require post-construction stormwater treatment controls consistent with MRP requirements for both new development and redevelopment projects.

Policy INC 10.4: Construction waste reuse. Require post-construction stormwater treatment controls consistent with MRP requirements for both new development and redevelopment projects.

Policy INC 11.1: Waste Diversion and Reduction. Meet or exceed all federal, State, and local laws and regulations concerning solid waste diversion and implementation of recycling and source reduction programs (City of Mountain View, 2012b)

4.15.4 Utilities and Service Systems Impacts

4.15.4.1 Significance Criteria

Consistent with Appendix G of the State CEQA *Guidelines*, the Project would cause adverse impacts to utilities and service systems if it were to:

a) 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;

b) Not have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years;

c) 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;

d) Generate solid waste in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals; or

e) Not comply with federal, State, and local management and reduction statutes and regulations related to solid waste.

4.15.4.2 Approach to Analysis

The water and wastewater site information presented below is based on site plans and information from the 2019 Project-specific Utility Impact Study which is included as Appendix L. The Project utility plans are also depicted in Figure 3-8.

Project water demand was estimated from the proposed number of residential units and the retail square footage water unit duty factors developed for the City as part of the *North Bayshore Precise Plan Phase II Utility Impact Study*. These duty factors are based on recent water meter data, collected between 2005 and 2015, of recent developments throughout the City. **Table 4.15-1** provides the water demand estimation for the Project.

Project sewer flow was estimated from the proposed number of residential units and the retail square footage. A return to sewer (RTS) ratio is applied to the water duty factors from Table 4.15-1 to estimate sewer flow for each land use type. For the Project's multi-family residential land uses, an RTS ratio of 0.9 was used based on the City's 2010 Sewer Master Plan (SMP) RTS ratio for multi-family residential land use. For the Project's retail land use, an RTS ratio of 0.7 was used based on the 2010 SMP RTS ratio for service commercial land use. **Table 4.15-2** provides the estimated Project sewer flow.

TABLE 4.15-1
PROJECT WATER DEMAND

Land Use	Units	Area (sf)	Water Duty Factor (gpd/unit or gpd/1000 sf)	Water Demand (gpd)
Block A Residential	203	-	100	20,300
Block A Retail	-	3,000	130	390
Block B Residential	100	-	100	10,000
Total	**303**	**3,000**	**-**	**30,690**

NOTES:
sf = square feet
gpd = gallons per day

SOURCE: Schaaf & Wheeler, 2019. (Appendix L)

TABLE 4.15-2
PROJECT SEWER FLOW

Land Use	Units	Area (sf)	Sewer Duty Factor (gpd/unit or gpd/1000 sf)	Sewer Flow (gpd)
Block A Residential	203	-	90	18,270
Block A Retail	-	3,000	91	273
Block B Residential	100	-	90	9,000
Total	**303**	**3,000**	**-**	**27,543**

NOTES:
sf = square feet
gpd = gallons per day

SOURCE: Schaaf & Wheeler, 2019. (Appendix L)

Project water and sewer system impacts were analyzed using the City's water and sewer models for three conditions: Existing, Existing with Shoreline/101 CIP, and Future Cumulative. Each condition was evaluated pre-Project for existing system deficiencies. The estimated incremental system demand resulting from Project development was then added to the model to determine potential post-Project deficiencies.

For the water system analysis, the Existing Condition uses the existing distribution system and operating parameters along with water demands based on existing land use from the City's 2010 Water Master Plan (WMP). The Existing with Shoreline/101 CIP Condition also uses the existing distribution system, operating parameters, and water demands from the 2010 WMP, but it includes the CIP depicted in Figure 4.15-1 above. This CIP is in the design stage and construction of the CIP may not coincide with Project construction. The Future Cumulative Condition water demand is based on the 2030 General Plan land use and has since been revised to include recent City approved projects not accounted for or in exceedance of the 2030 General Plan projections.

For the sewer system analysis, the Existing Condition model uses the existing collection system and operating parameters along with from the City's 2010 SMP. The Existing with Shoreline/101

CIP Condition uses the Existing Condition model with the CIP depicted in Figure 4.15-2 above added to the model. The Future Cumulative Condition sewer flows are based on the 2030 General Plan land use and have since been revised to include recent City approved projects not accounted for or in exceedance of the 2030 General Plan projections.

4.15.4.3 Discussion of Impacts and Mitigation Measures

Impact UTL-1: The Project would not require or result in the construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (Criterion a.) (*Less Than Significant, No Mitigation Required*)

As discussed in Section 3.4.10, Project Utility Improvements, and shown in Figure 3-8, the Project would include the construction of on-site domestic and fire water, and wastewater connections, meters, and backflow devices in order to connect the Project to existing and proposed new utility infrastructure. Joint trenches, located mainly under internal Project roads, would be utilized to convey new utility lines across the Project site.

Water System

As discussed in Section 3.4.10.1, Water System Improvements, the Project would utilize three existing 12-inch water mains in Terra Bella Avenue, Linda Vista Avenue, and North Shoreline Boulevard to provide domestic and fire water to the Project site. The Project would connect to the existing 12-inch water main in North Shoreline Boulevard; however, if the planned Shoreline/101 CIP improvements in North Shoreline Boulevard are completed prior to Project construction, the Project would connect to the new 16-inch water main.

The Project would require additional water during operation, and is expected to have a combined water demand of 30,690 gpd (see Table 4.15-1). As described in Section 4.15.2.1 above, the Project is located in Zone 1 which receives treated water from the SFPUC that can be supplemented with water from City-operated groundwater wells. Under the Existing Condition without the Project, the existing demand in Zone 1 cannot be sufficiently supplied by the current water system. However, surplus supply in Zone 2 can be routed to Zone 1 to make up the supply deficiency, without increasing the total supply amount for these two zones. The Utility Impact Study determined that the additional Project demand would not impact the City's ability to meet total system demand under Existing and Existing with Shoreline/101 CIP Conditions (Appendix L). The Project's water demand can be met with or without the planned CIP improvements. Therefore, the Project would not require new or expanded water facilities for water supply.

The State Water Resources Control Board Division of Drinking Water (DDW) also requires water storage equal to 8 hours of Maximum Day Demand (MDD) plus fire storage in each pressure zone. The maximum active storage in the City is 17 million gallons, but the City operates with an operational active storage of 14.3 million gallons. Operation of the Project would increase the DDW storage requirement by approximately 0.02 million gallons. The Utility Impact Study determined that the City has storage volume available to meet the storage

requirements pre- and post- Project under the Existing and Existing with Shoreline/101 CIP Conditions (Appendix L). Therefore, the Project would not require new or expanded water facilities for water storage.

Water system performance (hydraulic conveyance) was evaluated using two demand scenarios, Peak Hour Demand (PHD) and MDD with Fire Flow (MDD+FF). Under Existing and Existing with Shoreline/101 CIP Conditions, system pressures under PHD meet performance criteria. The Utility Impact Study determined that the increase in water demand introduced by the Project would not impact the system hydraulic performance under PHD (Appendix L).

The Utilities Impact Study projected that fire flow requirements for the Project would be 3,500 gallons per minute. Under Existing and Existing with Shoreline/101 CIP Conditions, the MDD+FF requirements are met at existing and proposed new hydrant locations for the Project. Out of the fire flow nodes analyzed, Project development would have a minimal (less than 1 percent) impact on fire flow, and the MDD+FF requirements would be met at hydrant locations near the Project. As a result, the additional Project water demand would not impact the City's ability to meet total water demand and would not impact water system performance (Appendix L). Therefore, the Project would not require new or expanded water facilities, and impacts would be less than significant impact.

Wastewater Collection and Treatment

As discussed in Section 3.4.10.2, Wastewater (Sewer) System Improvements, and shown in Figure 3-8, Project sewer flow would be discharged into the existing 18-inch diameter City sewer main in Terra Bella Avenue and to the proposed new 21-inch diameter City sewer main through the Project site. Due to the uncertainty of construction timing for the Shoreline/101 CIP, the Project could also include a connection to the existing 18-inch City sewer main in North Shoreline Boulevard.

The Project-specific Utility Impact Study analyzed the potential for the Project to have an impact on the City sewer systems during Project operation. The Project would result in additional sewer flow during operation, with estimated Project sewer flows of approximately 27,543 gpd (see Table 4.15-2). As described in Section 4.15.2.2, according to the Basic Agreement, the City's contractual capacity rights with the Palo Alto RWQCP are 15.1 MGD. The City's baseline flows were estimated to be 10.19 MGD by the Utility Impact Study. With the addition of Project flows, the City's sewer flows would increase by 0.02 MGD. This increase would not exceed or materially affect the City's allowed utilization capacity. Therefore, the Project would have a less than significant impact on the City's utilization of its contractual sewer capacity.

Sewer system capacity was analyzed under Peak Wet Weather Flow (PWWF) and Average Dry Weather Flow (ADWF). The Utility Impact Study determined that the sewer system has sufficient capacity downstream of the Project to accommodate the addition of Project sewer flows under the Existing and Existing with Shoreline/101 CIP Conditions. The wastewater generated by the Project can be met with or without the planned CIP improvements. Additionally, the sewer system would continue to meet all maximum flow depth to pipe diameter (d/D) requirements with

the addition of Project sewer flows. As a result, the Project would not require new or expanded wastewater facilities, and impacts would be less than significant impact.

Stormwater Drainage

Existing drains and infrastructure on the Project site convey stormwater directly into the City's stormwater system. As discussed in Section 4.9, *Hydrology and Water Quality*, the Project would be required to comply with NPDES Construction General Permit for storm water discharges associated with construction activity and a Storm Water Pollution Prevention Plan (SWPPP) for on-site storm water management and pollution prevention. In order to comply with the NPDES Program, the SWPPP would be required to include BMPs designed to control stormwater flows resulting from the Project. Project compliance with the NPDES Construction General Permit and incorporation of BMPs would minimize stormwater runoff generated during construction.

As discussed in Section 4.9 (Impact HYD-3), the Project would result in an increase in impervious surface onsite and therefore include stormwater control features including pervious pavers, bioretention basins, flow through planters, and self-retaining planted areas to treat and retain stormwater runoff prior to entering the City's stormwater system. Per the City's Standard Conditions of Approval, the Project would be required to submit a Stormwater Management Plan that complies with the City's guidelines and the State NPDES Permit, and would mitigate increases in peak runoff flow and increased runoff volume. The Project would also recondition, reuse, or reconstruct existing storm drain lines and outfalls. Therefore, the Project would include onsite stormwater treatment infrastructure necessary to accommodate stormwater flows generated under Project conditions and would not require additional offsite stormwater drainage or treatment infrastructure that could result in a significant environmental impact. Therefore, the Project would have a less than significant impact with respect to stormwater drainage and treatment infrastructure.

Electric Power, Natural Gas, and Telecommunications

The Project would construct new gas and electrical lines in order to connect into existing systems. Transformers for the Block A building are proposed along the eastern border and the southwestern corner of Block A. A garage transformer is proposed at the northeastern corner of the office parking garage and transformers for the Block B building are proposed at the southwestern corner of Block B. No additional electrical or gas infrastructure would be required.

As described in Section 4.15.2.5, telecommunications services are widely available in the City, and the Project would connect to existing telecommunications infrastructure, as needed. Additionally, the existing monopole containing telecommunications equipment located adjacent to the north side of the proposed parking garage could be relocated during Project construction. The equipment would be placed within the existing screening on the top of the existing office building, and would not be visible. The rooftop of the existing office building was designed and built to meet specifications and support the telecommunications equipment. Therefore, the Project would not require the construction of additional telecommunications infrastructure and the impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact UTL-2: The Project would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years. (Criterion b.) (*Less Than Significant, No Mitigation Required*)

Pursuant to Sections 10910-10915 of the California Water Code, a Water Supply Assessment would not be required for the proposed Project. The Project would not exceed the criterion that triggers an assessment with respect to residential development as it would contain fewer than 500 units, nor would it result in water demand equivalent to, or greater than the amount of water required by a 500-unit project. However, a water supply analysis was included the Utility Impact Study for the Project which evaluated the potential for the Project to have an impact on the City's water system (Appendix L).

The proposed Project would result in a demand for potable water. Under proposed Project conditions, the average daily water demand would be approximately 30,690 gpd (see Table 4.15-1). The increase in demand for water would increase the PHD by approximately 0.27 mgd. The Project would use water provided by the City, which has multiple sources of water as discussed in Section 4.15.2.6. As discussed under Impact UTL-1, above, the Utilities Impact Study determined that the additional demand for water introduced by the Project would not impact the City's ability to meet total system demand (Appendix L).

In addition to evaluating the Project's impact on water supplies under existing conditions, the Utility Impact Study analyzed the potential for the Project to have an impact under a foreseeable Future Cumulative Condition. The study developed the cumulative model using the City's 2030 General Plan Update Utility Impact Study (GPUUIS) and the North Bayshore Precise Plan Phase II Utility Impact Study (NBPPII UIS), CIPs and recently approved projects not accounted for in the 2030 GPUUIS projections. The Utility Impact Study determined that construction and operation of the Project would not impact the water system's ability to meet total system demand under the Future Cumulative Condition. The Project would be required to comply with the CALGreen Code which requires new construction to use high efficiency plumbing fixtures including toilets, urinals, showerheads, and faucet fixtures. For outdoor water use, the CALGreen Code requires that irrigation controllers shall be weather- or soil-moisture based, and automatically account for rainfall, or else be attached to a rainfall sensor. Additionally, the Project would be required to comply with the City of Mountain View Water Conservation in Landscaping Regulations and the MVGBC which include water conservation requirements.

The City's 2015 Urban Water Management Plan acknowledges that supply shortfalls could occur in dry and multiple dry year scenarios, but indicates that based on information provided by its suppliers, the water supply available to the City is considered to be reliable. The City has a number of programs in place for water conservation, including metering, rates, and water-conservation guidelines for landscaping, residential water surveys, turf audits, plumbing retrofits, and washing machine incentives (City of Mountain View, 2016a). During drought years, the City and its suppliers may implement other water conservation measures and Best Management

Practices (BMPs) such as conservation pricing, water waste prohibitions, public information programs, and large landscape audits (City of Mountain View 2019g). The Project would be subject to these measures during drought years.

The water demand generated by the development of the Project would result in a less-than-significant impact to water supply. Additionally, the Utility Impact Study determined that the Project would not impact on the water system's ability to meet demand under the Future Cumulative Condition. Therefore, the Project would have a less than significant impact on the water supply to serve the Project and foreseeable future development.

Significance: Less Than Significant.

Mitigation: None required.

Impact UTL-3: Development 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. (Criteria c.) (*Less Than Significant, No Mitigation Required*)

The Project would result in an increased demand for wastewater treatment services. As analyzed in the Utility Impact Study, sewer flow associated with Project operation would be approximately 27,543 gpd (see Table 4.15-2). As described above under Section 4.15.2.2, *Existing Setting*, the City's wastewater is treated by Palo Alto's RWQCP. The RWQCP The RWQCP has an average annual flow of 40 MGD and a Peak Wet Weather Flow of 80 MGD. The City's capacity rights with the RWQCP allow for an average annual flow of 15.1 MGD and a Peak Wet Weather Flow of 50 MGD. As discussed under Impact UTL-1, the City has an average annual flow of 10.19 MGD, well below the City's capacity rights. With the addition of Project flows, the City would have an average annual flow of 10.22 MGD, or a 0.3 percent increase. The Utility Impact Study determined that the sewer system would have sufficient capacity downstream of the Project to accommodate Project sewer flows in a PWWF scenario and all pipes downstream of the Project would continue to meet d/D criteria (Appendix L).

The Project would introduce an increased demand for wastewater treatment; however, the Project would have a less than significant impact on the ability of the sewer system to meet existing demand for wastewater services. Therefore, the Project would not result in wastewater capacity issues, and impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None required.

Impact UTL-4: Development of the Project would not generate solid waste in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals. (Criterion d.) (*Less Than Significant, No Mitigation Required*)

The Project would generate waste during both Project construction and operation. During construction, the Project would generate construction related debris. During operation, the Project would include approximately 303 new residential units and 3,000 square feet of retail uses which would result in an increase in the demand for solid waste services.

Construction

As described in Section 4.15.3, the City of Mountain View has adopted the CALGreen standards with regard to construction waste diversion. In accordance with the City of Mountain View and CALGreen requirements, the proposed Project would be required to divert 65 percent of nonhazardous construction and demolition waste and to create and maintain a waste management plan. As described in Section 4.15.2.4, Kirby Canyon Sanitary Landfill has an estimated remaining capacity of 16,191,600 cubic yards and an estimated closure date of December 31, 2022. Construction is not expected to generate substantial amounts of solid waste relative to the landfill's remaining capacity. Additionally, 65 percent of solid waste generated during construction and demolition would be required to be diverted. The remaining amount of waste would be disposed of at Kirby Landfill, which would have sufficient capacity to accommodate the waste generated during Project construction. Project construction would not generate solid waste in excess of the local infrastructure and would not impair the attainment of local or State level waste reduction goals

Operation

During Project operation, the approximately 303 residential units and 3,000 sf of retail space would generate solid waste. A Trash Management Plan was developed for the Project which estimated the amount of solid waste which would be generated by the residential units. This solid waste plan assumed that each residential unit would generate 0.15 cubic yards of residential waste per week, 0.10 cubic yards of paper recycling per week and 0.012 cubic yards of container recycling per week. In total, the residential units are expected to generate approximately 46 cubic yards of non-recyclable waste per week as well as 35 cubic yards of recyclable materials per week. The retail area in Building A is expected to generate approximately 2 cubic yards of non-recyclable waste per week and 3 cubic yards of recyclable waste per week (American Trash Management, 2018). At the time that the Trash Management Plan was drafted, the City of Mountain View did not have a residential organics recycling program. However, the City of Mountain View launched a food scraps organics recycling pilot program in October 2018 which includes multi-family properties with more than 9 units. This program is anticipated to become a City-wide mandatory compost program (American Trash Management, 2018). With the incorporation of food scraps composting, the amount of non-recyclable waste generated by the residential units would be reduced from the levels forecasted in the Trash Management Plan.

The Project would be required to comply with recycling requirements outlined in AB 341, and 1826 and would be required to comply with the City's Zero Waste Plan once it is developed. The Trash Management Plan designed a waste management system for the Project which would

facilitate the proper recycling and disposal of waste from residential and retail uses in accordance with the City's waste management requirements as well as statewide waste reduction goals. Thus, operation of the proposed Project would not impair the attainment of local or State level solid waste reduction goals.

As described in Section 4.15.2.4, solid waste would be collected by Recology Mountain View and then transferred to the Sunnyvale Materials Recovery and Transfer station. Without accounting for the foreseeable implementation of a residential food scraps composting program, the project would conservatively generate approximately 2,496 cubic yards of non-recyclable waste per year (American Trash Management, 2018). Given the remaining capacity at Kirby Landfill of 16,191,600 cubic yards, Kirby Landfill would have sufficient space to accommodate waste generated by the Project until its anticipated closure in 2022. After the closure of Kirby Landfill, waste would continue to be collected by Recology Mountain View, delivered to the Sunnyvale Materials Recovery and Transfer station and disposed of at another permitted landfill in Santa Clara County such as the Newby Island Landfill which has a remaining capacity of 21,200,000 cubic yards and an estimated closure date of 2041 (Santa Clara County, 2019; CalRecycle, 2019). Therefore, the Project would not generate waste in excess of the capacity of local infrastructure and would not impair the attainment of local and State level waste reduction goals, and impacts would be less than significant.

Impact UTL-5: The Project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste (Criterion e.) (*Less Than Significant, No Mitigation Required*)

The Project would be required to comply with local and State solid waste standards identified in Section 4.15.3, during construction and operation such as the California Integrated Waste Management Act, AB 939, the CALGreen Code, the MVGBC, AB 341 and 1826, and the City of Mountain View Zero Waste Policy and Plan. As described under Impact UTL-4, the Project would comply with local and State level construction and demolition waste management requirements during Project construction. During Project operation, the Project would comply with State level recycling requirements. Project operation would not impede the attainment of the City's Zero Waste Policy and would comply with the provisions outlined in the Zero Waste Plan once it is adopted. As a result, the Project would not conflict with local or State level waste reduction policies. Therefore, the Project would have a less than significant impact with regard to compliance with solid waste regulations.

Significance: Less Than Significant.

Mitigation: None required.

Cumulative Impacts

Geographic Context

The cumulative geographic context for utilities and service systems considerations for development of the Project includes the City of Mountain View and the service areas of the local utility providers. Cumulative projects that are considered in this analysis (past, approved, pending, under construction) are included in Section 4.0, *Introduction to the Environmental Analysis*, and Table 4.0-1.

Impact C-UTL-1: The Project in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity would not contribute considerably to cumulative impacts to utilities and service systems. (*Less than Significant, No Mitigation Required*)

Water

The Utilities Study evaluated potential impacts of the Project to water systems under a Future Cumulative Condition. The Future Cumulative Condition model for water used in the study was based on the General Plan Updated Water System Modeling Alternative 1 (GP-USWM), the NBPPPII UIS, as well as other CIPs from the NBPPPII UIS and City approved projects not accounted for in the 2030 GPUUIS and GP-USWM projections (see Appendix L for additional details).

With regard to PHD, under pre-Project conditions, the system generally meets performance criteria; however, one node falls below performance criteria. This existing deficiency for water system performance in Zone 1 would be considered a cumulative impact. In the Future Cumulative Condition, with post-Project demands, the pressure at the same node would fall slightly, but no additional nodes would fall below performance criteria, and the impact to the deficient node would be minimal (less than a 1 percent impact). Therefore, the Project's contribution to the existing deficiency for water system performance in Zone 1 would not be cumulatively considerable. Regarding MDD +FF, within Zone 1, there is one existing fire flow deficient node, located approximately 0.3-mile southeast of the Project site which would not be utilized directly by the Project. Under the Future Cumulative Condition, with post-Project fire flow demand, fire flow pressure at the deficient node would fall slightly; however, the impact to the deficient node would be minimal (less than a 1 percent contribution). Therefore, the Project's contribution to the existing deficiency for fire flow performance in Zone 1 would not be cumulatively considerable. As a result, the Project's incremental contribution to cumulative impacts on the City's water system would be less than significant.

Currently, there are no identified water supply deficiencies for the City. The City's 2015 Urban Water Management Plan acknowledges that supply shortfalls could occur in dry and multiple dry year scenarios, but indicates that based on information provided by its suppliers, the water supply available to the City is considered to be reliable (City of Mountain View, 2016a). As discussed under Impact UTL-2, the Project would have a less than significant impact on the water supply to serve the Project and foreseeable future development. Therefore, the Project would not contribute to a significant impact with regard to water supply.

Wastewater

The Utilities Study also evaluated potential impacts of the Project to sewer systems under a Future Cumulative Condition. The Future Cumulative Condition for sewer used in the study is based on the 2010 SMP, the Shoreline/101 CIP as well as the City's GPUUIS and all sewer system CIPs recommended in the GPUUIS. Additionally, the Future Cumulative Condition for sewer includes recent City approved projects which weren't accounted for or were in exceedance of the 2030 GPUUIS projections. In the 2030 GPUUIS, approximately 6,042 feet of sewer mains were identified as deficient based on d/D performance criteria. Under the Future Cumulative Condition, the Project sewer flows would contribute to these identified future deficiencies. Assuming implementation of three CIPs from 2030 GPUUIS, these deficiencies, both with and without the Project, would be resolved and d/D performance criteria would be met. Potential impacts related to the construction of new or expanded wastewater facilities resulting from development under the 2030 General Plan were analyzed in the City's 2030 General Plan EIR and found to be less than significant. Additionally, these CIPs would largely be installed in existing roadways and utility rights-of-way, and are not expected to impact sensitive habitat areas or result in other environmental impacts, aside from short-term construction disturbance. The Project also proposes to install approximately 738 feet of the sewer pipe identified in the Shoreline/101 CIP that would be located in a joint trench beneath internal Project roads on the Project site, construction of which is analyzed in this Draft EIR. Therefore, the Project, in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity would not require or result in the construction of new wastewater facilities, the construction of which would cause significant environmental effects.

As noted, the Project under the Future Cumulative Condition would contribute to the deficiencies and thus the need to construct these CIPs. As a condition of Project approval, the City would require the Project applicant to contribute the fair share of the Project's impact to a funding program for capital improvements to the sewer system, as determined by the City of Mountain View Public Works Department.

As described in 4.15.2.2, according to the Basic Agreement, when the City reaches 80 percent of its contractual capacity rights, the City will conduct an engineering study to redefine anticipated future needs of the RWQCP. If the City requires additional capacity after the completion of the engineering study, the City would have to either rent or purchase additional capacity rights from another agency participating in the Basic Agreement. Under the Future Cumulative Condition, the City is projected to reach 80 percent of the contractual capacity rights with the RWQCP, both with and without the development of the Project. As described under Impact UTL-3, Project sewer flow would account for an approximate 0.3 percent increase in the City's contribution to sewer flows. This incremental impact is not considered to be cumulatively considerable in light of contributions from other projects assumed in the Future Cumulative Condition that would exist in the absence of the Project. Therefore, the Project's incremental contribution to this condition would not be cumulatively considerable.

Stormwater

As discussed under Impact UTL-1, per the City's Standard Conditions of Approval, the Project would be required to submit a Stormwater Management Plan that complies with the City's

guidelines and the State NPDES Permit, and would mitigate increases in peak runoff flow and increased runoff volume and would not require any additional stormwater drainage or treatment infrastructure. The Project, as well as other reasonably foreseeable projects, would be required to implement BMPs and site design and source control measures to reduce the rate of stormwater runoff. Therefore, the Project would not contribute to a cumulative impact with regard to stormwater infrastructure.

Solid Waste

The Project, as well as other reasonably foreseeable projects, would be required to comply with all local and State waste reduction requirements. Landfills in the County such as the Kirby Landfill and Newby Island Landfill have sufficient capacity to accommodate the amount of waste which would be generated by the Project. As described under Impact UTL-4, the Project would generate approximately 450 tons of non-recyclable waste per year. In 2010, the City of Mountain View generated approximately 45,411 tons of solid waste (City of Mountain View, 2010). As described in Section 4.15.3.3, the City's Zero Waste Policy and Plan establishes an overall quantitative goal to reduce the amount of generated and disposed waste such that 90 percent of materials are diverted from landfill by 2030. Given the local solid waste reduction goals, both the citywide generation of solid waste as well as the Project specific generation of solid waste is expected to decrease in the future. Compared the amount of solid waste generated city-wide, the Project's contribution would not be cumulatively considerable.

Other Utilities

Electricity, natural gas, and telecommunications services are widely available in the City. The Project would connect to existing infrastructure as needed. Therefore, the Project would not contribute to a cumulative impact with regard to electricity, natural gas, and telecommunications services.

Summary

The Project, combined with past, present, and other foreseeable development in the area, would not result in a considerable contribution to existing cumulative impacts to utilities and service systems. Therefore, impacts would be less than significant.

Significance: Less Than Significant.

Mitigation: None Required.

4.15.5 Summary of Utilities and Service Systems Impacts

Impact	Significance Before Mitigation	Mitigation	Significance After Mitigation
Impact UTL-1: The Project would not require or result in the construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less than Significant	None required	-
Impact UTL-2: The Project would have sufficient water supplies available to serve the Project and reasonably foreseeable future development during normal, dry, and multiple dry years.	Less than Significant	None required	-
Impact UTL-3: Development 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	None required	-
Impact UTL-4: Development of the Project would not generate solid waste in excess of the capacity of the local infrastructure, or otherwise impair the attainment of solid waste reduction goals.	Less than Significant	None required	-
Impact UTL-5: The Project would comply with federal, State, and local management and reduction statutes and regulations related to solid waste	Less than Significant	None required	-
Impact C-UTL-1: The Project in combination with past, present, existing, approved, pending, and reasonably foreseeable future projects in the vicinity would not contribute considerably to cumulative impacts to utilities and service systems.	Less than Significant	None required	-

4.15.6 References – Utilities and Service Systems

American Trash Management, 2018. DRAFT - Sares Regis – DRAFT 1001 Shoreline - Mountain View, CA Schematic Design Trash Management Plan.

Broadband Now, 2019. Internet Providers in Mountain View. Available at: https://broadbandnow.com/California/Mountain-View. Accessed April 29, 2019.

City of Mountain View, 2010. City of Mountain View Waste Characterization Report 2010. November 2010. Available at: https://www.mountainview.gov/civicax/filebank/blobdload.aspx?blobid=8283. Accessed April 29, 2019.

City of Mountain View, 2012a. City of Mountain View Draft 2030 General Plan and Greenhouse Gas Reduction Program EIR. September 2012. Available at: https://www.mountainview.gov/depts/comdev/planning/regulations/general.asp. Accessed April 18, 2019.

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City of Mountain View, 2018a. City of Mountain View Sewer System Management Plan. June 2018. Available at: https://www.mountainview.gov/civicax/filebank/blobdload.aspx?blobid=26636. Accessed: April 11, 2019.

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City of Mountain View, 2018c. Zero Waste Policy. June 19, 2018 Available at: https://www.mountainview.gov/depts/pw/recycling_and_zero_waste/zero/default.asp#ZWpolicy2018. Accessed April 18, 2019.

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City of Mountain View, 2019b. Zero Waste. Available at: https://www.mountainview.gov/depts/pw/recycling_and_zero_waste/zero/default.asp#ActionPlan2019. Accessed April 18, 2019.

City of Mountain View, 2019c. Free City Wi-Fi. Available at: https://www.mountainview.gov/depts/it/wi_fi.asp. Accessed April 18, 2019.

City of Mountain View, 2019d. Composting Available at: https://www.mountainview.gov/depts/pw/recycling/garbage/residents/carts/compost.asp Accessed: April 18, 2019.

City of Mountain View, 2019e. City of Mountain View Green Building Code Available at: https://www.mountainview.gov/depts/comdev/building/construction/mvgbc.asp Accessed April 18, 2019.

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City of Mountain View, 2019g. Drought Available at: https://www.mountainview.gov/depts/pw/services/conserve/drought.asp. Accessed April 18, 2019.

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San Francisco Public Utilities Commission, 2019. Overview. Accessed at: https://www.sfwater.org/index.aspx?page=355. Accessed April 18, 2019.

Silicon Valley Clean Energy (SVCE, 2019). Your Choices. Available at: https://www.svcleanenergy.org/choices/#GreenStart. Accessed April 22, 2019.

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4.16 Effects Found Not to Be Significant

This section presents information regarding impacts of the Project for environmental topic areas that were determined to have no impact by the City of Mountain View. According to CEQA *Guidelines* Section 15128, an EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR.

Effects of the Project on the following environmental topic areas were found not to be significant during the EIR process: Agriculture and Forest Resources; Mineral Resources; and Wildfire. The following presents a brief summary of Project effects found not to be significant, including a discussion of reasons they would not be significant.

4.16.1 Agriculture and Forest Resources

The California Department of Conservation, Division of Land Resource Protection, has established the Farmland Mapping and Monitoring Program (FMMP), which monitors the conversion of the State's farmland to and from agricultural use. Four categories of farmland – Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance – are considered valuable. The Project site is identified as Urban and Built-Up Land by the FMMP, and is surrounded by lands designated as Urban and Built-Up Land (DOC, 2016a). Thus, the Project would have no impact on important farmland.

The Project site is currently zoned for general industrial uses, but was formerly used for agricultural uses; however, during the late 1950s and through the 1980s, all of the remaining agricultural fields within the Project vicinity had been subdivided and replaced by commercial and industrial uses as this area experienced rapid development during the post-World War II period. The Project site was most recently used for various commercial and industrial uses. As a part of the 2015 Office Project, nine buildings on the Project site were demolished, and replaced with a single four-story office building, which would be retained on the Project site. The surface parking lots, outdoor volleyball and basketball courts, and landscaping associated with the 2015 Office Project would be removed as a part of the proposed Project.

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to designate agricultural preserves and enter into contracts with private landowners for restricting specific parcels of land to agricultural, or related open space use. The Project site is not within an area subject to an agricultural preserve or a Williamson Act Contract (DOC, 2016b). Thus, implementation of the Project would not interact with or conflict with existing agricultural zoning or a Williamson Act contract, and would have no impact.

The Project site is not zoned as forest land or timberland, and there are no forests on the Project site. The Project would not result in the loss of forest land or conversion of forest land to non-forest uses, and would have no impact on forest land or timberland.

The Project would be constructed and operated entirely within a previously developed area, on the site of an office building that is designated as Urban and Built-Up Land by the FMMP. The Project site does not contain farmland and there are no aspects of the Project that would affect any agricultural land off-site. Moreover, the Project site does not contain forest land and there are no aspects of the Project that would affect any forest land off-site. Thus, implementation of the Project would not result in conversion of farmland, on-site or off-site, to a non-agricultural use, nor would it result in conversion of forest land to non-forest use. Therefore, no impact to agricultural and forestry resources would occur.

4.16.2 Mineral Resources

Initial Statewide mapping of aggregate resources included a small area within the southern boundary of Mountain View along Stevens Creek being classified as MRZ-3, "Areas containing mineral deposits the significance of which cannot be evaluated from the available data." However, based on subsequent mapping by the State of California for suitability of use as construction materials, it was determined that no minerals or aggregate resources of Statewide importance are located within the City. There are no natural gas, oil, or geothermal resources identified in or adjacent to the City (City of Mountain View, 2012).

There are no known significant mineral resources in the City of Mountain View or on the Project site. Additionally, the Project site is not zoned for, or immediately adjacent to, lands designated as a mineral resource zone by the City's General Plan (City of Mountain View, 2018a & 2018b). As a result, the Project would not interfere with any mineral extraction operations, and would not result in the loss of land designated for mineral resources. As such, the Project would not result in the loss of availability of a known mineral resource and would not result in the loss of a locally important mineral resource recovery site. Therefore, no impact to mineral resources would occur.

4.16.3 Wildfire

Impacts related to exposure of people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires are addressed in Section 4.8, *Hazards and Hazardous Materials*.

In accordance with California Public Resource Code Section 4201-4204 and Government Code Section 51175-51189, the California Department of Forestry and Fire Protection (CAL FIRE) has mapped areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), represent the risks associated with wildland fires. The Project is not located in or near a State Responsibility Area (SRA) or lands classified as very high fire severity zones (CAL FIRE, 2008). The Project site is located at the edge of an area that has been mapped as a Wildland-Urban interface fire hazard area (ABAG, 2019), however the site and vicinity is largely developed with sparse vegetation. Therefore, no impact would occur with regard to wildfire.

4.16.4 References – Effects Found Not to Be Significant

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CHAPTER 5
Alternatives to the Project

Pursuant to the provisions of CEQA, this chapter is provided to describe and evaluate alternatives to the Project, including one or more "No Project" alternatives, and to identify one or more "environmentally superior" alternatives. The primary purpose of this section is to provide decision-makers and the public with a qualitative review of alternatives to the Project that eliminate or substantially reduce any identified adverse environmental impacts while, at the same time, attaining most of the basic City objectives of the proposed Project.

The focus of the alternatives analysis in this chapter is on assessing the extent to which the Project alternatives would result in eliminating or reducing impacts identified as less than significant with mitigation in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*. Project impacts that would be less than significant without mitigation as identified in Chapter 4 are also considered, but to a lesser extent. No Project impacts that would be significant and unavoidable have been identified in this EIR.

5.1 CEQA Requirements

CEQA requires an evaluation of the comparative effects of a range of reasonable alternatives to a project that would feasibly attain most of the basic City objectives of the proposed Project but would avoid or substantially lessen any of the significant effects of the project on the environment (CEQA *Guidelines* Section 15126.6[a]). An EIR considers a range of potentially feasible alternatives in order to foster informed decision-making and public participation. The discussion of alternatives focuses on alternatives to the project or its location that 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 (CEQA *Guidelines* Section 15126.6[b]).

The focus of the alternatives analysis under CEQA is the avoidance or substantial lessening of a project's significant environmental effects. Chapter 4 of this EIR assesses the direct and indirect environmental impacts that could potentially result from implementation of the Project. This environmental impact analysis not only includes consideration and discussion of the Project's potentially significant environmental effects, but also identifies mitigation measures which, when incorporated as part of the Project, will have the effect of reducing each of the potentially significant effects to a less-than-significant level. The alternatives analysis set forth in this chapter is provided in order to foster informed decision making and public participation in the decision-making process.

Accordingly, this chapter presents a range of alternatives to the Project and a meaningful comparative analysis of the Project impacts, as identified in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, of this EIR (CEQA *Guidelines* Section 15126.6[d]); identifies and discusses any alternatives that were considered by the City, as lead agency, but that the City rejected for detailed analysis in this EIR (CEQA *Guidelines* Section 15126.6[c]); and provides comparative evaluation of the Project to two No Project alternatives (CEQA *Guidelines* Section 15126.6[e]).

5.2 Factors in the Selection of Alternatives

The nature and scope of the reasonable 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 Project;
- The extent to which the alternative would avoid or lessen the identified significant, or less-than-significant with mitigation, environmental effects of the 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 CEQA *Guidelines* requirement 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 in the first factor bulleted above, under 5.2, *Factors in the Selection of Alternatives*, the selection of alternatives shall consider the basic objectives of the Project. As previously presented in Chapter 3, *Project Description*, the following objectives have been identified for the Project:

1. Redevelop the Project site with approximately 300 new residential units and a diversity of housing choices, including new affordable residential units, to better balance the City's jobs/housing ratio;
2. Increase homeownership opportunities in the City of Mountain View and expand the supply of higher density attached, for-sale product by providing approximately 100 condominium units;
3. Locate higher density residential units in close proximity to both major job centers in Mountain View and the major thoroughfares of Highway 101 and Shoreline Boulevard;
4. Redevelop an underutilized site to allow for higher density housing in proximity to jobs and the existing 111,443 square foot office building on the Project site;

5. Provide amenities, shared auto and parking strategies, and TDM measures that promote walking, bicycling, telecommuting, and use of shuttles, transit and other transportation alternatives;
6. Respect the surrounding neighborhood and community through quality design, materials, and landscaping;
7. Implement sustainable building practices promoting energy and water efficiency;
8. Create a new common open space area with shade trees and an open plaza with outdoor seating to allow for the passive enjoyment by all residents and office building users.

5.2.2 Impacts Identified

As stated above under 5.2, *Factors in the Selection of Alternatives*, in the second factor bulleted, the selection of alternatives shall consider the ability for each alternative to avoid or lessen significant, or less-than-significant with mitigation, environmental effects identified with the Project. This evaluation of alternatives focuses on assessing the extent to which the Project alternatives would result in eliminating or reducing the less-than-significant impacts that have been identified in Chapter 4, especially with regards to impacts that would require mitigation to be reduced to a less-than-significant level.

For each alternative, the degree (severity) of adverse impacts that would be caused by the alternative is identified and compared to the Project. At the conclusion of these comparisons, two Environmentally Superior Alternatives are identified among the Project and all alternatives, taking into consideration all impacts identified.

Table 5-1 summarizes the impacts of the Project that would be reduced to a less-than-significant level with the implementation of mitigation measures, as identified in Chapter 4.

TABLE 5-1
PROJECT IMPACTS THAT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION

Less than Significant Project Impacts After Implementation of Mitigation Measures
Air Quality
• **Impact AIR-1:** The Project could conflict with or obstruct implementation of the applicable air quality plan. (M*itigation Measure AIR-1: Exhaust Emissions Reduction Measures)*
• **Impact AIR-4:** Construction of the Project could expose sensitive receptors to substantial pollutant concentrations including toxic air contaminants (TACs) and fine particulate matter. (M*itigation Measure AIR-1: Exhaust Emissions Reduction Measures)*
• **Impact C-AIR-2:** The Project, in combination with past, present, and reasonably foreseeable future development of cumulative projects could contribute to cumulative health risk impacts on sensitive receptors. (M*itigation Measure AIR-1: Exhaust Emissions Reduction Measures)*
Biological Resources
• **Impact BIO-1:** Development of the Project could have a substantial adverse effect, either directly or through habitat modifications, on species identified as candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the United States Fish and Wildlife Service. (*Mitigation Measure BIO-1: Special-Status Bat Protection Measures)*
• **Impact C-BIO-1:** The proposed Project, in conjunction with other past, current, or foreseeable development in Mountain View, could result in cumulative impacts on special-status species, local ordinances protecting biological resources, and an adopted local habitat conservation plan. (*Mitigation Measure BIO-1: Special-Status Bat Protection Measures)*

TABLE 5-1 (CONTINUED)
PROJECT IMPACTS THAT WOULD BE LESS THAN SIGNIFICANT WITH MITIGATION

Less than Significant Project Impacts After Implementation of Mitigation Measures
Cultural and Paleontological Resources
• **Impact CUL-1:** Project construction could cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA *Guidelines* Section 15064.5. (*Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources)*
• **Impact CUL-3:** Project construction could cause a substantial adverse change in the significance of a tribal cultural resource. (*Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources)*
• **Impact C-CUL-1:** Project construction, in combination with past, present, existing, approved, pending and reasonably foreseeable future projects within and in the vicinity of the Project site, could contribute to an adverse cumulative impact to cultural resources. (*Mitigation Measure CUL-1: Protocol for Inadvertent Discovery of Archaeological Resources)*
Hazards and Hazardous Materials
• **Impact HAZ-3:** The Project could create a significant hazard to the public or environment as a result of being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. (*Mitigation Measure HAZ-1a: Soil Management Plan and Air Monitoring Plan; Mitigation Measure HAZ-1b: Additional Assessments, Investigations, and/or Remediation; Mitigation Measure HAZ-1c: Vapor Mitigation System*)
• **Impact C-HAZ-1:** Development under the proposed Project, combined with cumulative development in the region, including past, present, existing, approved, pending, and reasonably foreseeable future development, could contribute considerably to cumulative impacts related to hazards and hazardous materials. (*Mitigation Measure HAZ-1a: Soil Management Plan and Air Monitoring Plan; Mitigation Measure HAZ-1b: Additional Assessments, Investigations, and/or Remediation; Mitigation Measure HAZ-1c: Vapor Mitigation System*)

5.3 Alternatives Considered but Rejected for Further Evaluation

CEQA *Guidelines* Section 15126.6(c) requires an EIR to identify and briefly discuss any alternatives that were considered by the lead agency and rejected from further evaluation. In identifying alternatives to the Project, primary consideration was given to alternatives that would reduce impacts while still meeting most of the basic objectives as well as the City's planning goals and objectives, such as those articulated in the 2030 General Plan. Alternatives that would likely have the same or greater impacts as the Project or that would not meet most of the basic objectives were rejected from further consideration.

The City considered potential off-site locations relative to the Project, with the goal of comparing the impacts of development of the same or a similar nature at a different location within the City. However, alternative sites for the Project were considered but determined to be infeasible for several reasons: (a) the Project applicant does not own other parcels in the City that could accommodate this Project, and CEQA *Guidelines* section 15126.6(f)(1) only requires consideration of alternative sites if the Project applicant can reasonably acquire or gain access to alternative locations; (b) to achieve Objective 3, the Project must be located near Highway 101 and Shoreline Boulevard; (c) other sites in the City would not easily accommodate a Project of this size that would redevelop an underutilized site to allow for higher density housing in proximity to the existing office building on the Project site. Furthermore, given the City's current level of urban development, an alternative site location would not necessarily avoid or substantially reduce Project impacts.

For these reasons, an off-site alternative was not carried forward for detailed analysis as a reasonable alternative.

5.4 Description of Alternatives Selected for Analysis

Project impacts that would be less than significant with the implementation of mitigation measures are generally related to the proposed density of development. Those resource areas that are generally given more weight in the comparison of alternatives are those with long-term impacts. Impacts associated with construction (i.e., temporary or short-term impacts) are given less weight. Thus, alternatives to the Project generally represent various means of reducing or avoiding long-term impacts, and/or variations of development density.

The City has identified the following reasonable range of alternatives to be addressed in this EIR. Each of the selected alternatives include the Project assumption that the Project site is 7.81 acres with a 5.84-acre Development Area.

- **Alternative 1:** No Project Alternative
- **Alternative 2:** Reduced Density Alternative
- **Alternative 3**: No Retail Alternative

Table 5-2 presents a comparison of alternatives (and a summary of the Project) carried forward for consideration and evaluation.

TABLE 5-2
DESCRIPTION OF PROJECT AND ALTERNATIVES SELECTED FOR EVALUATION

Land Use	Project	Alternative 1: No Project Alternative	Alternative 2: Reduced Density Alternative	Alternative 3: No Retail Alternative
Residential Units	303	-	242	303
Block A Units	*203*	-	162	*203*
Block B Units	*100*	-	80	*100*
Retail	3,000 sf	-	3,000 sf	0
Meets most basic objectives?	**Yes**	**No**	**Yes**	**Yes**
Potentially feasible?	**Yes**	**Yes**	**Yes**	**Yes**
Substantially avoids or lessens LTSM Impacts?[1]	**NA**	**Yes**	**Yes**	**Yes**

NOTES:
LTSM = Less Than Significant with Mitigation; SF = Square Feet; NA = Not Applicable

[1] At least one LTSM impact, but not necessarily all LTSM impacts, would be avoided or lessened under this alternative.

5.4.1 Alternative 1: No Project Alternative

The No Project Alternative is the circumstance under which the Project does not proceed. This alternative is analyzed consistent with Section 15126.6(e) of the CEQA *Guidelines*, which states

that the No Project Alternative must include the assumption that conditions at the time the Notice of Preparation of an EIR was circulated for public review would not be changed because the Project would not be constructed, as well as the events or actions that would reasonably be expected to occur in the foreseeable future if the Project were not approved.

Under the No Project Alternative, the Project would not be built, and the site would remain in the same state as its current condition. The proposed residential units and retail space would not be constructed at the site. In addition, the planned new water and sewer mains proposed to run through the site in a joint trench beneath the Project's internal roads, which are part of the City's Capital Improvements Project (CIP) crossing Highway 101 (Shoreline/101 CIP), would not be routed through the Project site. Instead, a different alignment would need to be used for this portion of the CIP improvements.

This alternative would not meet any of the basic objectives of the Project: it would not redevelop the Project site with a diversity of housing choices to better balance the City's jobs/housing ratio (objective 1); it would not increase homeownership opportunities in the City and expand the supply of higher density attached, for-sale product (objective 2); it would not locate higher density residential units in close proximity to both major job centers in the City and major thoroughfares (objective 3); it would not redevelop an underutilized site to allow for higher density housing in proximity to jobs (objective 4); it would not provide amenities, shared auto and parking strategies, and Transportation Demand Management (TDM) measures that promote the use of alternative transportation (objective 5); it would not respect the surrounding neighborhood and community through quality design, materials, and landscaping (objective 6); it would not implement sustainable building practices promoting energy and water efficiency (objective 7); and it would not create a new common open space area (objective 8).

5.4.2 Alternative 2: Reduced Density Alternative

The Reduced Density Alternative assumes the density of residential development on the site would be reduced by 20 percent as compared to the Project, with approximately 162 Block A residential units and 80 Block B residential units. Like the Project, this alternative would include multi-family residences, and 3,000 square feet of retail space. The Reduced Density Alternative would also include a reduction of the building area by 20 percent; however, it is assumed that the development envelope would largely remain the same. This alternative would include similar infrastructure, amenity, and open space improvements as proposed under the Project. The Shoreline/101 CIP utility improvements would continue to be routed through the Project site. This alternative would also include fewer parking spaces and lower building heights than the Project. Although the economic feasibility of this alternative would be required to be confirmed, this alternative is considered potentially feasible.

This alternative would meet some of the basic objectives of the Project: it would redevelop the Project site with a diversity of housing choices to better balance the City's jobs/housing ratio (objective 1); it would increase homeownership opportunities in the City and expand the supply of higher density attached, for-sale product (objective 2); it would provide amenities, shared auto and parking strategies, and TDM measures that promote the use of alternative transportation

(objective 5); it would respect the surrounding neighborhood and community through quality design, materials, and landscaping (objective 6); it would implement sustainable building practices promoting energy and water efficiency (objective 7); and it would create a new common open space area (objective 8). However, conservatively presuming that this alternative would be economically feasible, it would achieve the third objective (locate higher density residential units in close proximity to both major job centers in the City and major thoroughfares) and the fourth objective (redevelop an underutilized site to allow for higher density housing in proximity to jobs) to a lesser extent than the Project.

Under this alternative, the Project construction activity would be reduced, which would result in lower emissions of toxic air contaminants (TACs), including diesel particulate matter (DPM). In addition, other impacts, such as those related to criteria air pollutants and noise, would be reduced due to a reduction in daily vehicle trips from fewer residential uses. Overall, because this alternative would lessen some long-term impacts of the Project and would also reduce other impacts related to the operational phase of the Project, this alternative was carried forward for analysis.

5.4.3 Alternative 3: No Retail Alternative

The No Retail Alternative assumes that the retail uses located in the Block A building would not be provided, and the residential building amenity space and layout would be reconfigured. This alternative would include the same number of residential units and parking spaces as proposed for the Project. The 12 dedicated retail surface parking spaces would become shared parking spaces for the office and residential uses. Although the economic feasibility of this alternative would be required to be confirmed, this alternative is considered potentially feasible.

This alternative would meet all of the basic objectives of the Project: it would redevelop the Project site with a diversity of housing choices to better balance the City's jobs/housing ratio (objective 1); it would increase homeownership opportunities in the City and expand the supply of higher density attached, for-sale product (objective 2); it would locate higher density residential units in close proximity to both major job centers in the City and major thoroughfares (objective 3); it would redevelop an underutilized site to allow for higher density housing in proximity to jobs (objective 4); it would provide amenities, shared auto and parking strategies, and TDM measures that promote the use of alternative transportation (objective 5); it would respect the surrounding neighborhood and community through quality design, materials, and landscaping (objective 6); it would implement sustainable building practices promoting energy and water efficiency (objective 7); and it would create a new common open space area (objective 8).

Under this alternative, impacts, such as those related to criteria air pollutants and noise, would be reduced due to a reduction in daily vehicle trips from the exclusion of high trip generating retail uses. Overall, because this alternative would lessen some long-term impacts of the Project and would also reduce other impacts related to the operational phase of the Project, this alternative was carried forward for analysis.

5.5 Comparative Analysis of the Alternatives

This section presents a discussion of the comparative environmental effects of each alternative compared to the effects of the Project.

As permitted by CEQA, the significant effects of the alternatives are discussed in this EIR in less detail than are the effects of the proposed Project (CEQA *Guidelines* Section 15126.6[d]). Unless otherwise indicated, the impacts associated with the Project and each alternative are for year 2021 or 2023, the anticipated year for completion of Project construction under the simultaneous and sequenced construction scenarios, respectively. All impacts are described after implementation of any applicable mitigation measures identified in Chapter 4 (*Environmental Setting, Impacts, and Mitigation Measures*) of this EIR.

5.5.1 Alternative 1: No Project / No Development

The No Project Alternative assumes that the existing site remains as it is and no development takes place. The following discussion summarizes a comparison between the potential effects of the No Project Alternative and the Project. Because the alternative poses no changes or activity compared to existing baseline conditions, no impacts would result. As such, this alternative would have reduced impacts compared to the Project with respect to aesthetics, air quality, biological resources, cultural and tribal cultural resources, energy, geology, soils, and paleontological resources, greenhouse gas (GHG) emissions, hazards and hazardous materials, hydrology and water quality, land use, noise, population and housing, public services, recreation, transportation, and utilities and service systems. However, with regard to utilities and service systems, under the No Project Alternative, the water and sewer mains as part of the Shoreline/101 CIP would not be routed and installed through the Project site.

This alternative would not meet any of the basic objectives of the Project. This alternative would, however, avoid all of the Project's impacts that would be less than significant with the implementation of mitigation.

5.5.2 Alternative 2: Reduced Density Alternative

The Reduced Density Alternative would result in the construction of approximately 162 Block A residential units and 80 Block B residential units. Like the Project, this alternative would include multi-family residences and 3,000 square feet of retail space. The Reduced Density Alternative would also include a reduction of the building area by 20 percent; however, it is assumed that the development envelope would largely remain the same.

The following discussion summarizes impacts that would occur under the Reduced Density Alternative in comparison to the impacts that would occur under the Project.

5.5.2.1 Impacts

Aesthetics

The Reduced Density Alternative would result in less-than-significant (no mitigation required) aesthetics impacts, the same as identified with the Project although impacts would be less severe because the alternative would have lower building heights. The Reduced Density Alternative would reduce the building area by approximately 20 percent which would result in lower building heights. Like the Project, the Reduced Density Alternative would not have a substantial adverse effect on a scenic vista nor substantially damage scenic resources, conflict with applicable zoning and other regulations governing scenic quality, or create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Air Quality

The Reduced Density Alternative would result in less-than-significant (with mitigation) construction and operational air quality impacts, the same as identified with the Project, although impacts would be less severe because the alternative would involve less construction activity and residential development. This alternative would require less construction activity as compared to the Project due to the reduction in building area by approximately 20 percent. With regard to operations, the Reduced Density Alternative would also generate fewer daily vehicle trips compared to the Project (2,385 compared to 2,597) due to the reduction in residential units, as summarized in Table 5-6 (included under discussion of Transportation, below). Emissions of criteria pollutants during construction and operation were estimated for this alternative, and are summarized in **Tables 5-3** and **5-4**.

TABLE 5-3
REDUCED DENSITY ALTERNATIVE
AVERAGE UNMITIGATED DAILY CONSTRUCTION-RELATED POLLUTANT EMISSIONS

	ROG	NOx	Exhaust PM_{10}	Exhaust $PM_{2.5}$
Simultaneous Construction Emissions				
Block A & B Construction Emissions (tons)	2.57	7.32	0.35	0.32
Average Daily Emissions (lbs/day)	15.15	43.06	2.04	1.91
Sequenced Construction Emissions				
Block A Construction Emissions (tons)	1.50	2.90	0.13	0.12
Block B & Office Parking Emissions (tons)	1.00	3.72	0.17	0.16
Average Daily Emissions (lbs/day)	8.07	21.36	0.97	0.90
BAAQMD Threshold for Significant Construction Impacts (lbs/day)	54	54	82	54
Potential Significant Impact?				
Simultaneous Construction	No	No	No	No
Sequenced Construction	No	No	No	No

SOURCE: ESA (Appendix C).

TABLE 5-4
REDUCED DENSITY ALTERNATIVE
UNMITIGATED AVERAGE OPERATIONAL CRITERIA POLLUTANT EMISSIONS

Air Pollutant	Estimated Emissions (lbs/day)			
	ROG	NOx	PM_{10}	$PM_{2.5}$
Mobile Sources[a]	2.87	11.41	8.54	2.34
Area Sources[a]	9.17	0.12	0.05	0.05
Energy Sources[a]	0.06	0.53	0.04	0.04
Total	12.10	12.06	8.64	2.44
BAAQMD Threshold for Significant Operations Impacts[b]	54	54	82	54
Significant Impact?	No	No	No	No

NOTES:
[a] Mobile sources are motor vehicles and trucks. Area sources include landscape maintenance (equipment used for these activities such as gasoline-powered lawnmowers and blowers), maintenance application of paints and other interior and exterior surface coatings, and use of consumer products that result in emissions of ROG. Energy sources include natural gas combustion for space and water heating.
[b] Operational thresholds are from Table 2-1 of BAAQMD's 2017 CEQA Air Quality Guidelines (BAAQMD, 2017a).

SOURCE: ESA (see Appendix C).

Like the Project, this alternative would avoid construction and operational exceedances of ROG, NO_x and PM, with compliance with the City's Standard Conditions of Approval.

Construction of the Project would generate TACs, including DPM, which could expose offsite sensitive receptors to a localized health risk. Similar to the Project, construction of the Reduced Density Alternative would generate TACs, including DPM. However, as discussed above, the Reduced Density Alternative would result in approximately 80 percent of the square footage of development of the Project; therefore, it is anticipated that total construction-related DPM emissions for the Reduced Density Alternative would also be less than the DPM emissions for the Project. However, given the relative magnitude of development under the Reduced Density Alternative, it is likely that increased cancer risk would be significant in the absence of mitigation. However, with implementation of Mitigation Measure AIR-1, Exhaust Emissions Reduction Measures, lifetime cancer risk to offsite sensitive receptors under the Reduced Density Alternative would be less than significant with mitigation, similar to the Project.

Biological Resources

The Reduced Density Alternative would result in less-than-significant (with mitigation) biological resources impacts, the same as identified with the Project. The Reduced Density Alternative would involve the same construction envelope as analyzed for the Project, although it would require less construction activity due to a reduction in building area. As with the Project, the Reduced Density Alternative could result in impacts to roosting bats depending on the time of year construction activities would occur. Like the Project, with mitigation the impacts would be reduced to a less-than-significant level. Overall, the Reduced Density Alternative, like the Project, would not result in significant and unavoidable impacts to biological resources with mitigation incorporated.

Cultural and Tribal Cultural Resources

The Reduced Density Alternative would result in less-than-significant (with mitigation) cultural and tribal cultural resources impacts, the same as identified with the Project. The Reduced Density Alternative would involve less development as compared to the Project, but could result in adverse effects to cultural and tribal resources that might be uncovered during construction, requiring mitigation similar to that described for the Project. Like the Project, with mitigation, the alternative would avoid significant and unavoidable impacts to cultural and tribal cultural resources.

Energy Resources

The Reduced Density Alternative would result in less-than-significant (no mitigation required) impacts related to energy resources, similar to the impacts identified for the Project although impacts during operation would be less severe because the alternative would involve energy demand from fewer residential units and fewer trips. The Reduced Density Alternative would involve less construction activity as compared to the Project, and would require less energy during construction. The building-related energy demands of this alternative would also be less than that of the Project, as less residential-related energy use would be required. The Reduced Density Alternative would also generate fewer daily vehicle trips compared to the Project (2,385 compared to 2,597), as summarized in Table 5-6, and would require less gasoline fuel use during operation. The Reduced Density Alternative would result in less-than-significant energy impacts, similar to the impacts identified for the Project.

Geology, Soils, and Paleontological Resources

The Reduced Density Alternative would result in less-than-significant (no mitigation required) geology, soils, and paleontological resources impacts, the same as identified for the Project. The Reduced Density Alternative would involve similar excavation and ground disturbance, and the same overall construction footprint as the Project. As with the Project, under the Reduced Density Alternative, the Project applicant would be required to implement the geotechnical recommendations included in a geotechnical investigation in accordance with the City's Standard Conditions of Approval. Overall, like the Project, the Reduced Density Alternative would result in less-than-significant geology, soils, and paleontological resources impacts associated with construction and operation.

Greenhouses Gas Emissions

The Reduced Density Alternative would result in less-than-significant (no mitigation required) GHG emissions impacts, similar to the impacts identified for the Project although the alternative would be less greenhouse gas efficient. The Reduced Density Alternative was analyzed for potential effects related to GHGs (see Appendix C). The results are presented in **Table 5-5**, below.

TABLE 5-5
REDUCED DENSITY ALTERNATIVE
ESTIMATED ANNUAL OPERATIONAL GREENHOUSE GAS EMISSIONS

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area	3.07	<0.01	0.00	3.15
Energy	379.63	0.03	0.01	382.62
Mobile	1,605.93	0.06	0.00	1,607.40
Waste	23.24	1.37	0.00	57.57
Water	13.96	0.30	0.01	23.51
Total	**2,025.83**	**1.76**	**0.02**	**2,074.24**
Amortized Construction Emissions over 30 Years[a]				41.13
Operation including Construction Total				**2,015.37**
Service Population[b]				547
Total Project GHG Emissions by Service Population				**3.9**
2023 Project-level Service Population Threshold[c]				4.3
Exceeds Significance Threshold?				**No**

NOTES:
[a] Assumed to be the same as analyzed for the Project. See Table 4.7-2.
[b] Conservatively includes a 7.5 percent vacancy factor and an average of 2.4 persons per household from 242 residential units (538 residents) and nine employees as discussed in Section 4.12, *Population and Housing*.
[c] The total GHG emissions from construction under both scenarios would be similar, and are presented for the simultaneous construction scenario in this table.

Columns may not total precisely due to rounding, and due to the influence of minimal amounts of less common GHGs not represented in the table.

SOURCE: ESA (Appendix C).

The amount of total operational GHG emissions that would be generated under this alternative would be less than for the Project (2,290 total MT [metric tons]/year for the Project versus 2,015 MT/year for this alternative). However, under this alternative, fewer residential units would be developed, therefore resulting in a smaller service population of approximately 547 people (assuming an average of 2.4 residents per household and a 7.5 percent vacancy factor, and the nine employees from the retail use), which results in a ratio of MT CO_2e per year to service population that is higher than under Project conditions (3.9 as compared to the Project's ratio of 3.3).

As discussed in Section 4.7, *Greenhouse Gas Emissions*, efficiency-based thresholds commonly describe an efficiency limit using "per service population," which refers to the sum of the number of jobs and the number of residents generated by a project, and use emissions associated with commercial and residential uses, also known as the land use sector, to derive an efficiency metric. Thus, with regard to greenhouse gas emissions, while the Reduced Density Alternative would be less efficient, compared to the Project.

Emissions under the Reduced Density Alternative would not exceed the calculated 2023 efficiency threshold of 4.3 MT of CO_2e/service population/year (see Table 4.7-1), and the

alternative would not result in a significant impact, similar to the Project. Also like the Project, mitigation measures would not be required to reduce impacts to a less-than-significant level.

Hazards and Hazardous Materials

The Reduced Density Alternative would result in less-than-significant (with mitigation) hazards and hazardous materials impacts, the same as identified with the Project. The Reduced Density Alternative would involve similar excavation and ground disturbance, and the same overall construction footprint and land uses as the Project. The alternative would be subject to the same potential hazards and risk conditions as the Project. Also like the Project, the alternative would avoid significant and unavoidable hazards and hazardous materials impacts with mitigation.

Hydrology and Water Quality

The Reduced Density Alternative would result in less-than-significant hydrology and water quality impacts, the same as identified with the Project. The Reduced Density Alternative would involve construction and earthmoving activities that could affect water quality and alter drainage patterns in a similar fashion as the Project, within the same construction envelope, although less construction activity would occur. The Reduced Density Alternative would result in a similar area of impervious surfaces on the site than the Project, resulting in a similar volume of runoff and requiring the same total area for stormwater treatment and retention. In addition, site infrastructure under this alternative would be subject to the same flood hazard conditions, as compared to the Project. The regulatory requirements identified for the Project would also be required for this alternative and would ensure the same less-than-significant impacts to hydrology and water quality.

Land Use and Planning

The Reduced Density Alternative would result in less-than-significant (no mitigation required) land use and planning impacts, the same as identified for the Project although the alternative would result in a lower residential population. Like the Project, the Reduced Density Alternative would require a text and map amendment to the City of Mountain View 2030 General Plan and re-zoning amendments to the City's Zoning Ordinance and Map to allow for residential development on the Project site. This alternative would be consistent with the City's planning goals and other land use plans and policies regulating the site, similar to the Project. Overall, the Reduced Density Alternative would result in less-than-significant land use and planning impacts like those identified for the Project. However, because this alternative would have less residential development compared to the Project, it would not be as supportive toward meeting the City's Regional Housing Needs Assessment (RHNA) goals.

Noise

The Reduced Density Alternative would result in less-than-significant construction and operational noise impacts, the same as identified with the Project although impacts would be less severe because the alternative would involve less development. Under the Reduced Density Alternative, construction activity would be lessened due to the reduction in building area by

20 percent; therefore, construction noise would be reduced, as compared to the Project. The Reduced Density Alternative would generate fewer daily trips (1,648 daily trips for the alternative compared to 2,597 daily trips for the Project), and thus would generate less traffic noise than the Project. In addition, like the proposed Project, the alternative would avoid significant and unavoidable noise impacts.

Population and Housing

The Reduced Density Alternative would result in less-than-significant (no mitigation required) impacts to population and housing, the same as identified for the Project although the alternative would have less residential population. As with the Project, no displacement of housing or people would occur with the Reduced Density Alternative. Overall growth with this alternative would be less than with the Project (a residential population of 538 people compared to the Project residential population of 675). Less population growth largely results in reductions in other effects (e.g., utility and public service demands). Also, similar to the Project, no aspect of the alternative would result in undue growth associated with infrastructure improvements that would induce growth. However, compared with the Project, this alternative would contribute less residential development toward the City's RHNA goals.

Public Services and Recreation

The Reduced Density Alternative would result in less-than-significant (no mitigation required) impacts to public services and recreation, the same as those identified for the Project although impacts would be less severe because the alternative would involve less residential development. As previously discussed for this alternative, there would be less development and on-site population compared to the Project; this would result in lower demand for police, fire and emergency services, schools, and parks and recreation. Overall, the Reduced Density Alternative would result in less-than-significant impacts to public services and recreation, similar to those identified for the Project.

Transportation

The Reduced Density Alternative would result in less-than-significant (no mitigation required) transportation impacts, the same as identified with the Project although impacts would be less severe because the alternative would involve less development. Trip generation estimated for the Reduced Density Alternative is presented in **Table 5-6**, below. As discussed in Section 4.14, *Transportation*, of this EIR, the Project would not result in significant impacts related to increased traffic, and no mitigation would be required. The Reduced Density Alternative would generate fewer trips (1,648 daily trips for the alternative compared to 2,597 daily trips for the Project), and the less-than-significant transportation impacts of the Project would be slightly reduced under the Reduced Density Alternative.

TABLE 5-6
REDUCED DENSITY ALTERNATIVE TRIP GENERATION ESTIMATES

Land Use	ITE Code[a,b]	Size	Daily Total
Block A Multi-Family Residential	221	162 DU	881
Bock B Multi-Family Residential	221	80 DU	435
Retail	936	3,000 SF	2,062
Gross New Project Trips			***3,378***
Mixed-Use Reduction (Housing & Employment)[c]			(39)
Housing/Retail Mixed-Use Reduction - Housing[d]			(197)
Housing/Retail Mixed-Use Reduction - Retail[d]			(197)
Pass-by Reduction[e]			(560)
		Total Reduction	***(933)***
		Net New Project Trips	**2,385**

NOTES:
DU = dwelling unit; SF = square feet
[a] Trip generations rate for the proposed residential units are based on the ITE's Trip Generation Manual, 10th Edition rates for Land Use Code 221 "Multifamily Housing (Mid-Rise)."
[b] Trip generation rates for the proposed retail space are based on the ITE's Trip Generation Manual, 10th Edition rates for Land Use Code 936 "Coffee/Donut Shop without Drive-Through Window"
[c] As prescribed by the VTA Transportation Impact Analysis Guidelines, 2014, a maximum trip reduction of 3 percent for mixed-use development with housing and employment was applied to the housing trip generation.
[d] As prescribed by the VTA Transportation Impact Analysis Guidelines, 2014, a 15 percent trip reduction was applied to the smaller trip generator. The same number of trips were then subtracted from the larger trip generator to account for both trip ends.
[e] As prescribed by the VTA Transportation Impact Analysis Guidelines, 2014, a 30 percent pass-by trip reduction was applied to the retail component of the project. The reduction was applied to the net retail trips after applying the mixed-use reduction.

SOURCE: Hexagon, 2019.

Utilities and Service Systems

The Reduced Density Alternative would result in less-than-significant (no mitigation required) impacts to utilities and service system, the same as identified for the Project although impacts would be less severe because the alternative would involve less development. As noted above, the Reduced Density Alternative would result in fewer overall residential units and a reduced residential population increase when compared with the Project. As such, the demand for water, wastewater treatment, stormwater treatment, and solid waste disposal is expected to be similar, though slightly reduced. The Reduced Density Alternative would route and install the water and sewer mains as part of the Shoreline/101 CIP through the site, similar to the Project. Overall, the Reduced Density Alternative would have less-than-significant impacts related to utilities and services systems, similar to the Project.

5.5.3 Alternative 3: No Retail Alternative

The No Retail Alternative would not develop the retail uses located in the Block A building, and the residential building amenity space and layout would be reconfigured. This alternative would include the same number of residential units and parking spaces as proposed for the Project. Under this alternative, it is assumed that the development envelope would largely remain the same.

The following discussion summarizes impacts that would occur under the No Retail Alternative in comparison to the impacts that would occur under the Project.

5.5.3.1 Impacts

Aesthetics

The No Retail Alternative would result in less-than-significant (no mitigation required) aesthetics impacts, the same as identified with the Project. Development under this alternative would not include retail uses within the building on Block A. The layout of the building on Block A would be reconfigured. Like the Project, the No Retail Alternative would not have a substantial adverse effect on a scenic vista nor substantially damage scenic resources, conflict with applicable zoning and other regulations governing scenic quality, or create a new source of substantial light or glare which would adversely affect day or nighttime views in the area to the same degree than would occur with the Project.

Air Quality

The No Retail Alternative would result in less-than-significant (with mitigation) construction and operational air quality impacts, the same as identified with the Project, although impacts would be less severe because the alternative could involve incrementally less construction activity in the building and would not involve trip generating retail uses. It is possible that total construction-related DPM emissions for the No Retail Alternative could be incrementally less than the DPM emissions for the Project. However, given the relative magnitude of development under the No Retail Alternative, it is likely that increased cancer risk would be significant in the absence of mitigation. With implementation of Mitigation Measure AIR-1, Exhaust Emissions Reduction Measures, lifetime cancer risk to offsite sensitive receptors under the No Retail Alternative would be less than significant with mitigation, similar to the Project.

With regard to operational emissions, the No Retail Alternative would generate substantially fewer daily vehicle trips compared to the Project (1,648 compared to 2,597), as summarized in Table 5-8 (shown under the discussion of Transportation below). Like the Project, this alternative would avoid construction and operational exceedances of ROG, NO_x and PM, with compliance with the City's Standard Conditions of Approval. Overall, the No Retail Alternative, like the Project, would not result in significant and unavoidable impacts to air quality with mitigation incorporated.

Biological Resources

The No Retail Alternative would result in less-than-significant (with mitigation) biological resources impacts, the same as identified with the Project. The No Retail Alternative would involve the same development envelope as analyzed for the Project. As with the Project, the No Retail Alternative could result in impacts to roosting bats depending on the time of year construction activities would occur. Like the Project, impacts would be reduced to a less-than-significant with mitigation. Overall, the No Retail Alternative, like the Project, would not result in significant and unavoidable impacts to biological resources with mitigation incorporated.

Cultural and Tribal Cultural Resources

The No Retail Alternative would result in less-than-significant (with mitigation) cultural and tribal cultural resources impacts, the same as identified with the Project. The No Retail Alternative could result in adverse effects to cultural and tribal cultural resources that might be uncovered during construction, requiring mitigation similar to that described for the Project. Like the Project, with mitigation, the alternative would avoid significant and unavoidable impacts to archeological and tribal cultural resources.

Energy Resources

The No Retail Alternative would result in less-than-significant (no mitigation required) impacts related to energy resources, similar to the impacts identified for the Project, although impacts would be less severe because the alternative would require slightly less construction activity and would not involve energy demand from retail uses. The No Retail Alternative could involve incrementally less construction activity within the building as compared to the Project, and could require incrementally less energy during construction as compared to the Project, although this difference would likely be minimal. The building-related energy demands of this alternative could be less than that of the Project, as no retail-related energy use would be required. The No Retail Alternative would also generate substantially fewer daily vehicle trips compared to the Project (1,648 compared to 2,597), as summarized in Table 5-8, and would require less gasoline fuel use during operation. The No Retail Alternative would result in less-than-significant energy impacts, similar to the impacts identified for the Project.

Geology, Soils, and Paleontological Resources

The No Retail Alternative would result in less-than-significant (no mitigation required) geology, soils, and paleontological resources impacts, the same as identified for the Project. The No Retail Alternative would involve similar excavation and ground disturbance, and the same overall development envelope as the Project. As with the Project, under the No Retail Alternative, the Project applicant would be required to implement the geotechnical recommendations included in the geotechnical investigation in accordance with the City's Standard Conditions of Approval. Overall, like the Project, the No Retail Alternative would result in less-than-significant geology, soils, and paleontological resources impacts associated with construction and operation.

Greenhouse Gas Emissions

The No Retail Alternative would result in less-than-significant (no mitigation required) GHG emissions impacts, similar to the impacts identified for the Project, although impacts would be less severe because the alternative would generate less total GHG emissions annually. The No Retail Alternative was analyzed for potential effects related to GHGs (see Appendix C). The results are presented in **Table 5-7**.

TABLE 5-7
NO RETAIL ALTERNATIVE
ESTIMATED ANNUAL OPERATIONAL GREENHOUSE GAS EMISSIONS

Emission Source	CO_2	CH_4	N_2O	CO_2e
	Metric Tons per Year			
Area	3.81	<0.01	0.00	3.90
Energy	460.34	0.03	0.01	463.94
Mobile	1,415.82	0.04	0.00	1,417.06
Waste	28.29	1.67	0.00	70.09
Water	17.51	0.01	0.01	20.51
Total	**1,925.78**	**1.77**	**0.02**	**1,975.51**
Amortized Construction Emissions over 30 Years[a]				42.97
Operation including Construction Total				**2,018.48**
Service Population[b]				675
Total Project GHG Emissions by Service Population				**3.0**
2023 Project-level Service Population Threshold[c]				4.3
Exceeds Significance Threshold?				**No**

NOTES:
[a] Conservatively assumed to be the same as analyzed for the Project. See Table 4.7-2.
[b] Conservatively includes a 7.5 percent vacancy factor and an average of 2.4 persons per household from 303 residential units (675 residents).
[c] See Table 4.7-1.

Columns may not total precisely due to rounding, and due to the influence of minimal amounts of less common GHGs not represented in the table.

SOURCE: ESA (Appendix C).

The amount of total operational GHG emissions that would be generated under this alternative would be less than for the Project (2,290 total MT [metric tons]/year for the Project versus 2,018 MT/year for this alternative). This alternative would result in a slightly smaller service population (SP) of approximately 675 people and the ratio of MT CO_2e per year to service population would be lower than under Project conditions (3.0 as compared to the Project's ratio of 3.3). Emissions under the No Retail Alternative would not exceed the calculated 2023 efficiency threshold of 4.3 MT of CO_2e/SP/year (see Table 4.7-1), and the alternative would not result in a significant impact, similar to the Project. Also like the Project, mitigation measures would not be required to reduce impacts to a less-than-significant level.

Hazards and Hazardous Materials

The No Project/Parks and Recreation Alternative would result in less-than-significant (with mitigation) hazards and hazardous materials impacts, the same as identified with the Project. The No Retail Alternative would involve similar excavation as compared to the Project within the same development envelope. The alternative would also be subject to the same potential hazards risk and conditions as the Project, during construction and operation. Also like the Project, the alternative would avoid significant and unavoidable hazards and hazardous materials impacts with mitigation.

Hydrology and Water Quality

The No Retail Alternative would result in less-than-significant (no mitigation required) hydrology and water quality impacts, the same as identified with the Project. The No Retail Alternative would involve construction and earthmoving activities that could affect water quality and alter drainage patterns in a similar fashion as the Project, within the same construction envelope. The No Retail Alternative would result in the same area of impervious surfaces on the site resulting in a similar volume of runoff and requiring the same total area for stormwater treatment and retention. In addition, site infrastructure under this alternative would be subject to the same flood hazard conditions, as compared to the Project. The regulatory requirements identified for the Project would also be required for this alternative and would ensure the same less-than-significant impacts to hydrology and water quality.

Land Use and Planning

The No Retail Alternative would result in less-than-significant (no mitigation required) land use and planning impacts, the same as identified for the Project. Like the Project, the No Retail Alternative would require a text and map amendment to the City of Mountain View 2030 General Plan and re-zoning amendments to the City's Zoning Ordinance and Map to allow for residential development on the Project site. This alternative would be consistent with the City's planning goals and other land use plans and policies regulating the site, similar to the Project. Overall, the No Retail Alternative would result in less-than-significant land use and planning impacts like those identified for the Project.

Noise

The No Retail Alternative would result in less-than-significant (no mitigation required) construction and operational noise impacts, the same as identified with the Project although impacts would be less severe because the alternative would not involve trip generating retail uses. While this difference is anticipated to be minimal, the No Retail Alternative could result in incrementally less construction activity within the building and associated construction noise when compared with Project construction. In addition, this alternative would generate fewer daily trips (1,648 daily trips for the alternative compared to 2,597 daily trips for the Project), and therefore, less traffic noise during operation. Overall, the No Retail Alternative would result in less-than-significant noise impacts like those identified for the Project.

Population and Housing

The No Retail Alternative would result in less-than-significant (no mitigation required) impacts to population and housing, the same as identified with the Project although impacts would be less severe because the alternative would not generate new jobs associated with retail uses. As with the Project, no displacement of housing or people would occur with the No Retail Alternative. Overall direct growth with this alternative would be less than with the Project, as it would include no retail employment. No aspect of the alternative would result in undue growth associated with infrastructure improvements that would induce growth, similar to the Project. Overall, the No Retail Alternative would result in less-than-significant population and housing impacts like those identified for the Project.

Public Services and Recreation

The No Retail Alternative would result in less-than-significant (no mitigation required) impacts to public services and recreation, the same as those identified for the Project although impacts would be less severe because the alternative would not generate new jobs associated with retail uses. As previously discussed for this alternative, there would be no new jobs associated with retail uses as compared to the Project. This would result in an incrementally lower demand for police, fire and emergency services, and parks and recreation resulting from no new employment demand. Overall, the No Retail Alternative would result in less-than-significant impacts to public services and recreation, similar to those identified for the Project.

Transportation

The No Retail Alternative would result in less-than-significant (no mitigation required) transportation impacts, the same as identified with the Project although impacts would be less severe because the alternative would not include trip-generating retail uses. Trip generation estimated for the No Retail Alternative is presented in **Table 5-8**.

TABLE 5-8
NO RETAIL ALTERNATIVE AUTOMOBILE TRIP GENERATION ESTIMATES

Land Use	ITE Code[a]	Size	Daily Total
Block A Multi-Family Residential	221	203 DU	1,104
Block B Multi-Family Residential	221	100 DU	544
		Gross New Project Trips	***1,648***

NOTES:
DU = dwelling unit; SF = square feet
[a] Trip generations rate for the proposed residential units are based on the ITE's Trip Generation Manual, 10th Edition rates for Land Use Code 221 "Multifamily Housing (Mid-Rise)."

SOURCE: Hexagon, 2019.

As discussed in Section 4.14, *Transportation*, of this EIR, the Project would not result in significant impacts related to increased traffic, and no mitigation would be required. The No Retail Alternative would generate fewer daily trips (1,648 daily trips for the alternative compared to 2,597 daily trips for the Project), and the less-than-significant traffic impacts of the Project would not become any more severe under this alternative. Overall, the No Retail Alternative would have fewer daily vehicle trips and would result in less-than-significant impacts related to transportation, similar to the Project.

Utilities and Service Systems

The No Retail Alternative would result in less-than-significant (no mitigation required) impacts to utilities and service system, the same as identified for the Project although impacts would be less severe because the alternative would not include retail uses. As noted above, without retail uses, the demand for water, wastewater treatment, stormwater treatment, and solid waste disposal is expected to be reduced, compared with the Project. The No Retail Alternative

would route and install the water and sewer mains as part of the Shoreline/101 CIP through the site, similar to the Project. Overall, the No Retail Alternative would have less-than-significant impacts related to utilities and services systems, similar to the Project.

5.6 Overall Comparison of Proposed Project with Alternatives

The analysis of Project alternatives is summarized and compared in two tables: **Table 5-9** provides a summary of impact levels within all environmental topic areas. Overall, this table shows that both the Reduced Density Alternative and the No Retail Alternative would reduce most of the Project's impacts and would not result in any significant and unavoidable impacts.

Table 5-10 summarizes the ability of each alternative to meet the basic objectives for the Project. The tables provide a ready means for the reader to review and compare the alternatives with each other, and with the Project. Table 5-11 indicates that the No Project Alternative would not have the ability to meet the basic objectives of the Project. Both the Reduced Density Alternative and the No Retail Alternative would have the ability to meet all of the basic objectives of the Project, although for the Reduced Density Alternative to a lesser degree for objectives pertaining to housing density.

5.6.1 Environmentally Superior Alternative

CEQA *Guidelines* §15126.6(e)(2) requires an EIR to identify an environmentally superior alternative. If the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives. In general, the environmentally superior alternative is defined as that alternative with the least adverse impacts to the project area and its surrounding environment. CEQA *Guidelines* Section 15126.6(a) places emphasis on alternatives that "avoid or substantially lessen the significant effects" of a project.

The No Project Alternative would be the most environmentally superior alternative with the fewest environmental impacts. However, the No Project Alternative does not meet any of the basic objectives of the Project.

Since the environmentally superior alternative is the No Project Alternative, the EIR also must identify an environmentally superior alternative from among the other alternatives. Determining an environmentally superior alternative can be difficult because of the many factors that must be balanced. For example, the Reduced Density Alternative could be preferred because, relative to the Project, it would result in the greatest reduction in DPM emissions, and because incrementally reduced impacts would result from the 20 percent reduction in units, even though the impact conclusions would be the same as the Project. However, while the Reduced Density Alternative would result in lower annual GHG emissions, the alternative would not be as GHG efficient compared to the Project and would not be as supportive toward meeting the City's RHNA goals. By contrast, the No Retail Alternative could be superior because it would have incrementally reduced construction impacts that would result from slightly reduced construction activity and

TABLE 5-9
PROJECT ALTERNATIVES IMPACT SUMMARY AND COMPARISON

Impact	Alternative 1: No Project Alternative	Alternative 2: Reduced Density Alternative	Alternative 3: No Retail Alternative	Project
Aesthetics	No Impact	Less than Significant ⇩	Less than Significant	Less than Significant
Air Quality	No Impact	LTS with Mitigation ⇩	LTS with Mitigation ⇩	LTS with Mitigation
Biological Resources	No Impact	LTS with Mitigation	LTS with Mitigation	LTS with Mitigation
Cultural and Tribal Cultural Resources	No Impact	LTS with Mitigation	LTS with Mitigation	LTS with Mitigation
Energy	No Impact	Less than Significant ⇩	Less than Significant ⇩	Less than Significant
Geology, Soils, and Paleontological Resources	No Impact	Less than Significant	Less than Significant	Less than Significant
Greenhouse Gas Emissions	No Impact	Less than Significant ⇧	Less than Significant ⇩	Less than Significant
Hazards and Hazardous Materials	No Impact	LTS with Mitigation	LTS with Mitigation	LTS with Mitigation
Hydrology and Water Quality	No Impact	Less than Significant	Less than Significant	Less than Significant
Land Use and Planning	No Impact	Less than Significant	Less than Significant	Less than Significant
Noise	No Impact	Less than Significant ⇩	Less than Significant ⇩	Less than Significant
Population and Housing	No Impact	Less than Significant ⇩	Less than Significant ⇩	Less than Significant
Public Services and Recreation	No Impact	Less than Significant ⇩	Less than Significant ⇩	Less than Significant
Transportation	No Impact	Less than Significant ⇩	Less than Significant ⇩	Less than Significant
Utilities and Service Systems	No Impact	Less than Significant ⇩	Less than Significant ⇩	Less than Significant

NOTES: LTS = Less than Significant ⇧/⇩ - The impact is more/less severe than compared to the Project.

The color gradients in the table are a visual representation of the significance findings with the lightest or absence of color representing the least amount of impact, and the darkest shade representing an impact that would be significant without mitigation.

TABLE 5-10
ABILITY OF PROJECT ALTERNATIVES TO SATISFY BASIC OBJECTIVES OF THE PROJECT

Project Objective	Alternative 1: No Project Alternative	Alternative 2: Reduced Density Alternative	Alternative 3: No Retail Alternative
1. Redevelop the Project site with a diversity of housing choices, including approximately 300 new residential units, to better balance the City's jobs/housing ratio.	Does not meet objective	**Meets objective**	**Meets objective**
2. Increase homeownership opportunities in the City of Mountain View and expand the supply of higher density attached, for-sale product by providing approximately 100 condominium units.	Does not meet objective	**Meets objective**	**Meets objective**
3. Locate higher density residential units in close proximity to both major job centers in Mountain View and the major thoroughfares of Highway 101 and Shoreline Boulevard.	Does not meet objective	**Meets objective** ⇩	**Meets objective**
4. Redevelop an underutilized site to allow for higher density housing in proximity to jobs and the existing 111,443 square foot office building on the Project site.	Does not meet objective	**Meets objective** ⇩	**Meets objective**
5. Provide amenities, shared auto and parking strategies, and TDM measures that promote walking, bicycling, telecommuting, and use of shuttles, transit and other transportation alternatives.	Does not meet objective	**Meets objective**	**Meets objective**
6. Respect the surrounding neighborhood and community through quality design, materials, and landscaping.	Does not meet objective	**Meets objective**	**Meets objective**
7. Implement sustainable building practices promoting energy and water efficiency.	Does not meet objective	**Meets objective**	**Meets objective**
8. Create a new common open space area with shade trees and an open plaza with outdoor seating to allow for the passive enjoyment by all residents and office building users.	Does not meet objective	**Meets objective**	**Meets objective**

NOTES: ⇧/⇩ - The alternative is more (⇧) / less (⇩) aligned with the objective, compared to the Project.

would not include high vehicle trip generating retail uses, even though the impact conclusions would be the same as the Project. The No Retail Alternative would also meet all of the Project's basic objectives to the same degree as the Project.

The City has identified the No Retail Alternative as the environmentally superior alternative because of its combined incremental reduction in construction activity and substantial trip reduction and reduced congestion, leading to a higher GHG efficiency and lower traffic-related noise over the long-term. Nonetheless, City decision-makers may weigh the relative benefits of the alternatives differently and with additional information received in or developed during the Project approval process reasonably could reach a different decision.

In considering the alternatives analysis provided in this chapter, CEQA's substantive mandate is as follows: "public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects" of the project (CEQA Statute, Public Resources Code, Section 21002). For the Project, feasible mitigation measures have been determined to be available to reduce all potentially significant environmental impacts to less-than-significant levels. So long as these identified mitigation measures are either incorporated into the Project or made a condition of Project approval, the availability of feasible alternatives becomes somewhat of a less important consideration, as they would not substantially lessen or avoid significant environmental effects of the Project.

CHAPTER 6
Other Statutory Sections

Consistent with the CEQA *Guidelines* Section 15126.2, this section discusses significant environmental effects, significant irreversible environmental changes, and growth-inducing impacts associated with development of the Project. Project effects that were found to be less than significant are also discussed. Cumulative impacts are separately discussed in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*.

6.1 Significant Environmental Effects

In accordance with CEQA *Guidelines* sections 15064 and 15065, an EIR must identify impacts that would not be eliminated or reduced to an insignificant level by mitigation measures included as part of the proposed project, or by other mitigation measures that would be implemented.

As discussed throughout Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*, development of the proposed Project would not result in significant and unavoidable impacts that cannot be mitigated to a less-than-significant level.

6.2 Significant Irreversible Environmental Changes

An EIR must identify any significant irreversible environmental changes that could result from project development. These may include current or future uses of non-renewable resources, and secondary or growth-inducing impacts that commit future generations to similar uses. CEQA dictates that irretrievable commitments of resources should be evaluated to assure that such current consumption is justified (CEQA *Guidelines* Section 15126.2(c)). The CEQA *Guidelines* identify three distinct categories of significant irreversible changes: (1) changes in land use that would commit future generations; (2) irreversible changes from environmental actions; and (3) consumption of non-renewable resources.

6.2.1 Changes in Land Use Which Would Commit Future Generations

Development of the proposed Project would result in growth and development within the City of Mountain View. Development of the proposed Project would require text and map amendments to the City of Mountain View 2030 General Plan to change the Project site land use designation and associated re-zoning amendments to the City's Zoning Ordinance and Map; however, growth from development of the Project would be consistent with Association of Bay Area Governments

(ABAG) growth projections for the City and the region. Further, development of the Project would occur within an urbanized area surrounded by similar or compatible uses and would not commit future generations to significant changes in land use that would result in significant and unavoidable adverse impacts, as discussed in Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*.

6.2.2 Irreversible Changes from Environmental Accidents

As discussed in Section 4.8, *Hazards and Hazardous Materials*, of this EIR, no significant irreversible environmental damage, such as what could occur as a result of an accidental spill or explosion of hazardous materials, is anticipated due to development of the proposed Project. Furthermore, compliance with Federal, State, and local regulations associated with hazards and hazardous materials identified in Section 4.8 would reduce the possibility that hazardous substances associated with development of the Project would result in irreversible environmental damage from accidental spill or explosion.

6.2.3 Consumption of Non-renewable Resources

Consumption of non-renewable resources includes conversion of agricultural lands, loss of access to mining reserves, and use of non-renewable energy sources. As in Section 4.16, *Effects Found Not to Be Significant*, the proposed Project site is not located on agricultural land (DOC, 2016); therefore, no agricultural land would be converted to non-agricultural uses.

As also discussed in Section 4.16, no minerals or aggregate resources of Statewide importance are located within the City, and there are no natural gas, oil, or geothermal resources identified in or adjacent to the City (City of Mountain View, 2012). Therefore, the Project would not result in the loss of availability of a known mineral resource and would not result in the loss of a locally important mineral resource recovery site.

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, as discussed in Section 4.5, *Energy*. Project construction activities would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels, natural gas, and gasoline and diesel 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. New technologies or systems may also emerge over the lifetime of the Project, or would become more cost-effective or user-friendly, and would further reduce the Project's reliance upon nonrenewable energy resources.

6.3 Growth-Inducing Impacts

This section addresses the ways that development of the Project "could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment" (Section 15126.2(d) of the CEQA *Guidelines*). This section summarizes topics and impacts also addressed in Section 4.12 *Population and Housing*, which provides the context for evaluating growth-inducing impacts.

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. General plans define the location, type, and intensity of growth and thus 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).

6.3.1 Extension of Urban Services or Infrastructure

As discussed in Section 4.13, *Public Services and Recreation*, the Project is located in an urban area already served by City fire, police, school, and park services. Therefore, the Project would not require the extension of urban services into a previously unserved area. Additionally, as described in Section 4.15, *Utilities and Service Systems*, the Project would involve the installation of new utility infrastructure on-site. Although infrastructure improvements would occur as part of

the Project, extension of these facilities within the Project site would not indirectly induce substantial population growth, because the Project site is located within a developed area surrounded primarily by light industrial and office uses. Required infrastructure improvements would be limited in extent, and would not likely facilitate the development or redevelopment of other properties within the vicinity of the Project site.

As discussed in Section 4.15, *Utilities and Service Systems* the Project would facilitate the construction of a proposed Capital Improvement Project (CIP) crossing State Highway 101 near North Shoreline Boulevard through internal Project streets. The CIP is in the design stage but, construction of the CIP may not coincide with Project construction. The CIP is a planned facility in the City's 2010 Water Master Plan, which accounts for planned growth within the City.

6.3.2 Extension of a Transportation Corridor

As described in Section 4.10, *Land Use and Planning*, primary regional auto access to the Project site is provided by Highway 101 (U.S. 101) located adjacent to the north of the Project site, and local access via Moffett Blvd/NASA Parkway, W Middlefield Road, and N Shoreline Boulevard. As discussed in Section 4.14, *Transportation*, the Project site alternative transit options are available to and from the Project site including bus routes, shuttle routes, and bicycle facilities locally, and regional rail and light-rail within 1 mile of the Project site. Project access would be provided via private entrance driveways from Terra Bella Avenue along the southern border of the Project site and from Linda Vista Avenue along the eastern border of the Project site.

The Project does not propose an extension of any transportation corridor, the Project site is well-served by existing regional and local transportation, and is close to employment centers in Mountain View, Palo Alto, Santa Clara, and San Jose. Therefore, the Project would not extend transportation corridors into undeveloped areas resulting in growth-inducing impacts.

6.3.3 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." CEQA requires a discussion of how a project could increase population, employment, or housing in the areas surrounding the project site as well as an analysis of the infrastructure and planning changes that would be necessary to implement the project.

The Project involves the addition of residential and retail uses on a site that currently contains office uses, therefore directly stimulating population growth, the impacts of which are analyzed throughout Chapter 4, *Environmental Setting, Impacts, and Mitigation Measures*. The Project site is adjacent to existing urban development including predominantly light industrial and office uses. The parcel located directly east of the Project site containing commercial and light industrial buildings (currently designated as General Industrial in the City's 2030 General Plan) could be developed into a residential use. However, development of this relatively small parcel would be limited and require a General Plan amendment and change in zoning by the City, and would be subject to project-specific CEQA review.

Section 4.12, *Population and Housing*, analyzes the Project's overall effect on population and housing, including growth-inducing considerations. The Project would result in the addition of up to 303 new residential units on the Project site, which could induce population growth of up to 675 residents on the site as new homes are created. The new population associated with the Project would represent approximately 5 percent of the citywide population growth anticipated by the City's 2030 General Plan, and the Project's housing increase represents a small increment of the ABAG-projected growth within the City, which would not constitute substantial unplanned population growth. The Project's location is anticipated to attract households with a high proportion of working adults who value the site's location with good accessibility to workplaces elsewhere in the City, and the South Bay. Thus, from a regional perspective, the Project would add housing in an urban, infill location, adding to the housing supply in the South Bay, and marginally affecting the distribution of household and population growth within the region.

The Project would result in construction employment. The employment growth associated with construction work, however, would be limited and temporary, and, as discussed in Section 4.12, *Population and Housing*, the majority of construction workers are anticipated to originate from the local and regional labor pool, and would not relocate within the City, further reducing the potential for secondary effects. The Project would also result in approximately nine permanent employees on the Project site from proposed retail uses. However, as discussed in Section 4.12, the Project's employment increase represents a small increment of the ABAG-projected growth within the City, which would not constitute substantial unplanned employment growth within the City. Accordingly, the employment opportunities provided during operation are not anticipated to induce substantial population growth in the region.

The Project would not remove obstacles to additional growth through the extension of utilities that would facilitate new growth, because it would be undertaken in a developed urban area that is currently otherwise served by all utilities and services and would only require the minor extension of water and sewer infrastructure to serve the Project site. Similarly, the Project would not overburden existing infrastructure so as to require construction of new facilities that could result in significant impacts, as discussed in the Section 4.15, *Utilities and Service Systems*.

6.3.4 Summary

The proposed Project is not likely to encourage (or induce) other development in the surrounding area; regardless, the collective impacts of any such growth have been considered in the ABAG growth projections, and/or have been assessed in this EIR's consideration of cumulative impacts.

6.4 Cumulative Impacts

The approach used in this EIR for cumulative impact analysis is described in the introduction to Chapter 4 (Section 4.0). The analysis of each environmental topic included in Chapter 4 evaluates possible cumulative impacts considering regional development in combination with development of the proposed Project.

As noted above, under Section 6.1, *Significant and Unavoidable Environmental Impacts*, construction and operation of the proposed Project in combination with development in the surrounding area would not result in significant and unavoidable impacts under cumulative conditions.

6.5 References – Other Statutory Sections

California Department of Conservation (DOC), 2016. *Santa Clara County Important Farmland 2016*, September 2018. Available at: https://www.conservation.ca.gov/dlrp/fmmp/Pages/SantaClara.aspx, accessed March 18, 2019.

City of Mountain View, 2012. *City of Mountain View Draft 2030 General Plan and Greenhouse Gas Reduction Program Final Environmental Impact Report.* September 2012.

CHAPTER 7
Report Preparation

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