5. Environmental Analysis

DISCUSSION OF ENVIRONMENTAL EVALUATION

The General Plan EIR included an analysis of the project site with an increase of 820 units and a maximum height of 85 feet. The cumulative impacts, in conjunction with overall General Plan buildout, were evaluated as part of the General Plan EIR. The proposed project is anticipated to be complete in 2020; thus, this Initial Study presents a focused analysis to evaluate the near-term impacts of the proposed project under existing and cumulative conditions.

Consistent with the analysis presented in the General Plan EIR, and due to the proposed project's location in an urbanized city setting, the project would not have a significant effect on Agriculture, Forestry or Mineral Resources. Maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency categorize land within Cupertino as Urban and Built-Up Land.[1] In addition, according to 2006 mapping data from the California Department of Forestry and Fire Protection, the city does not contain any woodland or forestland cover.[2] Finally, the city does not contain land zoned for farmland or timberland production.[3] Consequently, there would be no impacts with regard to agriculture and forestry resources. The project site is within an area designated as Mineral Resource Zone 3, which is an area containing mineral deposits for which the significance cannot be evaluated from available data.[4] Consequently, because the site has been developed and is not considered suitable for protection or conservation, there would be no impacts to mineral resources. For these reasons, these topics are not discussed further in this Initial Study.

Items identified in each section of the environmental checklist below are discussed following that section. Required mitigation measures are identified where necessary to reduce a projected impact to a level that is determined to be less than significant. All impacts were found to be less than significant or less than significant with mitigation.

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[1] California Resources Agency, Farmland Mapping and Monitoring Program. Santa Clara County Important Farmland 2010, accessed on March 1, 2016.

[2] California Department of Forestry and Fire Protection Fire and Resource Assessment Program, Land Cover Map, accessed on March 1, 2016.

[3] City of Cupertino, Zoning Map, http://www.cupertino.org/index.aspx?page=291, accessed on March 1, 2016.

[4] City of Cupertino, General Plan (Community Vision 2015–2040, Chapter 6, Environmental Resources and Sustainability, Figure ES-2, Mineral Resources.

I. AESTHETICS

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
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) Substantially degrade the existing visual character or quality of the site and its surroundings?	❒	❒	■	❒
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	❒	❒	■	❒

GENERAL PLAN EIR

Chapter 4.1, Aesthetics, of the General Plan EIR, addresses the impacts to visual resources associated with a maximum building height of 85 feet permitted on the project site, and impacts were found to be less than significant.

EXISTING CONDITIONS

The project site contains a large open space field, a swimming pool, and 10 3-story, residential buildings housing containing a total of 342 apartment units over podium parking that are approximately 40 feet tall. These existing buildings are articulated and provide treatment to building massing and form. The site is immediately bordered by mature trees ranging in height from 15 to 80 feet, the Apple Campus 2 (AC2), currently under construction, to the north and east; Interstate 280 (I-280) to the south; and North Wolfe Road with the mainly 1-story (Cupertino Village), the 3-story Arioso Apartment community, Marriot Courtyard Inn, and the 4-story Hilton Garden Inn located across the street to the west.

DISCUSSION

a) Would the proposed project have a substantial adverse effect on a scenic vista?

As discussed in Chapter 4.1, Aesthetics, of the General Plan EIR, the proposed project would have the potential to affect scenic vistas and/or scenic corridors if the new intensified development on the project site blocked views of areas that provide or contribute to such vistas. Potential effects could include blocking views of a scenic vista/corridor from specific publically accessible vantage points or the alteration of the overall scenic vista/corridor itself. Such alterations could be positive or negative, depending on the characteristics of the project site and the subjective perception of observers.

Public views of scenic corridors are views seen along a linear transportation route and public views of scenic vistas are views of specific scenic features. Scenic vistas are generally interpreted as long-range views, while scenic corridors are comprised of short-, middle-, and long-range views. The General Plan does not have designated scenic corridors or vistas. However, for purposes of this analysis, the westward views of the foothills and ridgelines of the Santa Cruz Mountains are considered scenic vistas, and the segment of I-280 from Santa Clara County line on the west to I-880 on the east also is considered a scenic corridor.

The analysis in the General Plan EIR found that an increase of building height to 85 feet would result in a less-than-significant impact to the long-range views of the Santa Cruz Mountain Range and foothills because the maximum heights of the existing on-site and surrounding buildings and mature trees, which range from 15 to 80 feet, currently limit the opportunity for views of scenic vistas from street-level public viewing and because the project location is not considered a destination public viewing point nor is it visible from scenic vistas.

As described in Chapter 3, Project Description, of this Initial Study, the existing buildings would be removed and replaced by the proposed buildings that would consist of six and seven-story buildings over two levels of below-grade parking and 1.5 levels of at-grade parking, and would be 75 feet tall at the highest point. All of the existing trees would be removed from the site with the exception of the redwood trees that surround the perimeter of the project site and range in height from 15 to 80 feet. Figure 5-1 illustrates the relationship between the proposed project and these perimeter-trees.

Because the proposed project would involve height increases that are less than what was evaluated in then General Plan EIR, and because existing conditions currently limit views of scenic resources combined with the fact that the site and surrounding areas are not destination viewing locations, impacts would remain consistent with the conclusions in the General Plan EIR and would be *less than significant*.

b) Would the proposed project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?

As discussed in Chapter 4.1, Aesthetics, of the General Plan EIR, the segment of I-280 in Cupertino is not an officially designated State Scenic Highway, but is considered to be an eligible to be designated as a State Scenic Highway. Any views of the mountains are currently impeded by the existing tree canopy along North Wolfe Road as well as the three-story Arioso Apartment complex from North Wolfe Road, but there would be no changes from the I-280 viewshed since the freeway is located south of the site and the project site is not visible from that location. On the east side of North Wolfe Road, the taller heights of the proposed project may marginally impede views of the Santa Cruz mountains for the future users of AC2, but not from the I-280 view shed because the freeway is located south of the site. Impacts to views of scenic resource from the I-280 view corridor were determined to be less than significant in the General Plan EIR.

Note: Existing trees to remain as part of the project.

- Parapet
- Accessory Architectural Feature
- Existing Building

Figure 5-1

Simulated Height from the Street Level Perspective

Similar to the discussion above, because the project proposes height increases that would be less than what is evaluated in then General Plan EIR and existing conditions currently limit views of scenic resources, including those from the I-280 viewshed, impacts would remain consistent with the conclusions in the General Plan EIR and would be *less than significant*.

c) Would the proposed project substantially degrade the existing visual character or quality of the site and its surroundings?

As discussed in criteria (a) and (b) above, the proposed project would not result in a substantial change to the existing visual character of the site or its surroundings. The project would result in a change from the existing three story, multi-family residences to a six- to seven-story multi-family residential; however, as stated above in criterion (a) and shown on Figure 5-1, the redwood trees that surround the perimeter of the project site would remain as part of the project and would preserve the existing visual setting. The project site is separated from the surrounding one- to five-story buildings to the west by North Wolfe Road, which is made up of four-to-six-lanes with a landscaped median, from AC2 to the north by the four-lane Pruneridge Road, and to the east by AC2. These roadways and existing landscaping would remain intact and serve as a buffer between the project site and the surrounding land uses; thus, the existing visual setting of surrounding land uses would remain unaltered by the project. Furthermore, the project is subject to the City's discretionary review processes, including the Development Permit and Architectural and Site Approval Review, in accordance with Sections 19.12 and 19.168 of the Zoning Ordinance, which would ensure the proposed project would harmonize with adjacent development and not degrade the existing visual quality of the site and surrounding land uses. Accordingly, consistent with the conclusions of the General Plan EIR, the proposed project would not substantially degrade the existing visual character of the site and its surroundings, and impacts would remain *less than significant*.

d) Would the proposed project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Nighttime illumination and glare impacts are the effects on adjoining uses and areas of a project's exterior lighting. Light and glare impacts are determined through a comparison of the existing light sources with the proposed lighting plan or policies. As discussed in Chapter 4.1, Aesthetics, of the General Plan EIR, the project site and surrounding area contain many existing sources of nighttime illumination. These include street and parking area lights, security lighting, and exterior lighting on existing commercial buildings. Additional onsite light and glare is caused by surrounding land uses and traffic on surrounding roadways. As described in Chapter 3, Project Description, of this Initial Study, the source, intensity, and type of exterior lighting for the project site would be typical for orientation and safety needs. All on-site lighting would be low-level illumination and shielded to reduce light spill or glare. In landscaped and paved areas, light sources would be concealed and not visible from public views. All exterior surface and above-ground mounted fixtures would be sympathetic and complementary to the architectural theme. The roadway and landscaping surrounding the project discussed in criterion (c), above, would act as buffer to prevent light spilling on to adjacent land uses. For these reasons, and because the project proposes less development

than what was evaluated in then General Plan EIR, impacts would remain consistent with the conclusions in the General Plan EIR and would be *less than significant*.

II. AIR QUALITY

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	❒	❒	■	❒
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	❒	■	❒	❒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable federal or State ambient air quality standards (including releasing emissions which exceed quantitative Standards for ozone precursors or other pollutants)?	❒	■	❒	❒
d) Expose sensitive receptors to substantial pollutant concentrations?	❒	❒	■	❒
e) Create objectionable odors affecting a substantial number of people?	❒	❒	■	❒

GENERAL PLAN EIR

Chapter 4.2, Air Quality, of the General Plan EIR, addresses the air quality impacts associated with intensified development of the project site. Air quality impacts are found to be significant and unavoidable in the General Plan EIR and requires the City to implement General Plan EIR Mitigation Measures AQ-2a, AQ-2b and AQ-4b, which are project-specific mitigation measures that would reduce construction-related impacts and to ensure that mobile sources of toxic air contaminants (TACs) that are not covered under the Bay Area Air Quality Management District (BAAQMD) permits are considered during subsequent project-level environmental review.

While Chapter 4.2, Air Quality, of the General Plan EIR addresses the impacts associated with 820 new units compared to the proposed project's 600 units, the analysis was performed at a program level. This section analyzes the types and quantities of air pollutant emissions that would be generated by the construction and operation of the proposed project. An update to the background discussion on the air quality regulatory setting, meteorological conditions, existing ambient air quality in the vicinity of the project site, and air quality modeling is in Appendix D, Air Quality and Greenhouse Gas Emissions, to this Initial Study. The health risk assessment (HRA) is in Appendix E, Health Risk Assessment, to this Initial Study.

EXISTING CONDITIONS

Air Pollutants of Concern

Criteria Air Pollutants

Pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and State law under the National and California Clean Air Act, respectively. Air pollutants are categorized as primary and/or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxides (NO_x), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb) are primary air pollutants. Of these, all of them except for ROGs are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Toxic Air Contaminants

In addition to criteria air pollutants, both the State and federal government regulate the release of TACs. The California Health and Safety Code define a TAC as "an air pollutant 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." A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code Section 7412[b]) is a toxic air contaminant. Under State law, the California Environmental Protection Agency (CalEPA), acting through the California Air Resources Board (CARB), is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

Where available, the significance criteria established by the BAAQMD are relied upon to make the determinations discussed below.

DISCUSSION

a) Would the project conflict with or obstruct implementation of the applicable air quality plan?

As discussed in Chapter 3, Project Description, of this Initial Study, the project site is one of the five Priority Housing Element sites in the City's adopted Housing Element[5] to accommodate the Regional Housing Needs Allocation (RHNA) for the 2014 - 2022 planning period and meet the City's fair-share housing obligation of 1,064 units. As described in the Housing Element, the maximum density on the project site is 85 dwelling units per acre and the realistic capacity is a net increase of 600 units.[6] An increase of 600 units is proposed. As discussed in Chapter 4, General Plan EIR Consistency Analysis, the proposed project would not exceed the level of population or housing projected in City or regional planning efforts, and it would not have the potential to substantially affect housing, employment, and population projections within the region, which is the basis of the 2010 *Bay Area Clean Air Plan* projections. Furthermore, the net increase in regional emissions generated by the proposed project would be less than the BAAQMD's emissions thresholds with mitigations (see criterion (b) below). These thresholds were established to identify projects that have the potential to generate a substantial amount of criteria air pollutants. Because the proposed project would not exceed these thresholds, the proposed project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants. Therefore, the proposed project would not conflict with or obstruct implementation of the 2010 Bay Area Clean Air Plan and impacts would be considered *less than significant*.

b) Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

BAAQMD has identified thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including ROG, NO_x, PM_{10}, and $PM_{2.5}$. Development projects below the significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. The following describes changes in regional impacts from short-term construction activities and long-term operation of the proposed project.

Construction Impacts

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM_{10} and $PM_{2.5}$) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from

[5] The City's 2014-2022 Housing Element was adopted on May 19, 2015.

[6] Cupertino 2014-2022 Housing Element, Table HE-5, Summary of Priority Housing Element Sites To Meet The RHNA-Scenario A.

construction activities on site would vary daily as construction activity levels change. Construction activities associated with the project would result in emissions of ROG, NOx, CO, PM_{10}, and fine $PM_{2.5}$. The project site was developed in 1998 and does not contain any asbestos-containing materials (ACM) or lead-based paint (LBP), which have been regulated in construction since the early 1970's as explained below in Section VII, Hazards and Hazardous Materials.

Fugitive Dust

Ground disturbing activities during construction would generate fugitive dust. Fugitive dust emissions (PM_{10} and $PM_{2.5}$) are considered to be significant unless the proposed project implements the BAAQMD's Best Management Practices (BMPs) for fugitive dust control during construction. PM_{10} is typically the most significant source of air pollution from the dust generated from construction. The amount of dust generated during construction would be highly variable and is dependent on the amount of material being disturbed, the type of material, moisture content, and meteorological conditions. If uncontrolled, PM_{10} and $PM_{2.5}$ levels downwind of actively disturbed areas could possibly exceed State standards. Consequently, impacts related to fugitive dust would be less than significant with the implementation Mitigation Measure AQ-1a.

Mitigation Measure AQ-1a: The project's construction contractor shall comply with the following Bay Area Air Quality Management District (BAAQMD) Best Management Practices (BMPs) for reducing construction emissions of fugitive dust (PM_{10} and $PM_{2.5}$):

- Water all active construction areas at least twice daily, or as often as needed to control dust emissions. Watering should be sufficient to prevent airborne dust from leaving the site. Increased watering frequency may be necessary whenever wind speeds exceed 15 miles per hour. Reclaimed water should be used whenever possible.
- Pave, apply water twice daily or as often as necessary to control dust, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas, and staging areas at construction sites.
- Cover all trucks hauling soil, sand, and other loose materials or require all trucks to maintain at least two feet of freeboard (i.e., the minimum required space between the top of the load and the top of the trailer).
- Sweep daily (with water sweepers using reclaimed water if possible) or as often as needed all paved access roads, parking areas and staging areas at the construction site to control dust.
- Sweep public streets daily (with water sweepers using reclaimed water if possible) in the vicinity of the project site, or as often as needed, to keep streets free of visible soil material.
- Hydroseed or apply non-toxic soil stabilizers to inactive construction areas.
- Enclose, cover, water twice daily, or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
- Limit vehicle traffic speeds on unpaved roads to 15 miles per hour (mph).
- Replant vegetation in disturbed areas as quickly as possible.
- Install sandbags or other erosion control measures to prevent silt runoff from public roadways.

Adherence to the BAAQMD's BMPs for reducing construction emissions of PM_{10} and $PM_{2.5}$ would ensure that ground-disturbing activities would not generate a significant amount of fugitive dust. Fugitive dust impacts would be *less than significant* with implementation Mitigation Measure AQ-1a.

Implementation of Mitigation Measure AQ-1a is required per General Plan EIR Mitigation Measure AQ-2a that was previously adopted by the City and incorporated into the General Plan. Mitigation Measure AQ-1a will be made a condition of project approval.

Construction Exhaust Emissions

BAAQMD's CEQA Guidelines identifies screening criteria for construction-related criteria air pollutant emissions for an "apartment, mid-rise" development with 240 dwelling units. Mid-rise apartment developments with 240 dwelling units or more have the potential to generate a substantial increase in criteria air pollutant emissions and would need further analysis.[7] The proposed project would also be adding underground parking to the apartment buildings.

The proposed project would exceed the screening criteria for mid-rise apartment development as it would construct 942 dwelling units, involve demolition activities, and require soil export for the underground parking. Therefore, a quantified analysis of the proposed project's construction emissions was conducted.

Construction emissions are based on the construction schedule and equipment list provided by the project applicant. The proposed project is estimated to take approximately 38 months. To determine potential construction-related air quality impacts, the average daily criteria air pollutants emissions generated by the proposed project-related construction activities are compared to the BAAQMD significance thresholds in Table 5-1. Average daily emissions are based on the annual construction emissions divided by the total number of active construction days.

As shown in Table 5-1, except for NO_x, criteria air pollutant emissions from construction equipment exhaust would not exceed the BAAQMD average daily thresholds.

> Mitigation Measure AQ-1b: During construction, the construction contractor(s) shall use construction equipment fitted with engines that meet the United States Environmental Protection Agency (US EPA)-Certified Tier 3 emissions standards for equipment of 50 horsepower or more. The construction contractor shall maintain a list of all operating equipment in use on the project site for verification by the City of Cupertino Building Division official or their designee. The construction equipment list shall state the makes, models, and number of construction equipment onsite. Equipment shall properly service and maintain construction equipment in accordance with the manufacturer's

[7] Bay Area Air Quality Management District (BAAQMD), 2011 Revised, California Environmental Quality Act Air Quality Guidelines.

recommendations. The construction contractor shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with CARB Rule 2449. Prior to issuance of any construction permit, the construction contractor shall ensure that all construction plans submitted to the City of Cupertino Planning Department and/or Building Division clearly show the requirement for US EPA Tier 3 or higher emissions standards for construction equipment over 50 horsepower.

TABLE 5-1 CONSTRUCTION-RELATED CRITERIA AIR POLLUTANT EMISSIONS ESTIMATES

	Criteria Air Pollutants (tons/year)[a]					
Year	VOC	NO_x	Fugitive PM_{10}[b]	Exhaust PM_{10}	Fugitive $PM_{2.5}$[b]	Exhaust $PM_{2.5}$[b]
2017	1	8	<1	<1	<1	<1
2018	1	8	2	<1	<1	<1
2019	1	5	1	<1	<1	<1
2020	15	4	1	<1	<1	<1
Total	18	24	4	1	1	1
	Criteria Air Pollutants (average lbs/day)[a]					
Average Daily Emissions[c]	43	57	10	2	3	2
BAAQMD Average Daily Project-Level Threshold	54	54	BMPs	82	BMPs	54
Exceeds Average Daily Threshold	**No**	**Yes**	**NA**	**No**	**NA**	**No**

Notes: Emissions may not total to 100 percent due to rounding. BMP = Best Management Practices; NA = not applicable

a. Construction phasing and equipment mix are based on the preliminary information provided by the project applicant. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District of construction equipment and phasing for comparable projects.

b. Includes implementation of BMPs for fugitive dust control required by BAAQMD as mitigation, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and street sweeping.

c. Average daily emissions are based on the total construction emissions divided by the total number of active construction days. The total number of construction days is estimated to be 838.

Source: CalEEMod 2013.2.2.

Table 5-2 shows the emissions that would be generated with the implementation of Mitigation Measure AQ-1b. Mitigation Measure AQ-1b requires using construction equipment with Tier 3 engine. As shown in Table 5-2, the results indicate that with mitigation, emissions for NOx would be reduced to below the BAAQMD average daily thresholds. Therefore, impacts from project related construction activities to the regional air quality would be *less than significant* with implementation of Mitigation Measure AQ-1b.

TABLE 5-2 CONSTRUCTION-RELATED CRITERIA AIR POLLUTANT EMISSIONS ESTIMATES - MITIGATED

	Criteria Air Pollutants (tons/year)[a,d]					
Year	VOC	NO_x	Fugitive PM_{10}[b]	Exhaust PM_{10}	Fugitive $PM_{2.5}$[b]	Exhaust $PM_{2.5}$[b]
2017	<1	5	<1	<1	<1	<1
2018	1	6	2	<1	<1	<1
2019	1	4	1	<1	<1	<1
2020	15	3	1	<1	<1	<1
Total	17	19	4	1	1	1
	Criteria Air Pollutants (average lbs/day)[a]					
Average Daily Emissions[c]	40	45	10	2	3	1
BAAQMD Average Daily Project-Level Threshold	54	54	BMPs	82	BMPs	54
Exceeds Average Daily Threshold	**No**	**No**	**NA**	**No**	**NA**	**No**

Note: Emissions may not total to 100 percent due to rounding.
BMP: Best Management Practices; NA: not applicable
a. Construction phasing and equipment mix are based on the preliminary information provided by the project applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast Air Quality Management District of construction equipment and phasing for comparable projects.
b. Includes implementation of BMPs for fugitive dust control required by BAAQMD as mitigation, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, and street sweeping.
c. Average daily emissions are based on the total construction emissions divided by the total number of active construction days. The total number of construction days is estimated to be 838.
d. Incorporates Mitigation Measure AQ-1b, which includes using construction equipment with Tier 3 engines.
Source: CalEEMod 2013.2.2.

Implementation of Mitigation Measure AQ-1b is required per General Plan EIR Mitigation Measure AQ-2b that was previously adopted by the City and incorporated into the General Plan. Mitigation Measure AQ-1b will be made a condition of project approval.

Operation-Related Impacts

Long-term air pollutant emissions generated by a residential development are typically associated with the burning of fossil fuels in cars (mobile sources); energy use for cooling, heating, and cooking (energy); and landscape equipment use and household products (area sources). The primary source of long-term criteria air pollutant emissions generated by the project would be emissions produced from project-generated vehicle trips.

BAAQMD's CEQA Guidelines identifies screening criteria for operation-related criteria air pollutant emissions for an "apartment, mid-rise" development with 494 dwelling units. Mid-rise apartment developments with 494 dwelling units or more have the potential to generate a substantial increase in criteria air pollutant emissions and would need further analysis.[8] The proposed project would exceed the BAAQMD screening criteria for mid-rise apartment development. Therefore, a quantified analysis of the proposed project's operation emissions was conducted.

The project would generate a net total of 4,020 average daily trips during a weekday. Table 5-3 identifies the increase in criteria air pollutant emissions associated with the proposed project. As shown in Table 5-3, the net increase in operational emissions generated by the proposed project would not exceed the BAAQMD daily or annual thresholds. Consequently, the proposed project would not cumulatively contribute to the nonattainment designations of the Air Basin. Impacts from project related operation activities to the regional air quality would be *less than significant* and no mitigation measures would be required.

TABLE 5-3 OPERATION-RELATED CRITERIA AIR POLLUTANTS EMISSIONS FORECAST

	Criteria Air Pollutants (average lbs/day)			
Category	ROG	NO_x	PM_{10}	$PM_{2.5}$
Existing Average Daily				
Area	12	<1	<1	<1
Energy	<1	1	<1	<1
On-Road Mobile Sources	3	3	7	2
Total	15	4	8	2
Project Average Daily				
Area	45	<1	<1	<1
Energy	<1	1	<1	<1
On-Road Mobile Sources	11	10	25	7
Total	56	12	25	7

[8] Bay Area Air Quality Management District (BAAQMD), 2011 Revised, California Environmental Quality Act Air Quality Guidelines.

TABLE 5-3 OPERATION-RELATED CRITERIA AIR POLLUTANTS EMISSIONS FORECAST

	Criteria Air Pollutants (average lbs/day)			
Category	ROG	NO_x	PM_{10}	$PM_{2.5}$
Net Project Average Daily				
Area	33	<1	<1	<1
Energy	<1	<1	<1	<1
On-Road Mobile Sources	8	7	18	5
Total	**41**	**8**	**18**	**5**
BAAQMD Average Daily Project-Level Threshold	54	54	82	54
Exceeds Average Daily Threshold	**No**	**No**	**No**	**No**
	Criteria Air Pollutants (tons/year)			
Category	ROG	NO_x	PM_{10}	$PM_{2.5}$
Existing Tons per Year (tpy)	3	1	1	<1
Project Tons per Year (tpy)	10	2	5	1
Net Project Tons per Year (tpy)	8	1	3	1
BAAQMD Annual Project-Level Threshold	10 tpy	10 tpy	15 tpy	10 tpy
Exceeds Annual Threshold	**No**	**No**	**No**	**No**

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2016 Building & Energy Efficiency Standards (effective January 1, 2017). Average daily emissions are based on the annual operational emissions divided by 365 days.
lbs = pounds
Source: CalEEMod 2013.2.2. Based on year 2020 emission rates.

c) Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project area is in non-attainment under applicable federal or State ambient air quality standards (including releasing emissions which exceed quantitative Standards for ozone precursors or other pollutants)?

The San Francisco Bay Area Air Basin (SFBAAB) is currently designated as a nonattainment area for California and National ambient air quality standards (AAQS) for ozone (O_3) and for $PM_{2.5}$, and a nonattainment area under the California AAQS for PM_{10}.[9] Any project that does not exceed or can be

[9] California Air Resources Board (CARB), 2014, Area Designations: Activities and Maps, http://www.arb.ca.gov/desig/adm/adm.htm, April 17.

mitigated to less than the BAAQMD significance levels, used as the threshold for determining major projects, does not add significantly to a cumulative impact.[10]

The proposed project would have less than significant construction impacts (with mitigation for fugitive dust, construction, and construction-related off-site community risk and hazards), operational impacts (including 2010 *Bay Area Clean Air Plan* consistency, odors, and CO hotspots), and on-site community risk and hazards. Consequently, the proposed project's contribution to cumulative air quality impacts would be *less than significant*.

d) Would the project expose sensitive receptors to substantial pollutant concentrations?

Construction Off-Site Community Risk and Hazards

The proposed project would elevate concentrations of TACs and $PM_{2.5}$ in the vicinity of sensitive land uses during construction activities. The BAAQMD has developed Screening Tables for Air Toxics Evaluation During Construction that evaluate construction-related health risks associated with residential, commercial, and industrial projects.[11] According to the screening tables, construction activities occurring within 450 feet (137 meters) of sensitive receptors would result in potential health risks and warrant a health risk analysis. The nearest sensitive land uses in the vicinity of the proposed project is the Arioso Apartment complex approximately 410 feet to the west of the project site. Thus, construction activities in relation to sensitive receptors could occur within the BAAQMD construction-related health risks screening distance of 450 feet (137 meters). Consequently, a construction HRA of TACs and $PM_{2.5}$ was prepared (see Appendix E of this Initial Study).

A quantified analysis of the project's construction emissions was conducted using the California Emissions Estimator Model (CalEEMod), Version 2013.2.2. Construction emissions were based on a 38-month construction duration, construction schedule, and off-road equipment list provided by the project applicant. The United States Environmental Protection Agency (US EPA) AERMOD, Version 9.1, dispersion modeling program was used to estimate excess lifetime cancer risk, chronic non-cancer hazard index for non-carcinogenic risk, and the $PM_{2.5}$ maximum annual concentrations at the nearest sensitive receptors. Results of the analysis are shown in Table 5-4.

[10] Bay Area Air Quality Management District (BAAQMD), 2011 Revised, California Environmental Quality Act Air Quality Guidelines.

[11] Bay Area Air Quality Management District (BAAQMD), 2010, Screening Tables for Air Toxics Evaluation During Construction, Version 1.0, May.

TABLE 5-4 CONSTRUCTION RISK SUMMARY – UNMITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards	$PM_{2.5}$ ($\mu g/m^3$)[a]
Maximum Exposed Receptor – Residences at Arioso Apartments	11.5	0.033	0.09
BAAQMD Threshold	10	1.0	0.3
Exceeds Threshold?	Yes	No	No

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.
a. From year 2017 which represents the highest maximum annual $PM_{2.5}$ concentration.
Source: Lakes AERMOD View, 9.1 (2015).

The results of the HRA are based on the maximum receptor concentration over a 38-month construction exposure duration for off-site receptors, assuming 24-hour outdoor exposure.[12] Risk is based on the updated OEHHA Guidance:[13]

- Cancer risk for the maximum exposed off-site resident at the Arioso Apartments from only construction activities related to the proposed project were calculated to be 11.5 in a million and would exceed the 10 in a million significance threshold. Utilizing the 2015 OEHHA guidance, the calculated total cancer risk for the off-site residents incorporates the individual risk for infant and childhood exposures into one risk value. Therefore, only one cancer risk value for the off-site residents was determined using the 2015 OEHHA Guidance Manual.
- For non-carcinogenic effects, the hazard index identified for each toxicological endpoint totaled less than one for off-site sensitive receptors from the proposed project. Therefore, chronic non-carcinogenic hazards are within acceptable limits.
- The highest $PM_{2.5}$ annual concentrations at the maximum exposed off-site sensitive resident would not exceed the BAAQMD significance threshold of 0.3 $\mu g/m^3$.

Cancer risk for the maximum exposed off-site resident would exceed BAAQMD's significance thresholds due to construction activities associated with the proposed project. However, Mitigation Measure AQ-1b requires using construction equipment with Tier 3 engine and would reduce the project's localized construction emissions. The mitigated health risk values were calculated and are summarized in Table 5-5.

[12] Under the 2015 OEHHA Air Toxics Hot Spots Program Guidance Manual, the exposure duration has changed from 70 years to 30 years for operational risk to residents; however, the risk is still averaged over a 70-year lifetime.

[13] Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.

TABLE 5-5 CONSTRUCTION RISK SUMMARY – MITIGATED

Receptor	Cancer Risk (per million)	Chronic Hazards	$PM_{2.5}$ ($\mu g/m^3$)
Maximum Exposed Receptor – Residences at Arioso Apartments	6.9	0.019	0.05
BAAQMD Threshold	10	1.0	0.3
Exceeds Threshold?	No	No	No

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.
a. Incorporates Mitigation Measure AQ-1b, which includes using construction equipment with Tier 3 engines.
b. From year 2017 which represents the highest maximum annual PM2.5 concentration.
Source: Lakes AERMOD View, 9.1 (2015).

The results indicate that with mitigation, cancer risk impacts would be less than the BAAQMD's significance thresholds. Consequently, the project would not expose sensitive receptors to substantial concentrations of air pollutant emissions during construction and impacts would be *less than significant* with mitigation.

Mitigation Measure AQ-2: Implement Mitigation Measure AQ-1b.

Implementation of Mitigation Measure AQ-1b is required per General Plan EIR Mitigation Measure AQ-2b that was previously adopted by the City and incorporated into the General Plan. Mitigation Measure AQ-1b will be made a condition of project approval.

Operation On-Site Community Risk and Hazards

The proposed project would not create new major sources of TACs. However, when siting new sensitive receptors, the BAAQMD CEQA Guidelines recommend examining sources of TACs and $PM_{2.5}$ emissions within 1,000 feet that would adversely affect individuals within the project. Although the project by itself would not be a major source of toxic air contaminants, vehicle traffic and other project emissions would contribute to existing sources of TACs. Under the California Supreme Court's decision in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) (*CBIA v. BAAQMD*), where a project would exacerbate an existing environmental hazard, CEQA requires an analysis of the worsened condition on future project residents and the public at large. Therefore, this analysis has been incorporated into the environmental assessment in order for the City to consider potential health and welfare implications from siting new sensitive receptors.

BAAQMD has developed screening tools to identify stationary and mobile sources of TACs and $PM_{2.5}$ in the vicinity of sensitive land uses, and developed screening thresholds for assessing potential health risks from these sources. The site is adjacent to the future AC2 to the east and northeast and proximate to the following three high volume roadways with over 10,000 vehicles per day including, I-280, Wolfe Road, and Pruneridge Avenue.

An HRA was prepared to evaluate the health risk impacts to future project residents from the identified emission sources in compliance with Mitigation Measure AQ-4b of the MMRP for the General Plan EIR.

The US EPA AERMOD, Version 9.1, dispersion modeling program was used to estimate excess lifetime cancer risk, chronic and acute non-carcinogenic hazard indexes, and $PM_{2.5}$ concentrations for the on-site nearest sensitive receptors from I-280 and Wolfe Road. Health risk impacts from Pruneridge Avenue were identified utilizing BAAQMD's Highway Screening Analysis Tools.[14] Impacts identified for the AC2 were provided by the HRA previously prepared by LSA Associates, Inc.[15] The results of the HRA are shown in Table 5-6.

TABLE 5-6 ON-SITE RISK SUMMARY

Emissions Sources	Cancer Risk (per million)	Chronic Hazards	Acute Hazards	$PM_{2.5}$ ($\mu g/m^3$)
Project Level Risk				
I- 280[a]	1.89	0.002	0.005	0.11
Wolfe Road[a]	3.98	0.004	0.006	0.11
Pruneridge Avenue[b]	6.16	0.030	0.030	0.16
Apple Campus 2[c]	1.15	0.302	0.302	0.17
BAAQMD Project-Level Threshold	10	1.0	1.0	0.3
Exceeds Threshold	**No**	**No**	**No**	**No**
Cumulative Level Risk				
Total Cumulative Risk from All Sources	13.2	0.34	0.34	0.54
BAAQMD Project-Level Threshold	100	10.0	10.0	0.8
Exceeds Threshold	**No**	**No**	**No**	**No**

Note: Cancer risk calculated using 2015 OEHHA HRA guidance.
a. Lakes AERMOD View, 9.1 (2015). Residential cancer risks for I-280 and Wolfe Road were determined using the high-end residency exposure duration of 30-years (OEHHA, 2015).
b. BAAQMD Roadway Screening Analysis Calculator (2015).
c. Apple Campus 2 Project EIR, L. Air Quality (LSA Associates, Inc., 2013).

[14] Bay Area Air Quality Management District. 2011. Highway Screening Analysis Tool. Santa Clara County 6-foot elevation. Link 288.

[15] LSA Associates, Inc. 2013. *Apple Campus 2 Draft EIR, L. Air Quality*.

The results of the HRA are based on the maximum receptor concentration for on-site receptors. Additionally, the calculated cancer risk is based on the updated OEHHA Guidance.[16] Utilizing the 2015 OEHHA guidance, the calculated total cancer risk incorporates the individual risk for infant, childhood, and adult exposures into one risk value. Therefore, only one cancer risk value was determined using the 2015 OEHHA Guidance Manual. Additionally, a 24 hour outdoor exposure and an exposure duration of 30 years were assumed.[17]

- The excess cancer risks for on-site residents from each identified source range from 1.15 to 6.16 in one million and are less than the 10 in one million BAAQMD significance threshold for individual sources. Additionally, the combined excess cancer risk for on-site residents from the identified sources are also less than the 100 in a million BAAQMD cumulative significance threshold.
- For non-carcinogenic effects, the chronic and acute non-carcinogenic hazard indexes identified for each toxicological endpoint totaled less than one for on-site residents. Therefore, chronic non-carcinogenic hazards are within acceptable limits.
- The individual and cumulative $PM_{2.5}$ annual concentrations for on-site residents would also not exceed BAAQMD's significance thresholds.

Because the cancer risk, chronic and acute non-carcinogenic hazard indexes, and $PM_{2.5}$ concentrations for on-site receptors would not exceed the respective BAAQMD significance thresholds, health risk impacts to future on-site receptors are considered *less than significant*.

CO Hotspot Analysis

Areas of vehicle congestion have the potential to create pockets of carbon monoxide (CO) called hotspots. These pockets have the potential to exceed the State one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm. The proposed project would not conflict with the Santa Clara Valley Transportation Authority (VTA) Congestion Management Program (CMP) because it would not hinder the capital improvements outlined in the CMP or alter regional travel patterns. VTA's CMP must be consistent with the Metropolitan Transportation Commissions' (MTC) and the Association of Bay Area Government's (ABAG) *Plan Bay Area*. An overarching goal of the regional plan is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, vehicle miles traveled, and associated GHG emissions reductions. The proposed project is an infill residential development that is in close proximity to existing employment centers, roadways, transit, and bicycle and pedestrian routes (See Section XIV, Transportation and Circulation, below), and for these reasons would be consistent with the overall goals of the MTC's/ABAG's *Plan Bay Area*. Furthermore,

[16] Office of Environmental Health Hazard Assessment (OEHHA), 2015. Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments.

[17] Under the 2015 OEHHA Air Toxics Hot Spots Program Guidance Manual, the exposure duration has changed from 70 years to 30 years for operational risk to residents; however, the averaging time remains at 70 years.

implementation of the proposed project would result in a net generation of 4,020 peak hour trips on a weekday and would not increase traffic volumes at affected intersections by more than 44,000 vehicles per hour or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited. Therefore, impacts associated with CO hotspots for the proposed project would be *less than significant*.

e) Would the project create objectionable odors affecting a substantial number of people?

The proposed project is a residential development. Construction and operation of residential developments would not generate substantial odors or be subject to odors that would affect a substantial number of people. The type of facilities that are considered to have objectionable odors include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities. Residential uses are not associated with foul odors that constitute a public nuisance.

During operation, residences could generate odors from cooking. Odors from cooking are not substantial enough to be considered nuisance odors that would affect a substantial number of people. Furthermore, nuisance odors are regulated under BAAQMD Regulation 7, Odorous Substances, which requires abatement of any nuisance generating an odor complaint. BAAQMD's Regulation 7, Odorous Substances, places general limitations on odorous substances and specific emission limitations on certain odorous compounds.[18] In addition, odors are also regulated under BAAQMD Regulation 1, Rule 1-301, Public Nuisance, which states that "no person shall discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or the public; or which endangers the comfort, repose, health or safety of any such persons or the public, or which causes, or has a natural tendency to cause, injury or damage to business or property."

During construction activities, construction equipment exhaust and application of asphalt and architectural coatings would temporarily generate odors. Any construction-related odor emissions would be temporary and intermittent. Additionally, noxious odors would be confined to the immediate vicinity of the construction equipment. By the time such emissions reach any sensitive receptor sites, they would be diluted to well below any level of air quality concern.

Therefore, because existing sources of odors are required to comply with BAAQMD Regulation 7, impacts to siting of new sensitive land uses would be *less than significant.*

[18] It should be noted that while restaurants can generate odors, these sources are not identified by BAAQMD as nuisance odors since they typically do not generate significant odors that affect a substantial number of people. Larger restaurants that employ five or more people are subject to BAAQMD Regulation 7, Odorous Substances.

III. BIOLOGICAL RESOURCES

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on a plant or animal population, or essential habitat, defined as a candidate, sensitive or special-status species?	❒	■	❒	❒
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community type?	❒	❒	❒	■
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, 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, their wildlife corridors or nursery sites?	❒	❒	■	❒
e) Conflict with any local ordinances or policies protecting biological resources?	❒	❒	■	❒
f) Conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?	❒	❒	❒	■

GENERAL PLAN EIR

Chapter 4.3, Biological Resources, of the General Plan EIR, addresses the impacts to biological resources associated with intensified development of the project site. Impacts to biological resources are found to be less than significant and less than significant with implementation of mitigation measures to ensure impacts to birds protected under the Migratory Bird Treaty Act (MBTA) would not be significant. The project is required to comply with the General Plan EIR Mitigation Measure BIO-1 to ensure the protection of nesting raptors and other birds when in active use, as required by the federal Migratory Bird Treaty Act (MBTA) and the California Department of Fish and Game Code.

EXISTING CONDITIONS

The project site and surrounding area has been urbanized and now supports roadways, structures, other impervious surfaces, areas of turf, and ornamental landscaping. Remnant native trees are scattered throughout these urbanized areas, together with non-native trees, shrubs, and groundcovers. Using data

from the Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG)[19] habitat mapping program, the site is classified as an "urban area" that tends to have low to poor wildlife habitat value due to replacement of natural communities, fragmentation of remaining open space areas and parks, and intensive human disturbance. The diversity of urban wildlife depends on the extent and type of landscaping and remaining open space, as well as the proximity to natural habitat. Trees and shrubs used for landscaping provide nest sites and cover for wildlife adapted to developed areas. Typical native bird species include the mourning dove, scrub jay, northern mockingbird, American robin, brown towhee, American crow, and Anna's hummingbird, among others. Introduced species include the rock dove, European starling, house finch, and house sparrow. Urban areas can also provide habitat for several species of native mammals such as the California ground squirrel and striped skunk, as well as the introduced eastern fox squirrel and eastern red fox. Introduced pest species such as the Norway rat, house mouse, and opossum are also abundant in developed areas.

Wetlands and jurisdictional waters within the city boundary include creek corridors and associated riparian scrub and woodland, and areas of freshwater marsh around ponds, seeps, springs, and other waterbodies. Some remnant stands of riparian scrub and woodland occur along segments of the numerous creeks through the urbanized valley floor. The project site does not encompass these creek corridors or contain other regulated waters.

The California Natural Diversity Database (CNDDB) has no record of special-status plant or animal species on the project site or urbanized areas surrounding the project site. There is a possibility that birds could nest in trees and other landscaping on the project site. The nests of most bird species are protected under the MBTA when in active use and there is a remote possibility that one or more raptor species protected under the MBTA and California Department of Fish and Game (CDFG) Code could nest on the project site. These include both the Cooper's hawk (*Accipiter cooperi*) and white-tailed kite (*Elanus leuocurus*), which have reported CNDDB occurrences within the city boundary, together with more common raptors such as red-tailed hawk, great horned owl, and American kestrel, all of which are protected by the MBTA and CDFG Code when their nests are in active use.

A recent tree survey evaluated 433 trees on the site that represent 15 species.[20] All trees appeared to have been planted as part of landscape development when the property was developed and no trees met the City of Cupertino's criteria for protected status.[21] While coast redwood is native to California, no trees of this species were indigenous to the project site.

[19] The CALVEG system was initiated in January 1978 by the Region 5 Ecology Group of the US Forest Service to classify California's existing vegetation communities for use in statewide resource planning. CALVEG maps use a hierarchical classification on the following categories: forest; woodland; chaparral; shrubs; and herbaceous.

[20] Tree Survey, The Hamptons, prepared for the Irvine Company by HortScience, Inc. May 2015. See Appendix A, Tree Survey, of this Initial Study.

[21] The City of Cupertino Municipal Code (Section 14.80.050) defines "Protected" trees. See Section 3.1.4.2, Zoning, of Chapter 3, Project Description, for a summary of the City's tree protection ordinance.

DISCUSSION

a) Would the project have a substantial adverse effect, either directly or through habitat modifications, on a plant or animal population, or essential habitat, defined as a candidate, sensitive or special-status species?

As stated above in the existing conditions discussion, there are no known occurrences of special-status plant or animal species and no suitable habitat for such species on the project site, but there is a possibility that birds that are protected by the MBTA could nest in trees and other landscaping on the project site. The analysis in the General Plan EIR found that impacts to special-status species, including nesting birds, would be reduced to less than significant with mitigation. Accordingly, the implementation of Mitigation Measure BIO-1 would also be required for the project to reduce impacts to a *less-than-significant* level.

> Mitigation Measure BIO-1: Nests of raptors and other birds shall be protected when in active use, as required by the federal Migratory Bird Treaty Act and the California Department of Fish and Game Code. If construction activities and any required tree removal occur during the breeding season (February 1 and August 31), a qualified biologist shall be required to conduct surveys prior to tree removal or construction activities. Preconstruction surveys are not required for tree removal or construction activities outside the nesting period. If construction would occur during the nesting season (February 1 to August 31), preconstruction surveys shall be conducted no more than 14 days prior to the start of tree removal or construction. Preconstruction surveys shall be repeated at 14-day intervals until construction has been initiated in the area after which surveys can be stopped. Locations of active nests containing viable eggs or young birds shall be documented and protective measures implemented under the direction of the qualified biologist until the nests no longer contain eggs or young birds. Protective measures shall include establishment of clearly delineated exclusion zones (i.e., demarcated by identifiable fencing, such as orange construction fencing or equivalent) around each nest location as determined by a qualified biologist, taking into account the species of birds nesting, their tolerance for disturbance and proximity to existing development. In general, exclusion zones shall be a minimum of 300 feet for raptors and 75 feet for passerines and other birds. The active nest within an exclusion zone shall be monitored on a weekly basis throughout the nesting season to identify signs of disturbance and confirm nesting status. The radius of an exclusion zone may be increased by the qualified biologist if project activities are determined to be adversely affecting the nesting birds. Exclusion zones may be reduced by the qualified biologist only in consultation with California Department of Fish and Wildlife. The protection measures shall remain in effect until the young have left the nest and are foraging independently or the nest is no longer active.

Implementation of Mitigation Measure BIO-1 is required per General Plan EIR Mitigation Measure BIO-1 that was previously adopted by the City and incorporated into the General Plan. Mitigation Measure BIO-1 will be made a condition of project approval.

b) Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community type?

As discussed in the existing conditions above and determined in the General Plan EIR, development of the proposed project would occur in urbanized areas where sensitive natural communities are absent; therefore, *no impact* would occur and no mitigation measures would be required.

c) Would the project have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, through direct removal, filling, hydrological interruption, or other means?

As discussed in the existing conditions above and determined in the General Plan EIR, development of the proposed project would occur in urbanized areas where no wetlands or jurisdictional waters occur on or near the project site; therefore, *no impact* would occur directly.

Indirect impacts to wetlands and jurisdictional other waters include: 1) an increase in the potential for sedimentation due to construction grading and ground disturbance, 2) an increase in the potential for erosion due to increased runoff volumes generated by impervious surfaces, and 3) an increase in the potential for water quality degradation due to increased levels in non-point pollutants. However, indirect impacts would be largely avoided through effective implementation of Best Management Practices (BMP) during construction and compliance with water quality controls. As discussed in Section VII, Hydrology and Water Quality, of this Initial Study, water quality in stormwater runoff is regulated locally by the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), which implements Provision C.3 of the Municipal Regional Storm Water National Pollutant Discharge Elimination System (NPDES) Permit (MRP) adopted by the San Francisco Bay Regional Water Quality Control Board (RWQCB). Adherence to these permit conditions requires the project to incorporate treatment measures, an agreement to maintain them, and other appropriate source control and site design features that reduce pollutants in runoff to the maximum extent practicable. Many of the requirements involve low impact development (LID) practices such as the use of onsite infiltration that reduce pollutant loading. Incorporation of these measures can even improve on existing conditions. In addition, future development would be required to comply with the Municipal Regional NPDES Permit (Cupertino Municipal Code Chapter 9.18, Storm Water Pollution Prevention and Watershed Protection) and implement a construction Storm Water Pollution Prevention Plan (SWPPP) that require the incorporation of BMPs to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. The indirect water quality-related issues are discussed further in Section VII, Hydrology and Water Quality, of this Initial Study. As discussed in Impact HYDRO-1, water quality impacts would be less than significant. Accordingly, indirect impacts to wetlands and jurisdictional waters would be *less than significant* and no mitigation measures would be required.

d) Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species, their wildlife corridors or nursery sites?

Development on the project site would occur in urbanized areas where sensitive wildlife resources and important wildlife movement corridors are no longer present because of the existing development. Wildlife species common to urban and suburban habitat could be displaced where existing structures are demolished and landscaping is removed as part of future development, but these species are relatively abundant, and adapted to human disturbance. As discussed in Chapter 3, Project Description, the proposed project includes landscaping that would provide replacement habitat for wildlife species that may have adapted to the project site. Also discussed in Chapter 3, the project includes a Tree Demolition and Replacement Plan (see Figures 3-19 and 3-20). Consistent with General Plan Policies ES-5.1, Urban Ecosystem, and Strategy, and ES-5.1.2, Built Environment, the Tree Removal and Protection Plan includes native, drought tolerant trees that are beneficial to the environment. The project also includes water features, which would improve urban habitat linkages for migration of native and special-status species. Therefore, project impacts on the movement of fish and wildlife, wildlife corridors, or wildlife nursery sites would be considered *less than significant* and no mitigation measures would be required.

e) Would the project conflict with any local ordinances or policies protecting biological resources?

As discussed in criteria (a) through (d), above, development of the project site would occur in an urbanized area where sensitive biological and wetland resources are generally considered to be absent, and no major conflicts with the relevant policies or ordinances related to biological resources in the Cupertino General Plan and/or Municipal Code would occur. As discussed in the existing conditions above, the recent tree survey for the project site found that none of the existing on-site trees meet the City of Cupertino's criteria for protected status.[22] Therefore, the project would not conflict with any local ordinances or policies protecting biological resources and impacts would be *less than significant*, and no mitigation measures would be required.

f) Would the project conflict with an adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved local, regional, or State habitat conservation plan?

As discussed in the General Plan EIR, no adopted Habitat Conservation Plan, Natural Community Conservation Plans include the city or the project site, and the proposed project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved conservation plan. *No impact* would occur and no mitigation measures would be required.

[22] The City of Cupertino Municipal Code (Section 14.80.050) defines "Protected" trees. See Section 3.1.4.2, Zoning, of Chapter 3, Project Description, for a summary of the City's tree protection ordinance.

IV. CULTURAL RESOURCES

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	❒	❒	❒	■
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	❒	■	❒	❒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	❒	■	❒	❒
d) Disturb any human remains, including those interred outside of formal cemeteries?	❒	❒	■	❒
e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?	❒	■	❒	❒

GENERAL PLAN EIR

Chapter 4.4, Cultural Resources, of the General Plan EIR, addresses the impacts to cultural and Tribal Cultural Resources (TCRs) associated with intensified development of the project site and impacts are less than significant. The following is a summary of Section, 4.4.1.2, Existing Conditions, of Chapter 4.4, which is based on the cultural resources analysis conducted by Tom Origer & Associates on July 24, 2013, included as Appendix D, Cultural Resources Data, of the General Plan EIR. The cultural resources study consists of archival research at the Northwest Information Center at Sonoma State University, examination of the library and files, field inspection, and contact with the Native American community. As shown in Table 4.4-2, *Cultural Resources in the Project Study Area and Vicinity*, and on Figure 4.4-1, *Cultural Resources*, of the General Plan EIR, there are no identified cultural resources on the project site.

EXISTING CONDITIONS

The project site was developed in 1998 and no historical architectural resources are located on the project site. Accordingly, the buildings on the project site do not fall within the over 45-year age limits established for historical resources that should be included in the California Department of Historic Preservation (OHP) filing system.[23]

A review of the University of California's Museum of Paleontology's (UCMP) fossil locality database was conducted for the City of Cupertino. No paleontological resources have been identified on the project

[23] Office of Historic Preservation, Instructions For Recording Historical Resources, March 1995, page 2.

site; however, the presence of Pleistocene deposits that are known to contain fossils indicates that the overall the city could contain paleontological resources.

Assembly Bill 52 (AB 52), which took effect on July 1, 2015, amends CEQA and adds new sections relating to Native American consultation and certain types of cultural resources. AB 52 requires the CEQA lead agency to begin consultation with a California Native American Tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. The consultation is required before the determination of whether a negative declaration, mitigated negative declaration, or EIR is required, if the Tribe requests in writing, to be informed by the lead agency through formal notification of the proposed projects in the area, and the Tribe thereafter requests consultation. In addition, AB 52 includes time limits for certain responses regarding consultation. AB 52 also adds "tribal cultural resources" (TCR) to the specific cultural resources protected under CEQA.[24] CEQA Section 21084.3 has been added, which states that "public agencies shall, when feasible, avoid damaging effects to any tribal cultural resources." The Governor's Office of Planning and Research (OPR) has until July 1, 2016, to develop guidelines, and the NAHC has until then to inform tribes which agencies are in their traditional area. In absence of the adopted guidelines, OPR suggests addressing whether the project would cause a substantial adverse change in the significance of a TCR as defined in Public Resources Code 21074. The City has not received any request from any Tribes in the geographic area with which it is traditionally and culturally affiliated with or otherwise to be notified about projects in the city of Cupertino. Nonetheless, the evaluation of potential impacts to TCRs is addressed under criterion (e) below.

DISCUSSION

a) *Would the project cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?*

Under CEQA, both prehistoric and historic-period archaeological sites may qualify as historical resources.[25] Archaeological resources are addressed in criterion (b), and human remains are addressed below in criterion (d), below.

The project site currently includes a residential complex developed in 1998. As described in the existing conditions above, the existing buildings do not fall within the over 45-year age limits established for historical resources that should be included in the OHP filing system the California Register of Historical Resources.[26] Accordingly, *no impact* to historical architectural resources would occur as a result of project development and no mitigation measures would be required.

[24] CEQA Section 21074.

[25] California Code of Regulations, Title 14, Chapter 3, Section 15064.5(c), Determining the Significance of Impacts on Historical and Unique Archeological Resources.

[26] Office of Historic Preservation, Instructions For Recording Historical Resources, March 1995, page 2.

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Historical and pre-contact archaeological deposits that meet the definition of historical resource under CEQA Section 21084.1 or CEQA Guidelines Section 15064.5 could be present at the project site and could be damaged or destroyed by ground-disturbing construction activities (e.g., site preparation, grading, excavation, and trenching for utilities) associated with development allowed under the proposed project. Should this occur, the ability of the deposits to convey their significance, either as containing information about prehistory or history, or as possessing traditional or cultural significance to Native American or other descendant communities, would be materially impaired.

While the project site is currently developed and the cultural resources study prepared for the General Plan EIR did not identify any known archaeological deposits on the project site, the site could still contain subsurface archaeological deposits, including unrecorded Native American prehistoric archaeological materials. Therefore, any project-related ground-disturbing activities have the potential to affect subsurface prehistoric archaeological resources that may be present. Implementation of Mitigation Measure CULT-1 would reduce impacts to unknown archaeological deposits to a *less-than-significant* level.

Mitigation Measure CULT-1: If any prehistoric or historic subsurface cultural resources are discovered during ground-disturbing activities, all work within 50 feet of the resources shall be halted and a qualified archaeologist shall be consulted to assess the significance of the find according to CEQA Guidelines Section 15064.5. If any find is determined to be significant, representatives from the City and the archaeologist would meet to determine the appropriate avoidance measures or other appropriate mitigation. All significant cultural materials recovered shall be, as necessary and at the discretion of the consulting archaeologist, subject to scientific analysis, professional museum curation, and documentation according to current professional standards. In considering any suggested mitigation proposed by the consulting archaeologist to mitigate impacts to historical resources or unique archaeological resources, the City shall determine whether avoidance is necessary and feasible in light of factors such as the nature of the find, proposed project design, costs, and other considerations. If avoidance is infeasible, other appropriate measures (e.g., data recovery) would be instituted. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out.

c) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

As discussed above in existing conditions, while no paleontological resources have been identified within the project location, because the proposed project requires substantial excavation that could reach significant depths below the ground surface where no such excavation has previously occurred, there could be fossils of potential scientific significance and other unique geologic features that have not been recorded. Such ground-disturbing construction associated with development under the proposed project

could cause damage to, or destruction of, paleontological resources or unique geologic features. Impacts to paleontological resource or site or unique geologic features would be reduced to a *less-than-significant* level with implementation of Mitigation Measure CULT-2.

> Mitigation Measure CULT-2: In the event that fossils or fossil-bearing deposits are discovered during construction, excavations within 50 feet of the find shall be temporarily halted or diverted. The contractor shall notify a qualified paleontologist to examine the discovery. The paleontologist shall document the discovery as needed, in accordance with Society of Vertebrate Paleontology standards (Society of Vertebrate Paleontology 1995), evaluate the potential resource, and assess the significance of the finding under the criteria set forth in CEQA Guidelines Section 15064.5. The paleontologist shall notify the appropriate agencies to determine procedures that would be followed before construction is allowed to resume at the location of the find. If the project proponent determines that avoidance is not feasible, the paleontologist shall prepare an excavation plan for mitigating the effect of the project based on the qualities that make the resource important. The excavation plan shall be submitted to the City for review and approval prior to implementation.

d) Would the project disturb any human remains, including those interred outside of formal cemeteries?

Similar to the discussions under criteria (b) and (c), there are no known human remains of the project site; however, the potential to unearth unknown remains during ground disturbing activities associated with the construction of the project could occur. Any human remains encountered during ground-disturbing activities associated with the proposed project would be subject to federal, State, and local regulations to ensure no adverse impacts to human remains would occur in the unlikely event human remains are found.

Health and Safety Code Section 7050.5 and the CEQA Guidelines Section 15064.5(e) contain the mandated procedures of conduct following the discovery of human remains. According to the provisions in CEQA, if human remains are encountered at the site, all work in the immediate vicinity of the discovery shall cease and necessary steps to ensure the integrity of the immediate area shall be taken. The Santa Clara County Coroner shall be notified immediately. The Coroner shall then determine whether the remains are Native American. If the Coroner determines the remains are Native American, the Coroner shall notify the Native American Heritage Commission (NAHC) within 24 hours, who would, in turn, notify the person the NAHC identifies as the Most Likely Descendants (MLD) of any human remains. Further actions shall be determined, in part, by the desires of the MLD. The MLD has 48 hours to make recommendations regarding the disposition of the remains following notification from the NAHC of the discovery. If the MLD does not make recommendations within 48 hours, the owner shall, with appropriate dignity, reinter the remains in an area of the property secure from further disturbance. Alternatively, if the owner does not accept the MLD's recommendations, the owner or the descendent may request mediation by the NAHC.

Therefore, with the mandatory regulatory procedures described above, potential impacts related to the potential discovery or disturbance of any human remains accidently unearthed during construction

activities associated with the proposed project would be *less than significant* and no mitigation measures would be required.

e) Would the proposed project cause a substantial adverse change in the significance of a tribal cultural resources as defined in Public Resources Code 21074?

A TCR is defined under AB 52 as a site, feature, place, cultural landscape that is geographically defined in terms of size and scope, sacred place, and object with cultural value to a California Native American tribe that are either included or eligible for inclusion in the California Register of Historic Resources or included in a local register of historical resources, or included in a local register of historical resources, or if the City of Cupertino, acting as the lead agency, supported by substantial evidence, chooses at its discretion to treat the resource as a TCR.

As discussed under criteria (b) and (d) no known archeological resources, ethnographic sites or Native American remains are located on the project site. As discussed under criterion (b) implementation of Mitigation Measure CULT-1 would reduce impacts to unknown archaeological deposits, including TCRs, to a less-than-significant level. As discussed under criterion (d) compliance with State and federal regulations would reduce the likelihood of disturbing or discovering human remains, including those of Native Americans. Therefore, implementation of Mitigation Measure CULT-1 and compliance with State and federal regulations related to the protection of human remains would reduce impacts to TCRs to a *less-than-significant* level.

Mitigation Measure CULT-3: Implement Mitigation Measure CULT-1.

V. GEOLOGY AND SOILS

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	❒	❒	■	❒
ii) Strong seismic ground shaking?	❒	■	❒	❒
iii) Seismic-related ground failure, including liquefaction?	❒	❒	■	❒
iv) Landslides, mudslides or other similar hazards?	❒	❒	■	❒
b) Result in substantial soil erosion or the loss of topsoil?	❒	❒	■	❒

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
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, creating substantial risks to life or property?	❒	❒	■	❒
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?	❒	❒	❒	■

GENERAL PLAN EIR

Chapter 4.5, Geology, Soils, and Seismicity, of the General Plan EIR, addresses the impacts to geological and seismic-related impacts associated with intensified development of the project site. In addition, a geotechnical investigation dated July 10, 2015 was prepared for the project by TRC.[27] The geotechnical investigation report is included in Appendix B of this Initial Study. The following discussion is based on project site information available in Section, 4.5.1.2, Existing Conditions, of Chapter 4.5, and the project-specific geotechnical investigation.

EXISTING CONDITIONS

Geology

The City of Cupertino lies in the west-central part of the Santa Clara Valley, a broad, mostly flat alluvial plain that extends southward from San Francisco Bay. The surficial geology is described as young, unconsolidated Quaternary alluvium. The site is generally flat with elevation ranging from 160 to 205 feet above mean sea level (amsl).

Soils

Web-accessible soil mapping data compiled by the USDA's Soil Conservation Survey and the California Soil Resource Laboratory hosted by University of California at Davis was used to identify the major soil types on the project site. The predominant soil types for the project site are soils of the Urban Land-Flaskan, Urban-Land Stevens Creek, and Urban Land-Botella complexes generally formed on slopes of 0 to 2

[27] TRC, 2015. Geotechnical Investigation, The Hamptons Apartments, Cupertino, California, dated July 10, 2015.

percent. Exploratory borings logged by TRC in 1996 and 2015 encountered a pavement section consisting of 2.5 to 3 inches of asphalt concrete underlain by 5 to 5.5 inches of aggregate base. Below the pavement sections, the borings generally encountered interbedded clayey sand, poorly graded sand, poorly graded gravel, and lean clay to depths of 16.5 to 21.5 feet. Below depths of 16.5 to 21.5 feet, and extending to 40 feet (the maximum depth explored), the borings generally encountered lean clay with occasional thin interbedded layers composed of silty sand, clayey sand, and poorly graded sand.

To better evaluate soil permeability, two field infiltration rate tests were performed during the 2015 geotechnical investigation. Based on the test results, the geotechnical investigation estimated a typical infiltration rate of less than 1.5 inches/hour for site soils. This value appears to coincide with hydrologic soil group A (i.e., sand, loamy sand, sandy loam) that are typically well drained with low runoff potential.[28]

Groundwater

During the recent geotechnical investigation, groundwater was not encountered to the maximum explored depth of 40 feet. Based on the data published by the California Geological Survey (CGS), the depth to historically high groundwater is more than 50 feet in most of the Cupertino area.[29] However, these depths may fluctuate somewhat in response to recent changes in rainfall, impervious cover, and other factors.

Fault Rupture

The San Francisco Bay Area is one of the most seismically active regions in the United States. The significant earthquakes that occur in the Bay Area are generally associated with crustal movement along well-defined active fault zones such as the San Andreas Fault system. Many of these zones exhibit a regional trend to the northwest. The site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone (known formerly as a Special Studies Zone) or a Santa Clara County-designated Fault Rupture Hazard Zone.[30] No active fault traces are known to cross the site.

Liquefaction

The site is not located within a seismically inducted liquefaction hazard zone, as mapped by the State of California and Santa Clara County. During cyclic ground shaking, such as seismic shaking during an earthquake, cyclically-induced stresses may cause increased pore water pressures within the soil matrix, resulting in liquefaction. Liquefied soil may lose shear strength that may lead to large shear deformations

[28] USDA, 1955. How Much of the Rain Enters the Soil? in Water, The Yearbook of Agriculture, by G. W. Musgrave.
[29] CGS, 2002. Seismic Hazard Zone Report for the Cupertino 7.5-Minute Quadrangle, Santa Clara County, California, Seismic Hazard Zone report 068.
[30] Santa Clara County, 2012. Santa Clara County Geologic Hazard Zones, Map 18, updated October 26, 2012.

and/or flow failure. Liquefied soil can also settle as pore pressures dissipate following an earthquake. Limited field data is available on this subject; however, settlement on the order of 2 to 3 percent of the thickness of the liquefied zone has been measured in some cases.

Soils most susceptible to liquefaction are loose to moderately dense, saturated, non-cohesive soils with poor drainage, such as sands and silts with interbedded or capping layers of relatively low permeability soil.

Dry Seismic Settlement

If near-surface soils vary in composition both vertically and laterally, strong earthquake shaking can cause non-uniform densification of loose to medium dense cohesionless soils. Densification can result in the movement of the near-surface soils. A recent geotechnical investigation of the site encountered medium dense clayey sand, silty sand, and poorly graded gravel layers at various depths. Based on the anticipated excavation depths for the proposed below-grade parking at the site, dry seismic settlement of the medium dense soils is estimated at approximately 0.5 inch.

Lateral Spreading

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying alluvial material toward an open or "free" face such as an open body of water, channel, or excavation. In soils, this movement is generally due to failure along a weak plane, and may often be associated with liquefaction. As cracks develop within the weakened material, blocks of soil are displaced laterally toward the open face. Cracking and lateral movement may gradually propagate away from the face as blocks continue to break free. Because of the low potential for liquefaction, the risk of lateral spreading at the site is also considered low.

Corrosive Soils

Many factors can affect the corrosion potential of soil including soil moisture content, resistivity, permeability, and pH, as well as chloride and sulfate concentration. Of these, soil resistivity is the most influential factor. Four site soil samples were recently tested for corrosivity and the measured resistivity values ranging from 1,528 to 8,824 ohm/cm.[31] Based on the resistivity test results, two of the four samples were classified as "severely corrosive."

[31] The term ohms-cm ("ohms centimeter") refers to the measurement of the "volume" resistivity (also known as "bulk" resistivity) of a semiconductive material. The value in ohms-cm is the inherent resistance of a given material regardless of the shape or size.

DISCUSSION

a) Would the project expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: (i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; (ii) Strong seismic ground shaking; (iii) Seismic-related ground failure, including liquefaction; (iv) Landslides, mudslides or other similar hazards?

Fault Rupture

As discussed in the General Plan EIR, only one Alquist-Priolo Earthquake Fault Zone has been mapped within the City of Cupertino, namely, the zone that flanks the San Andreas Fault in the southwestern most part of the city. Because the site is not located within a State-designated Alquist-Priolo Earthquake Fault Zone or Santa Clara County-designated Fault Rupture Hazard Zone, and no active faults are known to traverse the site, the risk of surface fault rupture is considered low. The impacts from project development as they relate to surface fault rupture are considered *less than significant*. No mitigation measures would be required.

Strong Seismic Ground Shaking

The hazards posed by strong seismic ground shaking during a major earthquake, while variable, are nearly omnipresent in the San Francisco Bay Area. As discussed in the General Plan EIR, in the event of a large, magnitude 6.7 or greater seismic event, much of the city is projected to experience "strong" ground shaking, with the most intense shaking forecast for the northeast part of the city where the project is located. Adherence to applicable building code, including conformance to California Building Code (CBC) Site Class and Site Seismic Coefficients (as recommended in the recent 2015 geotechnical investigation), and the City's building permit requirements would ensure that the impacts associated with strong seismic ground shaking are minimized to the maximum extent practicable. The impacts of project development as they relate to strong seismic ground shaking would be *less than significant* with implementation of Mitigation Measure GEO-1.

> Mitigation Measure GEO-1: The project applicant shall adhere to the seismic design criteria for the maximum estimated ground shaking (i.e., peak ground acceleration of 0.58 gravity (g) as recommended in the recent 2015 geotechnical investigation for the proposed project.

Liquefaction

As described above in Existing Conditions, the project site is not located within an area mapped by the State of California and Santa Clara County as having a high potential for seismically induced liquefaction.

As discussed in the General Plan EIR, the potential for seismically induced liquefaction in the vicinity appears low, limited to a very narrow strip of alluvial deposits that flank Calabazas Creek roughly 0.30

miles southeast of the project site. Accordingly, impacts associated with project development as they may relate to seismically induced liquefaction would be *less than significant* and no mitigation measures would be required.

Landslides

The site is generally flat with elevation ranging from 160 to 205 feet amsl. The project site is not located within an area mapped by the State of California or Santa Clara County as having a high potential for seismically induced landslides. Therefore, impacts associated with project development as they may relate to seismically induced landslides would be *less than significant* and no mitigation measures would be required.

b) Would the project result in substantial soil erosion or the loss of topsoil?

Substantial soil erosion or loss of topsoil during construction could, in theory, undermine structures and minor slopes during development of the project site. However, compliance with existing regulatory requirements, such as the implementation of grading erosion control measures specified in the CBC and the City of Cupertino's Municipal Code, would reduce impacts from erosion and the loss of topsoil.

Examples of these control measures are BMPs such as hydroseeding or short-term biodegradable erosion control blankets; vegetated swales, silt fences, or other forms of protection at storm drain inlets; post-construction inspection of drainage structures for accumulated sediment; and post-construction clearing of debris and sediment from these structures.

Section 16.08.110 of the Municipal Code requires the preparation and submittal of Interim Erosion and Sediment Control Plans for all projects subject to City-issued grading permits, which would minimize the removal of topsoil, avoid overly steep cut and/or fill slopes, and protect existing vegetation during grading operations. These requirements are broadly applicable to residential development projects. Adherence to these regulations would help ensure that the impacts of project development as they relate to substantial soil erosion or loss of topsoil would be *less than significant*. No mitigation measures would be required.

c) Would the project 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?

As discussed in criterion (a), the project site is not located within an area mapped as having significant potential for seismically induced liquefaction. Because of the low potential for liquefaction, the risk of lateral spreading at the site would also be low. Therefore, the impacts of project development as they relate to liquefaction and lateral spreading would be *less than significant* and no mitigation measures would be required.

As previously discussed in Existing Conditions, the project site is generally flat with on-site elevations ranging from 160 to 205 feet amsl. The properties surrounding the project site are also typified by low

topographic relief. The impacts of project development as they relate to landslides would be *less than significant* and no mitigation measures would be required.

In this analysis, corrosive soils are interpreted as a type of (chemically) unstable soil. Based on a recent geotechnical investigation, some site soils were categorized as severely corrosive based on their measured resistivity, and could compromise building materials unless protective measures are implemented. The impacts of project development as they relate to corrosive soils would be *less than significant* with implementation of Mitigation Measure GEO-2.

> Mitigation Measure GEO-2: Prior to issuing building permits, the City shall require the project applicant to consult with a corrosion protection engineer in order to develop specific recommendations regarding corrosion protection for buried metal pipe or buried metal pipe-fittings. The project applicant shall implement the recommendations during construction to be verified by the City's Building Department.

d) Would the project be located on expansive soil, creating substantial risks to life or property?

Expansive soils can undergo dramatic changes in volume in response to variations in soil moisture content. When wet, these soils can expand; conversely, when dry, they can contract or shrink. Sources of moisture that can trigger this shrink-swell phenomenon can include seasonal rainfall, landscape irrigation, utility leakage, and/or perched groundwater. Expansive soil can develop wide cracks in the dry season, and changes in soil volume have the potential to damage concrete slabs, foundations, and pavement. Special building/structure design or soil treatment are often needed in areas with expansive soils. Expansive soils are typically very fine-grained with a high to very high percentage of clay, typically montmorillonite, smectite, or bentonite clay.

As discussed in the existing conditions, a recent geotechnical investigation of the project site described the representative soil samples as exhibiting low soil plasticity. Therefore, the impacts of project development as they relate to expansive soils are considered *less than significant*. No mitigation measures would be required.

e) Would the project have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of wastewater?

The development of the proposed project would not require the construction or use of septic tanks or alternative wastewater disposal systems. Wastewater generated by the proposed project would be conveyed to the existing municipal sanitary sewer system in Cupertino, where multiple connections would be made in Pruneridge Avenue. Therefore, there would be *no impact* from the proposed project associated with soils that are inadequate for the use of septic tanks or alternative wastewater disposal systems. No mitigation measures would be required.

VI. GREENHOUSE GAS EMISSIONS

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	❒	❒	■	❒
b) Conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?	❒	❒	■	❒

GENERAL PLAN EIR

Chapter 4.6, Greenhouse Gas Emissions, of the General Plan EIR, addresses the cumulative impacts from greenhouse gas emissions associated with General Plan buildout, including intensified development of the project site. Greenhouse gas emission (GHG) impacts under the General Plan EIR are less than significant.

EXISTING CONDITIONS

The following impact discussions include and updated existing conditions summary from that presented in Section, 4.6.1.2, Existing Conditions, of Chapter 4.6.

DISCUSSION

a) Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

A project does not generate enough GHG emissions on its own to influence global climate change; therefore, this section measures the project's contribution to the cumulative environmental impact. Development permitted under the proposed project would contribute to global climate change through direct and indirect emissions of GHG from transportation sources, energy (natural gas and purchased energy), water use and wastewater generation, and solid waste generation. In addition, construction activities would generate a short-term increase in GHG emissions. The total and net increase in GHG emissions associated with the proposed project are shown in Table 5-7.

TABLE 5-7 PROJECT GHG EMISSIONS

	GHG Emissions ($MTCO_2e$/Year)	
Category	**Project**	**Percent of Total**
Construction Emissions		
Total Construction Emissions (Years 2017–2020)[a]	6,883	N/A
30-Year Amortized Construction	229	N/A
Operational Emissions		
Existing		
Area	19	1%
Energy	599	28%
On-Road Mobile Sources	1,178	55%
Waste	346	16%
Water/Wastewater	15	1%
Total	2,158	**100%**
Proposed Project		
Area	57	1%
Energy	2,267	34%
On-Road Mobile Sources	3,389	51%
Waste	952	14%
Water/Wastewater	34	1%
Total	6,700	**100%**
Net Change		
Area	38	1%
Energy	1,668	37%
On-Road Mobile Sources	2,211	49%
Waste	606	13%
Water/Wastewater	19	<1%
Total	**4,542**	**100%**
Total without Waste Generation Emissions[b]	**3,936**	**N/A**
Service Population	1,723	N/A
Per Capita Emissions Threshold	**2.28**	**N/A**
Per Capita Threshold ($MTCO_2e$/SP)	4.6	N/A
Exceeds BAAQMD Thresholds?	**No**	**N/A**

Note: Emissions may not total to 100 percent due to rounding. New buildings would be constructed to the 2016 Building & Energy Efficiency Standards (effective January 1, 2017).
a. Includes implementation of Mitigation Measure AQ-1a, which requires complying with BAAQMD's BMPs for reducing construction emissions.
b. BAAQMD did not include solid waste emissions when developing the per capita significance thresholds. Therefore, total GHG emissions with and without the Waste Generation sector are included. If these emissions are included in the analysis for the proposed project, the per capita emissions would be 2.64 $MTCO_2e$/SP/yr.
Source: CalEEMod 2013.2.2.

BAAQMD does not have thresholds of significance for construction-related GHG emissions, however, the BAAQMD advises that the lead agency should quantify and disclose GHG emissions that would occur during construction and make a determination on the significance of these construction-generated GHG emissions in relation to meeting AB 32 GHG reduction goals. One-time, short-term emissions are converted to average annual emissions by amortizing them over the service life of a building. For buildings in general, it is reasonable to look at a 30-year time frame, since this is a typical interval before a new building requires the first major renovation.[32] As shown in Table 5-7, when amortized over a 30-year project lifetime, average annual construction emissions from the proposed project would represent a nominal source of GHG emissions and would not exceed BAAQMD's threshold of 1,100 million metric tons of carbon dioxide equivalent per year ($MTCO_2e$/year). Construction emissions would be *less than significant* and no mitigation measures would be required.

As shown in Table 5-7, development of the proposed project would result in a net increase of GHG emissions of 3,936 $MTCO_2e$/year as a result of an increase in density on the project site. Impacts are evaluated based on BAAQMD's per capita significance threshold. BAAQMD's per capita significance threshold is calculated based on the State's land use sector emissions inventory prepared by CARB and the demographic forecasts for the 2008 Scoping Plan. The proposed project would not exceed the per capita significance threshold of 4.6 $MTCO_2e$/SP. Therefore, project-related GHG emissions impacts would be *less than significant* and no mitigation measures would be required.

b) Would the project conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan and the MTC's/ ABAG's) *Plan Bay Area*. A consistency analysis with these plans is presented below.

CARB's Scoping Plan

In accordance with Assembly Bill 32 (AB 32), the California Air Resources Board (CARB) developed the *2008 Scoping Plan* to outline the State's strategy to achieve 1990 level emissions by year 2020. To estimate the reductions necessary, CARB projected Statewide 2020 business as usual (BAU) GHG emissions (i.e., GHG emissions in the absence of statewide emission reduction measures). CARB identified that the State as a whole would be required to reduce GHG emissions by 28.5 percent from year 2020 BAU to achieve the targets of AB 32.[33] A revised BAU 2020 forecast conducted after publication of the *2008 Scoping Plan* by CARB shows that the state would have to reduce GHG emissions by 21.6 percent from BAU (i.e., without the Pavley standards and the California Renewables Portfolio Standard) or 15.7

[32] International Energy Agency, 2008, *Energy Efficiency Requirements in Building Codes, Energy Efficiency Policies for New Buildings,* March.

[33] California Air Resources Board (CARB), 2008. *Climate Change Proposed Scoping Plan, a Framework for Change,* October.

percent from the adjusted baseline (i.e., with the Pavley standards and the California Renewable Portfolio Standard).[34]

Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard, California Appliance Energy Efficiency regulations; California Building Standards (i.e., CALGreen and Building and Energy Efficiency Standards); California Renewable Portfolio Standard (33 percent RPS); changes in the corporate average fuel economy standards (e.g., Pavley I and Pavley II); and other measures that would ensure the State is on target to achieve the GHG emissions reduction goals of AB 32. Statewide GHG emissions reduction measures that are being implemented over the next five years would reduce the proposed project's GHG emissions.

New structures would meet the current Building and Energy Efficiency Standards. The 2016 Building and Energy Efficiency Standards become effective January 1, 2017. Multi-family of four stories and higher are treated as non-residential buildings for the Building and Energy Efficiency Standards. The 2016 Standards are 33.5 percent more energy efficient than the 2008 standards for non-residential buildings. The new buildings would also be constructed in conformance with CALGreen, which requires high-efficiency water fixtures for indoor plumbing and water efficient irrigation systems.

The proposed project would not conflict with statewide programs adopted for the purpose of reducing GHG emissions and impacts would be *less than significant* and no mitigation measures would be required.

MTC's/ABAG's Plan Bay Area

As described above under the subheading "CO2 Hotspots, an overarching goal of the *Plan Bay Area* is to concentrate development in areas where there are existing services and infrastructure rather than allocate new growth in outlying areas where substantial transportation investments would be necessary to achieve the per capita passenger vehicle, vehicle miles traveled, and associated GHG emissions reductions. The proposed project is an infill residential development that is in close proximity to existing employment centers, roadways, transit, and bicycle and pedestrian routes (See Section XIV, Transportation and Circulation, below), and for these reasons would be consistent with the overall goals of the MTC's/ABAG's *Plan Bay Area*. Therefore, the proposed project would not conflict with the land use concept plan for the City of Cupertino identified in the *Plan Bay Area* and impacts would be *less than significant* and no mitigation measures would be required.

[34] California Air Resources Board (CARB), 2012. *Status of Scoping Plan Recommended Measures.* http://www.arb.ca.gov/cc/scopingplan/status_of_scoping_plan_measures.pdf.

City of Cupertino Climate Action Plan

The *Cupertino Climate Action Plan* (CAP) is a strategic planning document that identifies sources of GHG emissions within the City's boundaries, presents current and future emissions estimates, identifies a GHG reduction target for future years, and presents strategic goals, measures, and actions to reduce emissions from the energy, transportation and land use, water, solid waste, and green infrastructure sectors. The emissions reduction strategies developed by the City follows the BAAQMD's CEQA Guidelines (2011) and the corresponding criteria for a Qualified Greenhouse Gas Emissions Reduction Program as defined by the BAAQMD, which in turn were developed to comply with the requirements of AB 32 and achieve the goals of the California Air Resources Board's (CARB) AB 32 Scoping Plan. A qualified GHG emissions reduction strategy adopted by a local jurisdiction should include the elements below, as described in CEQA Guidelines Section 15183.5. The following BAAQMD's CEQA Guidelines (2011) provide the methodology to determine whether a GHG reduction program meets these requirements:

- Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities within a defined geographic area.
- Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable.
- Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area.
- Specify measures or a group of measures, including performance standards, which substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level.
- Establish a mechanism to monitor the plan's progress toward achieving the level and to require amendment if the plan is not achieving specified levels.
- Be adopted in a public process following environmental review.

The City's CAP meets BAAQMD guidelines as follows:

- The CAP quantifies citywide GHG emissions, both existing and projected over the specified time period, resulting from activities within the city as defined by the City's General Plan.
- The CAP establishes a level, based on substantial evidence, below which the contribution of emissions from activities covered by the plan would not be cumulatively considerable.
- CAP policy provisions reduce emissions to 15 percent below 2005 levels by 2020.
- CAP policy provisions reduce emissions to 35 percent below 2005 levels by 2030.
- CAP policy provisions provide a foundation for the City to reach the goal of reducing emissions to 80 percent below 1990 levels by 2050.
- The CAP identifies and analyzes the emissions resulting from specific actions or categories of actions anticipated within the city.
- The CAP specifies measures or a group of measures, including performance standards.
- The CAP establishes a mechanism to monitor its progress toward achieving the level and to require amendment if the plan is not achieving specific levels.
- The reduction measures proposed in the CAP build on inventory results and key opportunities prioritized by City staff, members from the community, and elected officials. The strategies in the CAP

consist of measures and actions that identify the steps the City will take to support reductions in GHG emissions. The City of Cupertino will achieve these reductions in GHG emissions through a mix of voluntary programs and new strategic standards. The standards presented in the CAP respond to the needs of development, avoiding unnecessary regulation, streamlining new development, and achieving more efficient use of resources.

The project is consistent with the GHG inventory contained in the CAP. Both the existing and projected GHG inventory contained in the City's CAP were derived based on the land use designations and associated densities defined in the City's General Plan. The General Plan land use designation is High Density with greater than 35 dwelling units per acre (High Density (greater than 35 du/ac)). The proposed project is consistent with this land use designation. Therefore, since the project is consistent with the City's General Plan and does not propose an amendment to modify the type, intensity, or density of use, it is also consistent with the GHG inventory contained in the CAP.

In addition, a specific project proposal is considered consistent with the Cupertino CAP if it complies with the "required" GHG reduction measures contained in the adopted CAP. The previously adopted GHG reduction measures applicable to the proposed project include the following:

- Measure C-E-1 Energy Use Data and Analysis: Increase resident and building owner/tenant/operator knowledge about how, when, and where building energy is used.
- Measure C-W-1 SB-X7-7: Implement water conservation policies contained within Cupertino's Urban Water Management Plan to achieve 20 percent per capita water reduction by 2020.
- Measure C-SW-1 Zero Waste Goal: Maximize solid waste diversion community-wide through preparation of a zero-waste strategic plan.
- Measure C-SW-3 Construction & Demolition Waste Diversion Program: Continue to enforce diversion requirements in City's Construction & Demolition Debris Diversion and Green Building Ordinances.

The proposed project would not make any changes to current City standards. Development in the City of Cupertino, including the project, is required to adhere to City-adopted policy provisions, including those contained in the adopted CAP. The City ensures that the provisions of the Cupertino CAP are incorporated into projects and their permits through development review and applications of conditions of approval as applicable. Therefore, the impact would be *less than significant* and no mitigation measures would be required.

VII. HAZARDS AND HAZARDOUS MATERIALS

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
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 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 material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	❒	❒	❒	■
e) For a project 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, result in a safety hazard for people living or working in the project area?	❒	❒	❒	■
f) For a project within the vicinity of a private airstrip, result in a safety hazard for people living or working in the project area?	❒	❒	❒	■
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	❒	❒	■	❒
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	❒	❒	❒	■

GENERAL PLAN EIR

Chapter 4.7, Hazards and Hazardous Materials, of the General Plan EIR, addressees the hazards- and hazardous materials-related impacts as a result of intensified development in Cupertino. Impacts are found to be less than significant and less than significant with mitigation measures to ensure that development on sites with known hazardous contamination would be less than significant. General Plan EIR Mitigation Measures HAZ-4a and HAZ-4b are required to be implemented for sites with known contamination and potential residual contamination. As discussed in Chapter 4.7, the project site is not listed as a site with known contamination or potential residual contamination; therefore, the identified mitigation measures in the General Plan EIR do not apply to the proposed project. The following is a summary of Section, 4.7.1.2, Existing Conditions, of Chapter 4.7.

EXISTING CONDITIONS

As shown on Table 4.7-2, *Hazardous Materials and LUST [leaking underground storage tanks] Sites,* of the General Plan EIR*,* the search of the Department of Toxic Substance Control's EnviroStor Database and the GeoTracker database search did not reveal any hazardous materials or LUST sites on or within close proximity to the project site. The project site, developed in 1998, does not contain any asbestos-containing materials (ACM) or lead-based paint (LBP), which have been regulated in construction since the early 1970's. There are no known hazardous materials sites located on the project site. Cupertino High School and Sedgwick Elementary School in the Cupertino Union School District are approximately 1.5 miles to the south, while Laurelwood Elementary School in the Santa Clara Unified School District is located approximately 1.5 miles to the northeast in the City of Santa Clara. There are no moderate, high, or very high fire hazard severity zones in the State Responsibility Areas in the vicinity of the project site. The nearest public airports are San Jose International Airport, approximately 5.1 miles to the northeast, and Palo Alto Airport, approximately 10.5 miles to the northwest. The nearest heliports are Mc Candless Towers Heliport, approximately 4.3 miles to the northeast, and County Medical Center Heliport, approximately 4.5 miles to the southeast. The nearest private airport is Moffett Federal Airfield, approximately 6.1 miles to the northwest.

DISCUSSION

a) Would the project create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

Project Operation

The proposed project, a residential development, would not involve the routine transport or disposing of hazardous materials. Project operation would involve the use of small amounts of hazardous materials for cleaning and maintenance purposes, such as cleansers, degreasers, pesticides, and fertilizers. These potentially hazardous materials would not be of a type or be present in sufficient quantities to pose a significant hazard to public health and safety or the environment. Furthermore, such substances would be used, transported, stored, and disposed of in in accordance with applicable federal, State, and local laws, policies, and regulations. Any businesses that transport, generate, use, and/or dispose of hazardous materials in Cupertino are subject to existing hazardous materials regulations, such as those implemented by Santa Clara County Department of Environmental Health (DEH) Hazardous Materials Compliance Division (HMCD), and hazardous materials permits from the Santa Clara Fire Department (SCCFD). The SCCFD also conducts inspections for fire safety and hazardous materials management of businesses and multi-family dwellings, in accordance with the City of Cupertino Hazardous Materials Storage Ordinance in Title 9, Health and Sanitation, Chapter 9.12, Hazardous Materials Storage. Thus, associated impacts from the operational phase of the project would be *less than significant* and no mitigation measures would be required.

Project Construction

Construction activities at the project site would involve the use of larger amounts of hazardous materials than would operation of the proposed project, such as petroleum-based fuels for maintenance and construction equipment, and coatings used in construction, which would be transported to the site periodically by vehicle and would be present temporarily during construction. These potentially hazardous materials would not be of a type or occur in sufficient quantities on-site to pose a significant hazard to public health and safety or the environment, and would their use during construction would be short-term. Additionally, as with proposed project operation, the use, transport, and disposal of construction-related hazardous materials would be required to conform to existing laws and regulations. Compliance with applicable laws and regulations governing the use, storage, and transportation of hazardous materials would ensure that all potentially hazardous materials are used and handled in an appropriate manner, and would minimize the potential for safety impacts to occur. Consequently, associated impacts from construction of the proposed project would be *less than significant* and no mitigation measures would be required.

b) Would the project 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?

As described under criterion (a) above, operation and construction of the proposed project would involve the storage and use of common cleaning substances, building maintenance products, paints, and solvents, as well as petroleum-based fuels for maintenance and construction equipment, and coatings used in construction. Also, as described in the existing conditions, all of the existing buildings on the project site were developed in 1998; thus, the buildings would not contain ACM and LBP. An impact could occur if construction and operation of the proposed project creates conditions where hazardous materials could easily contaminate surrounding soil, water, or air. The most likely scenarios would be from rainwater runoff spreading contaminated waste. Stormwater runoff is discussed in Section VIII, Hydrology and Water Quality, of this Initial Study and impacts were found to be less than significant.

Project Operation

The proposed project, a residential complex, is not considered the type of project that would create a hazardous materials threat to the users of the site or the surrounding land uses. The Santa Clara County HMCD is the Certified Unified Program Agency (CUPA) for Santa Clara County including the City of Cupertino, and is responsible for enforcing Chapter 6.95 of the California Health and Safety Code. As the CUPA, Santa Clara County HMCD is required to regulate hazardous materials business plans (HMBP) and chemical inventory, hazardous waste and tiered permitting, underground storage tanks, and risk-management plans. The HMBP is required to contain basic information on the location, type, quantity, and health risks of hazardous materials stored, used, or disposed of on development sites. The HMBP also contains an emergency-response plan, which describes the procedures for mitigating a hazardous release, procedures, and equipment for minimizing the potential damage of a hazardous materials release, and

provisions for immediate notification of the Cal EMA and other emergency-response personnel, such as the SCCFD. Implementation of the emergency response plan facilitates rapid response in the event of an accidental spill or release, thereby reducing potential adverse impacts. Furthermore, Santa Clara County HMCD is required to conduct ongoing routine inspections to ensure compliance with existing laws and regulations; to identify safety hazards that could cause or contribute to an accidental spill or release; and to suggest preventative measures to minimize the risk of a spill or release of hazardous substances. Compliance with these regulations would ensure that the risk of accidents and spills is minimized to the maximum extent practicable during the operation of the proposed project. Consequently, associated impacts would be *less than significant* and no mitigation measures would be required.

Project Construction

Similar to the operation of the proposed project, the type of construction materials and equipment would be considered standard for this type of development. All spills or leakage of petroleum products during construction activities are required to be immediately contained, the hazardous material identified, and the material remediated in compliance with applicable state and local regulations. All contaminated waste would be required to be collected and disposed of at an appropriately licensed disposal or treatment facility. Furthermore, strict adherence to all emergency response plan requirements set forth by the Santa Clara County HMCD would be required through the duration of the construction of each individual development project. Therefore, substantial hazards to the public or the environment arising from the routine use of hazardous materials during project construction would not occur. Accordingly, impacts would *be less than significant* and no mitigation measures would be required.

c) Would the project emit hazardous emissions or handle hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

There are no schools within one-quarter mile of the project site. Furthermore, the proposed project would not involve the storage, handling, or disposal of hazardous materials in sufficient quantities to pose a significant risk to the public. Thus, *no impact* related to hazardous emissions or hazardous material handling within one-quarter mile of a school would occur and no mitigation measures would be required.

d) Would the project be located on a site which is included on a list of hazardous material sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?

As shown in the General Plan EIR (see Table 4.7-2, *Hazardous Materials and LUST* [leaking underground storage tanks] and Figure 4.7-1, *Hazardous Material Sites*) the project site is not included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5. Accordingly, *no impact* would occur and no mitigation measures would be required.

e) For a project within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people living or working in the project area?

The project site is not within an airport land use plan or within two miles of a public use airport. Thus, there would be *no impact* related to public airport hazards and no mitigation measures would be required.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people living or working in the project area?

There are no private use airstrips or airports within two miles of the project site. Therefore, there would be *no impact* related to private airstrip hazards as a result of implementing the proposed project and no mitigation measures would be required.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The City of Cupertino Office of Emergency Services is responsible for coordinating agency response to disasters or other large-scale emergencies in the City of Cupertino with assistance from the Santa Clara County Office of Emergency Services and the SCCFD. The Cupertino Emergency Operations Plan (EOP)[35] establishes policy direction for emergency planning, mitigation, response, and recovery activities within the city. The Cupertino EOP addresses interagency coordination, procedures to maintain communications with county and State emergency response teams, and methods to assess the extent of damage and management of volunteers.

The proposed project would not block roads and would not impede emergency access to surrounding properties or neighborhoods. As described in Chapter 3, Project Description, of this Initial Study, emergency vehicle access would be provided at two points; one located off of Wolfe Road and the other off of Pruneridge Avenue described above. The project's circulation design includes a 0.5 mile fire Emergency Vehicle Access (EVA) lane that connects to the cul-de-sac off of Pruneridge Avenue, forming a clockwise pattern around the site. Along the route, dedicated 26-feet by 60-feet fire truck access pads would be provided for firefighting equipment to access each building. Six designated fire aerial rig locations would be strategically located around the buildings on the EVA lane. The EVA lane would be made of different building materials along its length. In some locations the EVA lane would be made of asphalt and concrete, while in other locations the EVA land would be made of turf that can support the weight of a fire truck and would have the appearance of a linear park. Fire access would be maintained and provided to the AC2 gate at the southern portion of the property.

[35] City of Cupertino, Office of Emergency Services. *Emergency Operations Plan.* September 2005.

During demolition and construction, vehicles, equipment, and materials would be staged and stored on a portion of the project site. The construction site and staging areas would be clearly marked, and construction fencing would be installed to prevent disturbance and safety hazards. No staging would occur in the public right-of-way. A combination of on- and off-site parking facilities for construction workers would be identified during demolition, grading, and construction. The proposed project would not interfere with an adopted emergency response plan, or emergency evacuation plan; therefore, impacts would be *less than significant* and no mitigation measures would be required.

h) Would the project expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildland are adjacent to urbanized areas or where residences are intermixed with wildlands?

The project site is fully developed and is surrounded by built-out urban use. There are no very high fire hazard severity zones within the Local Responsibility Areas of Cupertino and there are no high or very high fire risk areas as shown on the City's adopted Wildland Urban Interface Fire Area map. The proposed project would not subject people or structures to wildfire hazards, and *no impact* would occur. No mitigation measures would be required.

VIII. HYDROLOGY AND WATER QUALITY

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Violate any water quality standards or waste discharge requirements?	❒	❒	■	❒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted).	❒	❒	■	❒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, or flooding on- or off-site.	❒	❒	■	❒
d) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	❒	❒	■	❒
e) Otherwise substantially degrade water quality?	❒	❒	■	❒

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
f) Place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map or place structures that would impede or redirect flood flows within a 100-year flood hazard area?	❒	❒	❒	■
g) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	❒	❒	❒	■
h) Potentially be inundated by seiche, tsunami, or mudflow?	❒	❒	❒	■

GENERAL PLAN EIR

Chapter 4.8, Hydrology and Water Quality, of the General Plan EIR, addresses the hydrology- and water quality-related impacts as a result of intensified development of the project site. These impacts are identified as less than significant in the General Plan EIR. The following is a summary of Section, 4.8.1.2, Existing Conditions, of Chapter 4.8.

EXISTING CONDITIONS

The project site lies within the Calabazas Creek watershed. No creeks are present on the project site. In addition to the natural drainage system, a network of storm drains collects runoff from city streets and carries it to the creeks and San Francisco Bay.

The City of Cupertino Department of Public Works is responsible for the design, construction, and maintenance of City-owned facilities including public streets, sidewalks, curb, gutter, storm drains. The capacity of the storm drain facilities within the City of Cupertino were evaluated and documented in the 1993 Storm Drain Master Plan, which identifies the areas within the system that do not have the capacity to handle runoff during the 10-year storm event, which is the City's design standard. The project site is not located in an area where the storm drains are potentially deficient in conveying the 10-year storm (see Table 4.8-3, *Under Capacity Storm Drainage Infrastructure*, of the General Plan EIR).

The project site, as does the entire city, lies within the Santa Clara Subbasin of the Santa Clara Valley Groundwater Basin. In 2012, approximately 40 percent of the water used in Santa Clara County was pumped from groundwater.[36] The rest of the water used in the County is purchased from the Santa Clara

[36] Santa Clara Valley Water District, 2012. Annual Groundwater Report for Calendar Year 2012.

Valley Water District (SCVWD), which receives surface water from the State Water Project (SWP) and the Central Valley Project (CVP). Additional details on water usage and local water purveyors are provided in Section XV, Utilities and Service Systems, of this Initial Study.

Santa Clara Valley streams do not receive discharges from industrial or municipal wastewater.[37] Industrial discharges are routed to municipal sanitary sewers and then to regional municipal wastewater treatment plants that discharge treated effluent to the tidal sloughs of San Francisco Bay. The National Pollutant Discharge Elimination System (NPDES) permit program was established by the federal Clean Water Act (CWA) to regulate municipal and industrial discharges to surface waters of the United States from their municipal separate storm sewer systems (MS4s). Municipal storm water discharges in the City of Cupertino is subject to the Waste Discharge Requirements of the new Municipal Regional Permit (MRP; Order Number R2-2015-0049) and NPDES Permit Number CAS612008, which became effective on January 1, 2016.

The San Francisco Bay Regional Water Quality Control Board (RWQCB) monitors surface water quality through implementation of the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) and designates beneficial uses for surface water bodies and groundwater within the Santa Clara Valley. The Basin Plan also contains water quality criteria for groundwater. Groundwater quality in the Santa Clara subbasin is generally considered to be good and water quality objectives are met in at least 95 percent of the County water supply wells without the use of treatment methods.[38]

The project site is not located in a FEMA-designated 100-year floodplain or Special Flood Hazard Area (SFHA). The project site is not within a dam inundation zone. The City of Cupertino is more than eight miles south of San Francisco Bay and is more than 100 feet amsl, which places the city at a distance that is considered too far to be affected by a tsunami.[39] There are no large bodies of water within the City of Cupertino or near the project site; thus, the project site would not be impacted by a seiche.

DISCUSSION

a) Would the project violate any water quality standards or waste discharge requirements?

Because the project would disturb one or more acres during construction, the project applicant would be required to comply with the NPDES Permit and submit Permit Registration Documents (PRDs) to the SWRCB prior to the start of construction. The PRDs include a Notice of Intent (NOI) and a site-specific

[37] Santa Clara Basin Watershed Initiative, 2003. *Volume 1, Watershed Characteristics Report,* http://www.scbwmi.org/ accessed May 2, 2014.

[38] Santa Clara Valley Water District, 2012. Santa Clara Valley Water District, 2012. *2012 Groundwater Management Plan.*

[39] Association of Bay Area Governments (ABAG), 2014. *Interactive Tsunami Inundation Map.* http://gis.abag.ca.gov/website/Tsunami/index.html accessed April 5, 2014.

construction Stormwater Pollution Prevention Plan (SWPPP). The SWPPP describes the incorporation of Best Management Practices (BMPs) to control sedimentation, erosion, and hazardous materials contamination of runoff during construction. New requirements by the SWRCB would also require the project applicant to prepare a construction SWPPP that includes post construction treatment measures aimed at minimizing storm water runoff. With implementation of these measures, water quality impacts during construction would be *less than significant*.

In addition, all new development or redevelopment projects that create and/or replace 10,000 square feet or more of impervious surfaces would be required to incorporate source control, site design, and stormwater treatment measures into the project, pursuant to the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) C.3 requirements. The requirements include minimization of impervious surfaces, measures to detain or infiltrate runoff from peak flows to match pre-development conditions, and agreements to ensure that the stormwater treatment and flow control facilities are maintained in perpetuity. The proposed project would implement the following measures:

- Site Design Measures – minimize amount of disturbed land, minimize impervious surfaces, minimum impact street and parking lot design, cluster structures/pavement, include self-retaining areas
- Source Control Measures – wash area/racks, drain to sanitary sewer; covered dumpster area, drain to sanitary sewer; sanitary sewer connection or accessible cleanout for swimming pool/spa; beneficial landscaping (minimize irrigation, runoff, pesticides and fertilizers); regular maintenance including pavement sweeping, catch basin cleaning, and good housekeeping
- Treatment Systems –nineteen bioretention areas scattered throughout the property totaling 13,734 cubic feet

Implementation of these measures and compliance with the C.3 requirements of the MRP would ensure that post-development impacts to water quality would be *less than significant.*

Adherence to applicable water quality regulations, preparation of a SWPPP, implementation of BMPs during construction, and compliance with the City of Cupertino Municipal Code would ensure that water quality standards are not violated during construction. Implementation of stormwater site design, source control, and stormwater treatment measures and compliance with C.3 provisions of the MRP and the City of Cupertino's stormwater requirements would result in less-than-significant impacts during operation of the project. Consequently, potential impacts associated with water quality during construction and operation would be *less than significant* and no mitigation measures would be required.

b) Would the project substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?

The project would be connected to municipal water supplies and does not propose any groundwater wells on the property. The project site is supplied by California Water Service Company (Cal Water), which obtains its water from groundwater production (32 percent) and purchases of surface water from the Santa Clara Valley Water District. The 2010 *Urban Water Management Plan* for the Los Altos Suburban

District, which includes the area for the project site, states that there is sufficient water for their customers for normal, single-dry, and multiple-dry years.[40] If additional water is needed, Cal Water states that additional groundwater can be pumped to meet demand through 2040.[41] Therefore, the project would not result in a depletion of groundwater supplies or result in a lowering of groundwater levels. Water supply is discussed in Section XV, Utilities and Service Systems, below. Furthermore, due to the project's location, the development of the proposed project would not interfere with groundwater recharge that takes place in the McClellan Ponds recharge facility located within the City of Cupertino or the creeks and streams that run through the city. Therefore, the project would have a *less-than-significant* impact to groundwater recharge.

The proposed project would be located on a site that is already developed and currently has a high percentage of impervious surfaces. The proposed project would result in an increase in the amount of impervious surfaces of 30,281 square feet as compared to existing conditions, which is approximately a 10 percent increase. As a result, the project would result in a slight increase in the amount of runoff from the property. However, the project would install nineteen bioretention areas, which would contribute to groundwater recharge by infiltration. Therefore, the project would have a *less than significant* impact on groundwater supplies and groundwater recharge and no mitigation measures are needed.

c) Would the substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion, siltation, or flooding on- or off-site?

The proposed project would take place within the boundaries of a fully developed site that is currently connected to the City's storm drain system. The proposed redevelopment does not involve the alteration of any natural drainage channels or any watercourse. As shown on Figures 3-23 and 3-24 in Chapter 3, Project Description, of this Initial Study, the proposed project would provide nineteen bioretention water treatment areas throughout the project site. These would collect runoff from roof areas, parking lots, sidewalks and streets for treatment and flow control prior to discharge into the internal storm drain system, which connects to the City's storm drain system in Wolfe Road and Pruneridge Avenue.

The project applicant would be required, pursuant to the C.3 provisions of the MRP, to implement construction phase BMPs, post-construction design measures that encourage infiltration in pervious areas, and post-construction source control measures to help keep pollutants out of stormwater. In addition, post-construction stormwater treatment measures would be required since the project would create and/or replace more than 10,000 square feet of impervious surface. These measures would reduce the amount of stormwater runoff from the project.

[40] California Water Service Company, 2011. *2010 Urban Water Management Plan, Los Altos Suburban District.*

[41] Water Supply Assessment page 23, prepared for CalWater by Yarne & Associates, Inc. included in Appendix C of this Initial Study.

During construction, project applicants are subject to the NPDES construction permit requirements, including preparation of a SWPPP. The SWPPP includes erosion and sediment control measures to stabilize the site, protect slopes and channels, control the perimeter of the site, minimize the area and duration of exposed soils, and protect receiving waters adjacent to the site.

Once constructed, the requirements for new development or redevelopment projects include source control measures and site design measures that address stormwater runoff and would reduce the potential for erosion or siltation. In addition, Provision C.3 of the MRP would require the project to implement stormwater treatment measures to contain site runoff, using specific numeric sizing criteria based on volume and flow rate.

With implementation of these erosion and sediment control measures and regulatory provisions to limit runoff for new development sites, the proposed project would not result in significant increases in erosion and sedimentation or contribute to flooding on-site or off-site and impacts would be *less than significant*.

d) Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

There are two potential impacts to stormwater runoff hydrology with urban development. Impervious surfaces, such as roads, sidewalks, and buildings prevent the natural infiltration of stormwater into the soil and thus create higher runoff volumes. In addition, more rapid transport of runoff over impermeable surfaces combined with higher runoff volumes result in elevated peak flows. This increase in flows could adversely impact stormwater drainage systems.

As stated above in criterion (b), the proposed project involves construction of a residential development on an existing developed property that is currently connected to the City's storm drain system. The proposed project would result in a small increase of 30,281 square feet of impervious surfaces over existing conditions, which in turn could result in a slight increase in the amount of runoff from the property. However, with the installation of nineteen bioretention areas scattered throughout the property, the 10 percent increase in impervious surfaces as compared to existing conditions would not result in a significant change in the volume of stormwater runoff in a manner that would exceed the capacity of the storm drain system. The bioretention areas would provide both treatment of site runoff, reduction in peak flow rates, and flow control prior to discharge to the City's storm drain system. As stated above in the existing conditions section, the project site is not located in an area where the storm drains are potentially deficient in conveying the 10-year storm. The existing storm drain system would be able to handle the stormwater flow from the site and the impact to stormwater drainage systems would be *less than significant.* In addition, with the implementation of stormwater treatment measures, the project would not provide substantial additional sources of polluted runoff and the impact would be *less than significant.*

e) Would the project otherwise substantially degrade water quality?

As required by storm water management guidelines discussed under criterion (a), BMPs and LID measures would be implemented across the project site during both construction and operation of the proposed project. These measures would control and prevent the release of sediment, debris, and other pollutants into the storm drain system. Implementation of BMPs during construction would be in accordance with the provisions of the SWPPP, which would minimize the release of sediment, soil, and other pollutants. Operational BMPs would be required to meet the C.3 provisions of the MRP and these requirements include the incorporation of site design, source control, and treatment control measures to treat and control runoff before it enters the storm drain system. The proposed treatment measures would include the use of bioretention areas to treat and detain runoff prior to discharge to the City's storm drain system. With implementation of these BMPs and LID measures in accordance with City and MRP requirements, the potential impact on water quality would be *less than significant.*

f) Would the project place housing within a 100-year flood hazard area as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map or place structures that would impede or redirect flood flows within a 100-year flood hazard area?

The project would not result in the development of residential structures in a FEMA-designated 100-year floodplain or Special Flood Hazard Area (SFHA). *No impact* would occur and no mitigation measures would be required.

g) Would the project expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The project site is not in a dam inundation zone or in close proximity to any levees; thus, *no impact* would occur and no mitigation measures are necessary.

h) Would the project potentially be inundated by seiche, tsunami, or mudflow?

The project site is not located in close proximity to San Francisco Bay or the Pacific Ocean, and is not within a mapped tsunami inundation zone.[42] Because there are no large bodies of water, such as reservoirs or lakes, in the vicinity of the project site, there would be no potential for seiches to impact the project site. In addition, the site is in a relatively flat area of the City and is outside of the ABAG mapped

[42] Association of Bay Area Governments (ABAG), 2016. *Interactive Tsunami Inundation Map.* http://gis.abag.ca.gov/website/Hazards/?hlyr=tsunami accessed on January 20, 2016.

zones for earthquake-induced landslides or debris flow source areas.[43] Therefore, *no impact* would occur with respect to these issues and no mitigation measures would be required.

IX. LAND USE

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Physically divide an established community?	❒	❒	❒	■
b) Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	❒	❒	■	❒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	❒	❒	❒	■

GENERAL PLAN EIR

As discussed in Chapter 4.9, Land Use and Planning, of the General Plan EIR, impacts are determined to be less than significant as a result of intensified development of the project site. The following is a summary of Section, 4.9.1.2, Existing Conditions, of Chapter 4.9.

EXISTING CONDITIONS

General Plan

The General Plan land use designation is High Density with greater than 35 dwelling units per acre (High Density (greater than 35 du/ac)). The project is located in the North Vallco Gateway, which is within the North Vallco Park Special Area. As described in Chapter 2, Planning Areas, of the General Plan, the North Vallco Park Special Area is an important employment center for Cupertino and the region. The North Vallco Gateway includes two hotels and the Cupertino Village Shopping Center west of Wolfe Road. The North Vallco Park Special Area is envisioned to become a sustainable office and campus environment surrounded by a mix of connected, high-quality and pedestrian-oriented neighborhood center, hotels and residential uses. Taller building heights and additional density may be allowed in the North Vallco

[43] Association of Bay Area Governments (ABAG), 2016. Ranifall-Induced Landslides, Debris Flow Source Areas and Earthquake Induced Landslides. Accessed at http://resilience.abag.ca.gov/landslides/ on January 20, 2016.

Gateway. In addition, the project site is also one of the five Priority Housing Element sites in the City's adopted Housing Element.[44]

The maximum density currently permitted on the site is 85 dwelling units per acre (du/ac) and, as described in the Housing Element, the realistic capacity is a net increase of 600 units.[45] The maximum height of 75 feet or 60 feet for buildings located within 50 feet of property lines abutting Wolfe Road, Pruneridge Avenue and the AC2 site is allowed in the North Vallco Gateway.

Zoning

The project site is within the Planned Development with Residential (P(Res)) zoning district. As described in Municipal Code 19.80.010,[46] the planned development zoning district is intended to provide a means of guiding land development or redevelopment of the city that is uniquely suited for planned coordination of land uses. Development in this zoning district provides for a greater flexibility of land use intensity and design because of accessibility, ownership patterns, topographical considerations, and community design objectives. This zoning district is intended to accomplish the following:

- Encourage variety in the development pattern of the community.
- Promote a more desirable living environment.
- Encourage creative approaches in land development.
- Provide a means of reducing the amount of improvements required in development through better design and land planning.
- Conserve natural features.
- Facilitate a more aesthetic and efficient use of open spaces.
- Encourage the creation of public or private common open space.

All planned development districts are identified on the zoning map with the letter coding "P" followed by a specific reference to the general type of use allowed in the particular planning development zoning district. The general type of use allowed on the project site is Residential (RES).

Setbacks

The required setbacks for the project site include a front setback of 1:1 slope from the edge of the existing curb and a rear yard setback of 20 feet.

[44] The City's 2014-2022 Housing Element was adopted on May 19, 2015.

[45] Cupertino 2014-2022 Housing Element, Table HE-5, Summary of Priority Housing Element Sites To Meet The RHNA-Scenario A.

[46] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.80, Planed Development, Section 19.80.010, Purpose.

Parking

Per Municipal Code Section 19.124.040, high-density residential apartments are required to provide two parking spaces per dwelling unit for vehicular parking and 0.4 bicycle storage space per dwelling unit.[47]

DISCUSSION

a) Would the project physically divide an established community?

As discussed in the General Plan EIR, because the development of the proposed project would occur on a site that is currently developed, would retain the existing roadway patterns, and would not introduce any new major roadways or other physical features through existing residential neighborhoods or other communities that would create new barriers, the project would not physically divide an established community. Therefore, *no impact* would occur and no mitigation measures would be required.

b) Would the project conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The proposed project would develop a high-density residential development that would consist of six and seven-story buildings, which would be consistent with the types of development envisioned in the North Vallco Special Area and North Vallco Gateway. The proposed project would be 75 feet tall at its highest point, and would have a 60-foot maximum (six stories) height that is within 50 feet of the adjacent property line along Wolfe Road, Pruneridge Avenue and the AC2 property. The maximum density under the proposed project would be 75 du/ac. Accordingly, the proposed project would be consistent with the land use designations specified in the General Plan. As shown on Figure 3-15 in Chapter 3, Project Description, of this Initial Study, all of the project buildings would comply with the 1:1 front setback requirement as measured from the adjacent curb and existing topography and exceed the 20-foot rear yard setback requirement. The proposed project would not require any amendments to the Cupertino General Plan or Zoning Ordinance.

Municipal Code Section 19.124.040 requires high-density residential apartments are required to provide two parking spaces per dwelling unit for vehicular parking and 0.4 bicycle storage space per dwelling unit.[48] The project would include more than the 377 Class I bike storage spaces in accordance with the 0.4 space per dwelling unit requirement; however, the project would provide 1,716 vehicle parking spaces,

[47] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.124, Parking Regulations, Section 19.124.040, Regulations For Off-Street Parking, Table 19.124.040(A).

[48] Cupertino Municipal Code, Title 19, Zoning, Chapter 19.124, Parking Regulations, Section 19.124.040, Regulations For Off-Street Parking, Table 19.124.040(A).

which represents approximately 9 percent fewer parking spaces (1,716 parking spaces compared to 1,884 parking spaces) and a parking supply rate of approximately 1.8 parking spaces per dwelling unit.

In order to determine the adequate number of vehicle parking spaces for the proposed project, a Parking Ratio Analysis was prepared by the project applicant. The Parking Ratio Analysis was based on six high-density residential projects similar to the proposed project and included units ranging from 2,762 to 825 units located in the cities of San Jose and Santa Clara. The Parking Ratio Analysis is included in Appendix I, Parking and Transportation Data, of this Initial Study. Of the six residential projects surveyed, the parking demand per unit ratio ranged from 1.88 to 1.67 parked vehicles per room. The Parking Ratio Analysis research helps to demonstrate that the proposed parking ratio of 1.8 parking spaces per unit would provide adequate parking for the proposed project. Furthermore, as discussed in Chapter 3, Project Description, the project applicant prepared a draft Transportation Demand Management (TDM) Plan to be implemented as part of the proposed project. The draft TDM Plan is included in Appendix H, Draft Transportation Demand Management Plan, of this Initial Study. The draft TDM Plan includes many design features and amenities that promote the use of alternative transportation and reduce vehicular parking needs. The draft TDM Plan outlines trip reduction measures and strategies in order to:

- Reduce the amount of traffic generated by the proposed project.
- Promote the more efficient utilization of existing transportation facilities.
- Maximize the potential for alternative transportation usage.
- Establish an ongoing monitoring and enforcement program to ensure that the desired alternative mode use is achieved.

As discussed in the *Hamptons Apartment Complex Transportation Impact Analysis* (TIA) prepared by Fehr & Peers in December 2015 (see Appendix I of this Initial Study), the Institute of Transportation Engineers (ITE) Parking Generation 4th Edition shows weekday average peak-period parking demand for low/midrise apartments to be 1.23 vehicle spaces per dwelling unit for suburban locations. Typical engineering practice for residential parking is to provide 10 to 15 percent more parking than demand to account for turn-over and to avoid vehicles circulating for parking. With a 10 to 15 percent increase, the ITE Parking Generation would suggest a parking ratio of 1.35 to 1.42 spaces per dwelling unit. In addition, the high percentage of one bedroom and studio units (68 percent/639 units), the new bike hub, the high-level of pedestrian connectivity, and increased use of rideshare companies like Uber and Lyft, are anticipated to reduce parking demand. The TIA prepared for the project recognizes that the future residents of the proposed project may work at the AC2 site and would choose alternative modes of transportation to the automobile, which would reduce projected AM and PM trips by 10 percent. The parking reduction proposed by the project represents similar reduction. For the reasons stated above, a parking ratio of 1.8 vehicle spaces per dwelling unit is justified for the proposed project.

Therefore, impacts would be *less than significant* and no mitigation measures would be required.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

As discussed in the General Plan EIR, the City of Cupertino is located outside the boundaries of the Santa Clara Valley Habitat Plan. The city is not located within any other habitat conservation plan or natural community conservation plan and would not conflict with any such plan. Therefore, *no impact* would occur and no mitigation measures would be required.

X. NOISE

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or other applicable standards?	❒	❒	■	❒
b) Expose people to or generate excessive groundborne vibration or ground borne noise levels?	❒	❒	■	❒
c) Create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	❒	❒	■	❒
d) Create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	❒	❒	■	❒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	❒	❒	❒	■
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	❒	❒	❒	■

GENERAL PLAN EIR

Chapter 4.10, Noise, of the General Plan EIR, addresses the noise and vibration impacts associated with intensified development of the project site. The following is a summary of Section, 4.10.1.3, Existing Conditions, of Chapter 4.10.

EXISTING CONDITIONS

Noise is defined as unwanted sound, and is known to have several adverse effects on people, including hearing loss, speech and sleep interference, physiological responses, and annoyance. Based on these known adverse effects of noise, the federal government, State of California, and City of Cupertino have established criteria to protect public health and safety and to prevent disruption of certain human activities. Noise-related terminology/descriptors, pertinent existing regulations and Cupertino General

Plan Health and Safety Element guidelines, calculations for traffic noise levels, and calculations for construction noise and vibration levels can be found in Appendix G, Noise Data, to this Initial Study.

The principal noise sources affecting the project site are traffic noise from I-280 and Wolfe Road. The nearest public airports are San Jose International Airport, approximately 5.1 miles to the northeast, and Palo Alto Airport, approximately 10.5 miles to the northwest. The nearest heliports are Mc Candless Towers Heliport, approximately 4.3 miles to the northeast, and County Medical Center Heliport, approximately 4.5 miles to the southeast. The nearest private airport is Moffett Federal Airfield, approximately 6.1 miles to the northwest.

DISCUSSION

a) Would the project expose people to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or other applicable standards?

Mobile-Source Noise Impacts

The proposed project would generate noise associated with additional vehicles traveling to and from the project site on local roadways. The roadway noise modeling was based on average daily trips (ADT) on roadway segments in the vicinity; as analyzed in the project TIA (see Appendix I of this Initial Study). Traffic noise was evaluated for Existing, Existing plus Project, Background, and Background plus Project conditions. Noise modeling procedures involved the calculation of vehicular noise levels along individual roadway segments. This was accomplished using the Federal Highway Administration Highway Noise Prediction Model. This model calculated the average noise level at specific locations based on traffic volumes, average speeds, roadway geometry, and site conditions. The proposed project's impact is determined by analysis of off-site traffic noise increases. Parameters and modeling results are included in Appendix G, Noise Data, of this Initial Study.

The proposed project would be subject to traffic noise from I-280 and Wolfe Road. The traffic on I-280 would be the dominant roadway noise sources at the project site. Table 5-8, compares the noise levels of each roadway segment for existing and background conditions.

TABLE 5-8 PROJECT CONTRIBUTIONS TO TRAFFIC NOISE LEVELS

Roadway	Segment	Existing, dBA CNEL	Background + Project, dBA CNEL	Overall Increase, dB	Project Contribution, dB	Significant Impact?
Wolfe Road	El Camino Real to Fremont	73.9	74.3	0.4	0.0	no
Wolfe Road	Fremont to Marion	69.9	70.5	0.7	0.1	no
Wolfe Road	Marion to Inverness	69.1	69.8	0.7	0.1	no
Wolfe Road	Inverness to Homestead	68.6	69.4	0.8	0.1	no
Wolfe Road	Homestead to AC2	70.8	72.1	1.2	0.2	no
Wolfe Road	AC2 to Pruneridge	70.8	73.4	2.6	0.2	no
Wolfe Road	Pruneridge to I-280 NB	71.2	73.7	2.5	0.3	no
Wolfe Road	I-280 NB to I-280 SB	71.1	73.2	2.1	0.2	no
Wolfe Road	I-280 SB to Vallco	74.3	75.9	1.6	0.1	no
Wolfe Road	Vallco to Stevens Creek	70.4	71.3	0.9	0.1	no
Stevens Creek Blvd.	De Anza to Miller	73.6	74.5	0.9	0.1	no
Stevens Creek Blvd.	Miller to Tantau	73.4	74.8	1.4	0.0	no
Homestead Rd.	Wolfe Road to Tantau	67.9	69.3	1.4	0.1	no
Homestead Rd.	Tantau to Lawrence	69.0	69.7	0.7	0.0	no

Source: Federal Highway Administration Highway Noise Prediction Model (FHWA-RD77-108).

As shown in Table 5-8, traffic noise increases due to project contributions range from 0.0 to 0.2 dBA. An increase of less than 3 dB CNEL is generally not noticeable and is not considered to be significant. Consequently, noise impacts generated by project-related traffic would be *less than significant* and no mitigation measures would be required.

Stationary-Source Noise Impacts

Stationary sources of noise generated by the proposed project would comply with the noise standards of the City of Cupertino. Stationary (non-transportation) noise sources associated with the proposed residential development would include heating, ventilation, and air conditioning (HVAC) units. The new HVAC units are expected to be located on the roofs of the multi-family buildings with the HVAC units most likely grouped into clusters. The nearest receptors that could potentially be affected by HVAC units are the nearby hotel uses to the west (across Wolfe Road). However, ambient noise levels at the hotels are already elevated under existing conditions due to heavy traffic flows on both I-280 and Wolfe Road. Therefore, the noise levels due to the proposed project's HVAC units would be lower at the nearby hotels than ambient noise levels caused by the traffic-related sources. Additionally, machinery and other stationary sources of noise are regulated by the City of Cupertino's Municipal Code. The City of Cupertino

requires that noise generated on a residential property be prohibited from exceeding 50 dBA during the night time (10:00 p.m. to 7:00 a.m.) and 60 dBA during the day time (7:00 a.m. to 10:00 p.m.) at receiving properties.

Because the proposed project's HVAC units would comply with noise standards contained within the City of Cupertino's Municipal Code, and because surrounding noise-sensitive uses experience high ambient noise levels, the impacts to any existing noise-sensitive uses in the project vicinity would be *less than significant* and no mitigation measures would be required.

Impacts to Residential Areas-Exterior

The General Plan Health and Safety (HS) Element specifies guidelines for acceptable community noise levels according to type of land use. The proposed project is located within an area zoned as residential. Pursuant to Policy HS-8.1, the Land Use Compatibility for Community Noise Environments chart, Future Noise Contour Map, and City Municipal Code should be used to evaluate land use decisions. According to the Land Use Compatibility for Community Noise Environments chart in the General Plan (i.e., Figure HS-8), an outdoor noise standard of 65 dBA Ldn would be considered "normally acceptable" for multi-family residential developments, while environments up to 70 dBA Ldn would be considered "Conditionally Acceptable." In the case of Conditionally Acceptable noise levels, "New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise reduction features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning would normally suffice." Multi-family residential developments in environments between 70 and 75 dBA Ldn would be considered as "Normally Unacceptable." In the case of Normally Unacceptable noise levels, "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."

Based on the General Plan EIR noise analysis, both existing (2014) and future (2040) noise levels on most portions of the project site would generally be between 65 and 70 dBA CNEL. Some portions of the project site would have noise levels greater than 70 dBA CNEL, however. Specifically, approximately 75 percent of the site would be between 65 and 70 dBA CNEL, and approximately 25 percent[49] would be at or above 70 dBA CNEL, due to traffic flows on adjacent roadways. These exterior noise levels would fall within either the "Conditionally Acceptable" or "Normally Unacceptable" land use compatibility classifications. Therefore, the noise environment for the entire project site would not conform to the land use compatibility guidelines of the City's Health and Safety Element policies (for exterior environments), a detailed analysis of the noise reduction requirements must be completed for plan check approvals, and

[49] These greater-than-70 dBA CNEL would include the southern portions of proposed Buildings D and E that face the Wolfe Road exit ramp and the I-280 freeway.

the needed noise insulation features must be included in the design. Although the project by itself would not be a major source of noise, vehicle traffic, construction equipment, and project mechanical equipment would contribute to existing sources of noise. Under the *CBIA v. BAAQMD*, where a project would exacerbate an existing environmental hazard, CEQA requires an analysis of the worsened condition on future project residents and the public at large.

Impacts to Residential Areas-Interior

For interior spaces, the 2013 California Building Code (CBC) specifies an interior noise standard of 45 dB CNEL[50] for single- and multi-family residential land use. The interior habitable environment excludes bathrooms, closets, and corridors. The interior noise standard shall be satisfied with windows in the closed position and mechanical ventilation shall be provided per uniform building code (UBC) requirements.

Noise levels at future facades of residential units that face and have a clear exposure to the I-280 freeway are expected to be at or above 70 dBA CNEL. Typical wood frame construction techniques with standard thermal insulating glass in moderately sized (less than one-third of the exterior wall area) closed windows would reduce traffic noise levels by approximately 24 to about 25 dB.[51] This reduction can potentially be increased to upwards of 30 dB (for the 'windows-closed' configuration) by using improved noise reduction methods.

Based on these average exterior-to-interior noise attenuation factors (i.e., 24 to 25 dB), interior levels in residences which face and have a clear exposure to the I-280 freeway can be expected to be above the state interior requirement of 45 dBA CNEL when standard thermal insulating windows are closed (for the purpose of noise control). Additionally, with such a windows-closed configuration, adequate ventilation must be provided according to the 2013 California Building and Mechanical Code as well as the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE). Additionally, such ventilation systems and the associated HVAC units must be selected and installed to comply with the noise standards contained within the City of Cupertino's Municipal Code. Further, the ventilation system selected should not compromise the outdoor-to-indoor noise attenuation of the structure. These projected interior noise levels – even with closed windows – would not comply with the requirements of the State of California Building Code and would, thus, require noise reduction measures to pass the plan check approval process. It should be noted that the windows-open configuration would be even more problematic when residential windows are open. This is because traffic noise attenuation from the exterior to interior

[50] Taken to be equivalent to 45 dBA Ldn.

[51] Society of Automotive Engineers, Inc. (SAE). 1971, October. House Noise – Reduction Measurements for Use in Studies of Aircraft Flyover Noise. AIR 1081.

California Department of Transportation (Caltrans). 2009, November. Technical Noise Supplement ("TeNS"). Prepared by ICF International.

spaces is reduced to between 15 to 17 dB in a best-case scenario and, more typically, to between 12 to 14 dB.[52] Since the entire site has existing and future noise environment above 65 dBA CNEL – due to traffic flows on I-280, Wolfe Road, and Pruneridge Avenue – essentially the entire proposed project can also be expected to experience an interior level exceeding 45 dBA CNEL when the windows are open.[53] Therefore, there is a high probability that interior noise levels for most, if not all, residential areas would be in excess of the State standards for residential interiors when windows are in the open configuration. As such, these window-open interior noise levels would expand both the severity and breadth of the non-compliance with the requirements of the State of California Building Code (relative to the windows-closed plus active ventilation configuration).

Although the project by itself would not be a major source of noise, vehicle traffic, construction equipment, and project mechanical equipment would contribute to existing sources of noise. Under the CBIA v. BAAQMD, where a project would exacerbate an existing environmental hazard, CEQA requires an analysis of the worsened condition on future project residents and the public at large.

Impacts to Outdoor Common Areas

The proposed project includes several outdoor areas that would be considered as 'common' and available to all the residents. These outdoor areas include two pools, as well as lawn, paseo, and plaza areas.

The City's Health and Safety Element does not contain guidelines for noise environments in common-use areas for multi-family developments so there are no thresholds for evaluating acceptability.

All of these outdoor common areas are near the center of the development and are relatively well shielded from traffic flow noise on I-280, Wolfe Road, and Pruneridge Avenue. The future noise environments in these common areas would be evaluated as part of the aforementioned exterior noise study, which would be mandated by conformance to the City's Health and Safety Element policies and to the conditions of the land use compatibility conditions therein.

[52] U. S. Environmental Protection Agency (EPA). 1978, November. Protective Noise Levels (Condensed Version of EPA Levels Document…see immediately below). EPA 550/9-79-100. U. S. Environmental Protection Agency (EPA). 1974, March. Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety. U.S. EPA Office of Noise Abatement and Control, Washington, D.C. Society of Automotive Engineers, Inc. (SAE). 1971, October. *House Noise – Reduction Measurements for Use in Studies of Aircraft Flyover Noise*. AIR 1081.

[53] For brevity in this evaluation, benefits to northernmost and easternmost portions of the project due to intervening buildings (i.e., proposed Buildings D, E, and F) were neglected.

Construction Noise

Section 10.48.053 of the City's Municipal Code prescribes allowable hours and noise emissions levels for construction activities within the city limits. The assessment of potential noise impacts due to project construction are discussed below in criterion (d).

b) *Would the project expose people to or generate excessive groundborne vibration or ground borne noise levels?*

Operations Vibration

The operation of the proposed project would not include any long-term vibration sources. Thus, vibration effects or impacts from operations sources would be *less than significant* and no mitigation measures would be required.

Construction Vibration

Project construction can generate varying degrees of ground vibration, depending on the construction procedures, the equipment used, and the proximity to vibration-sensitive uses. Construction equipment generates vibrations that spread through the ground and diminish in amplitude with distance from the source. The effect on buildings near a construction site varies depending on the type and depth of the source, soil type, ground strata, and receptor building construction. The generation of vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, or to slight damage at the highest levels. Vibration is typically noticed nearby when objects in a building generate noise from rattling windows or jangling picture frames. It is typically not perceptible outdoors and, therefore, impacts are normally based on the distance to the nearest building.[54] Table 5-9 lists vibration levels for different types of construction equipment.

[54] Federal Transit Administration (FTA). 2006, May. Transit Noise and Vibration Impact Assessment. United States Department of Transportation. FTA-VA-90-1003-06.

TABLE 5-9 CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Equipment	Approximate RMS[a] Velocity Level at 25 Feet (VdB)	Approximate PPV Velocity at 25 Feet (in/sec)
Vibratory Roller	94	0.210
Large Bulldozer	87	0.089
Caisson Drilling	87	0.089
Loaded Trucks	86	0.076
Jackhammer	79	0.035
Small Bulldozer	58	0.003

Note:
a. RMS velocity calculated from vibration level (VdB) using the reference of 1 microinch/second and a crest factor of 4.
Source: FTA 2006.

Construction Vibration-Induced Architectural Damage

The City does not have specific, vibration-related standards. Thus, project-related construction vibration was evaluated for its potential to cause minor architectural damage[55] based on FTA's architectural damage criteria. According to guidelines from the FTA for assessing damage from vibration caused by construction equipment, the threshold at which there is a risk of architectural damage for non-engineered timber and masonry buildings is 0.200 peak particle velocity (PPV) in inches per second. According to Caltrans's research and measurements, earthmovers and haul trucks have never exceeded PPV of 0.100 inches per second (in/sec) at 10 feet.[56]

Likewise, ground vibration from construction activities rarely reach levels that can damage structures, but can achieve levels in buildings close to a construction site that are in the perceptible ranges.[57] Groundborne vibration generated by construction projects is usually highest during pile driving and rock blasting. No pile driving and rock blasting activities are anticipated to be required during project construction.

The nearest off-site structures are the hotels to the west across Wolfe Road, approximately 175 feet from the project site boundary. Table 5-10 shows the vibration levels from typical earthmoving construction equipment at a distance of 175 feet.

[55] The term architectural damage is typically used to describe effects such as cracked plaster, cracks in drywall seams, sticking doors or windows, loosened baseboard/crown moldings, and the like.

[56] California Department of Transportation (Caltrans), Division of Environmental Analysis. 2002, February. *Transportation Related Earthborne Vibration (Caltrans Experiences)*. Technical Advisory, Vibration. TAV-02-01-R9601. Prepared by Rudy Hendricks.

[57] Federal Transit Administration (FTA). 2006, May. *Transit Noise and Vibration Impact Assessment*. United States Department of Transportation. FTA-VA-90-1003-06.

TABLE 5-10 MAXIMUM VIBRATION LEVELS FROM CONSTRUCTION EQUIPMENT

Equipment	Vibration Levels (PPV) at 175 Feet
Vibratory Roller	0.011
Large Bulldozer	0.005
Caisson Drilling	0.005
Loaded Trucks	0.004
Jackhammer	0.002
Small Bulldozer	0.000

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, May 2006.

As shown in Table 5-10, construction activities associated with the project would not exceed 0.011 PPV in/sec at the nearest structures in the vicinity of the project site. This value is well below the FTA's criteria for vibration-induced structural damage of 0.200 PPV in/sec. Therefore, impacts from vibration-induced architectural damage at off-site structures would be less than significant and no mitigation measures would be required.

Construction Vibration Annoyance

While not presenting potential impacts relative to architectural damage, some construction activities may be perceptible at the nearest off-site receptors due to of proximity to the activities. However, vibration-related construction activities would occur in the daytime when people are least sensitive to vibration levels (as many people would be away from their residences during the day).

The level where vibration becomes annoying is 78 VdB for residential uses, and 84 VdB for office uses. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time. Construction activities are typically distributed throughout the project site and would only occur for a very limited duration when equipment would be working in close proximity. Therefore, distances to the nearest receptors are measured from the center of the construction site, to represent the average vibration level.

The nearest sensitive receptors are the hotels to the west across Wolfe Road, approximately 600 feet from the center of the project site. Table 5-11 shows the vibration levels from typical earthmoving construction equipment at a distance of 600 feet.

TABLE 5-11 AVERAGE VIBRATION LEVELS FROM CONSTRUCTION EQUIPMENT

Equipment	Vibration Levels (VdB) at 600 Feet
Vibratory Roller	66
Large Bulldozer	59
Caisson Drilling	59
Loaded Trucks	58
Jackhammer	51
Small Bulldozer	30

Source: Federal Transit Administration (FTA), Transit Noise and Vibration Impact Assessment, May 2006.

On average, construction-generated vibration levels would not exceed 66 VdB, and therefore would not exceed the threshold for human annoyance at nearby sensitive receptors. Heavy equipment would only operate at the project boundary for brief periods, if at all. As heavy construction equipment moves around the project site, the average vibration levels at the nearest structures would diminish with increasing distance between structures and the equipment, and would generally not be perceptible. Vibration during construction would not exceed the FTA's annoyance threshold at the nearest structures, and therefore the impact would be *less than significant* and no mitigation measures would be required.

In summary, the generation of groundborne vibration or groundborne noise levels due to operations at the proposed project or during construction activities would be *less than significant* and no mitigation measures would be required.

c) Would the project create a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

As described in criterion (a) above, increases in noise levels related to stationary noise sources for the proposed project would not substantially elevate the existing ambient noise environment. Similarly, noise from project-related traffic along local roadways would not significantly increase noise levels in the project area. Accordingly, impacts would be *less than significant* and no mitigation measures would be required.

d) Would the project create a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Potential temporary increases in ambient noise levels would be associated with construction activities. Sensitivity to noise is based on the location of the equipment relative to sensitive receptors, the time of day, and the duration of the noise-generating activities. Two types of short-term noise impacts could occur during construction: (1) mobile-source noise from the transport of workers, material deliveries, and debris/soil hauling and (2) on-site noise from use of construction equipment. Construction activities are

anticipated to last approximately three years. The following discusses construction noise impacts to the off-site sensitive receptors.

Construction Vehicles

The transport of workers and equipment to the construction site would incrementally increase noise levels along site access roadways. The primary access routes for construction vehicles to the project site would be Wolfe Road and Pruneridge Ave. Project-related construction worker vehicles, haul trucks, and vendor trucks could pass by existing hotel uses along Wolfe Road west of the project site. Construction-related activities would generate worker, vendor, and soil haul trips. The demolition and grading phases would generate the most trips due to soil haul. Regardless, the 325 construction-related daily trips[58] would result in negligible noise level increases when compared to the traffic flow noise currently generated on the roadways (31,305 Average Daily Trips [ADT]). In addition, these truck trips would be spread throughout the workday and would primarily occur during non-peak traffic periods. Therefore, noise impacts from construction-related truck traffic would be *less than significant* at noise-sensitive receptors along the construction routes and no mitigation measures would be required.

Construction Equipment

According to Section 10.48.053 of the City's Municipal Code, construction is allowed during "daytime hours" (7:00 a.m. to 8:00 p.m. Monday through Friday, and 9:00 a.m. to 6:00 p.m. on weekends), provided that such construction activities do not exceed 80 dBA at the nearest affected property or individual equipment items do not exceed 87 dBA at 25 feet.[59] Construction is prohibited on holidays and within 750 feet of residential areas on weekends, unless a special exception has been granted, and during nighttime hours unless it meets the nighttime noise level standards. Even with these restrictions, project construction would temporarily increase ambient noise. However, noise levels would subside again after construction.

Typically, demolition and grading activities generate the loudest noise because they involve the largest and most powerful equipment. However, the project site is generally level, and only a nominal amount of heavy earthwork would be required. Therefore, construction activities for the project would utilize relatively small- to medium-sized equipment such as delivery/dump trucks, loaders/backhoes, dozers, excavators, scrapers, a grader, forklifts, a crane, rollers, and pavers. The total duration for construction

[58] This evaluation conservatively considered the overlapping phases of building demolition hauling plus asphalt demolition hauling plus soil hauling.

[59] These 80 and 87 dBA sound levels are taken to be the maximum continuous or repeated peak value measured by the use of a sound level meter and the "A" weighting network and the "SLOW" metering response, per Municipal Code Section 10.48.010.

would be approximately three years. As shown in Table 5-12 operational noise levels of most construction equipment range between 80 and 88 dBA at 50 feet.[60]

TABLE 5-12 TYPICAL CONSTRUCTION EQUIPMENT NOISE LEVEL

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft.)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft.)
Jack Hammers	75–85	82
Pneumatic Tools	78–88	85
Pumps	74–84	80
Dozers	77–90	85
Scrapers	83–91	87
Haul Trucks	83–94	88
Cranes	79–86	82
Portable Generators	71–87	80
Rollers	75–82	80
Tractors	77–82	80
Front-End Loaders	77–90	86
Hydraulic Backhoe	81–90	86
Hydraulic Excavators	81–90	86
Graders	79–89	86
Air Compressors	76–89	86
Trucks	81–87	86

Source: Bolt, Beranek & Newman; Noise Control for Buildings and Manufacturing Plants, 1987.

Construction equipment typically moves around on the project site and uses various power levels. Noise from localized point sources (such as construction equipment) decreases by approximately 6 to 7.5 dB

[60] Neglecting detailed sound propagation considerations for the near-field/transition-zone/far-field environs, these reference sound levels would simplistically be adjusted to 86 to 94 dBA at 25 feet. Thus, several equipment items could potentially have typical sound emissions that would be higher than the Section 10.48.053 standards.

with each doubling of distance between the source and receptor.[61] For example, the noise levels from a dozer that generates 85 dBA at 50 feet would measure 79 dBA at 100 feet, 73 dBA at 200 feet, 67 dBA at 400 feet, and 61 dBA at 800 feet (conservatively use a 6 dB per doubling of distance attenuation factor).

The nearest offsite receptors are the hotels and apartments to the west of the site, across Wolfe Road. The hotels are approximately 600 feet from the center of construction; Arioso Apartments are 800 feet from the main construction zone. Equipment operates intermittently and at varying power settings, as well as moving around the site. Therefore, noise would also be intermittent as well as temporary during the construction period. The heaviest and loudest equipment would be used during the demolition and grading phases. Assuming a worst-case situation of combined demolition and grading phases, with two pieces of earthmoving equipment (e.g., backhoes, loaders), a concrete saw, three excavators, two scrapers, a grader, and two dozers, and assuming that all equipment operates simultaneously in the center of the site, the noise levels would be 68 dBA L_{eq} at the hotels, and 65 dBA L_{eq} at the Arioso Apartments. Subsequent phases would mostly use lighter equipment, such as forklifts, cranes, welders, and compressors, so the noise levels would be expected to be less than for demolition and grading. Therefore, construction activity would not be expected to exceed the noise ordinance's limit of 80 dBA (L_{max}). Because the hotels and apartments lie within 750 feet of the construction boundary, project construction would not be allowed on weekends pursuant to Municipal Code Section 10.48.053. Due to the distances to sensitive receptors, the limitation on construction hours to the least noise-sensitive portion of the day (7:00 a.m. to 8:00 p.m.), and the construction activity noise level limit, impacts at offsite receptors would be *less than significant*, and no mitigation would be necessary.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project is not located within an airport land use plan or within two miles of an airport. The nearest public airports are San Jose International Airport, approximately 5.1 miles to the northeast, and Palo Alto Airport, approximately 10.5 miles to the northwest. At these distances from the aircraft facilities, the proposed project would not expose residents or patrons to excessive noise levels from aircraft noise. *No impacts* related to noise from public airport would occur and no mitigation measures are necessary.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

The proposed project is not located within the immediate vicinity of a private airstrip or heliport. The nearest heliports are Mc Candless Towers Heliport, approximately 4.3 miles to the northeast, and County

[61] As sound energy travels outward from the source, spreading loss accounts for a 6 dB decrease in noise level. Soft ground and atmospheric absorption effects can decrease this by an additional 1.5 dB.

Medical Center Heliport, approximately 4.5 miles to the southeast. The nearest private airport is Moffett Federal Airfield, approximately 6.1 miles to the northwest. At these relatively long distances from the aircraft facilities, the proposed project would not expose residents to excessive noise levels from private airstrip or heliport noise. *No impacts* related to noise from private airstrip would occur and no mitigation measures would be required.

XI. POPULATION AND HOUSING

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Induce substantial unexpected population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	❒	❒	❒	■
b) Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?	❒	❒	■	❒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	❒	❒	■	❒

GENERAL PLAN EIR

As discussed in Chapter 4.11, Population and Housing, of the General Plan EIR, impacts were determined to be less than significant as a result of intensified development of the project site. As discussed in Chapter 4, Consistency with the General Plan EIR, of this Initial Study, the General Plan would introduce approximately 12,998 new residents[62] and 16,855 new jobs[63] to Cupertino. These new residents and jobs combined with existing conditions would result in 71,300 residents and 44,242 jobs at the 2040 buildout horizon.

EXISTING CONDITIONS

The project is anticipated to be complete by 2020. According to the Association of Bay Area Governments (ABAG), Cupertino would have 62,500 residents and 30,110 jobs by 2020.

[62] Population is calculated by 4,421 units times 2.94 persons per household, which is the ABAG 2040 estimated generation rate.

[63] Jobs are calculated applying the City's generation rates as follows; 4,040,231 square feet of office allocation divided by 300 square feet equals 13,467 jobs; 1,343,679 square feet of commercial allocation divided by 450 square feet equals 2,986 jobs; and 1,339 hotel rooms at .3 jobs per room equals 402 jobs for a total of 16,855 jobs.

No new residential projects have been developed or approved for development in Cupertino since the adoption of the General Plan. The site is currently developed with ten residential buildings totaling 342 multi-family units. The existing residential development includes 308 market rate units and 34 below market rate units.

DISCUSSION

a) Would the project induce substantial unexpected population growth or growth for which inadequate planning has occurred, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Based on a projected average household size of 2.88 persons,[64] it is assumed the proposed project would introduce 1,728 new residents[65] to the project site, which would increase the number of residents on the site from the existing 985 residents[66] to approximately 2,713 residents at project buildout in 2020. Because the majority of the proposed apartment units would be studio and one-bedroom units, it is likely that the projected total resident population of 2,713 is high, thereby allowing for a conservative analysis of potential environmental impacts. Under the proposed project approximately 800 temporary construction-related jobs and 25 permanent jobs are anticipated by the 2020 buildout year.

As stated above, no new residential projects have been developed or approved for development since the adoption of the General Plan. Accordingly, an increase of 2,713 residents and 800 temporary construction-related jobs and 25 permanent jobs in combination with other future projects would not increase the overall city buildout to the year 2020 projections. Therefore, the proposed project is well within the population projections considered in the General Plan EIR and projected by ABAG. The growth occurring as a result of the project would be limited to the project site, and the project does not include infrastructure to allow indirect off-site development.

As discussed in Section IX, Land Use and Planning, the project is consistent with the General Plan Land Use and Zoning designations, and would not require any amendments to the General Plan or Zoning Code. Accordingly, there would be *no impacts* related to substantial unexpected population growth or growth for which inadequate planning has occurred.

[64] This analysis is based on the Association of Bay Area Governments (ABAG) 2013 projections of the average household size of 2.88 persons for Cupertino in 2020. This is the standard approach for population and housing analysis in Cupertino.

[65] 600 new units multiplied by 2.88 persons per unit equals 1,728 new residents.

[66] 342 existing units multiplied by 2.88 persons per unit equals 985 existing residents.

b) Would the project displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere?

The proposed project would involve the removal of all existing uses on the project site, including a total temporary loss of 342 residential units consisting of 308 market-rate units and 34 below market-rate units over a three-year construction period. The proposed apartment units would replace the existing residential development with 242 studios, 272 one-bedroom, 141 one-bedroom plus dens, and 287 two-bedroom units. Apartment units would range in size between 1,464 square feet (penthouse) and 575 square feet (studio). Of the proposed 942 units, 34 units would continue to be available to rent to very low and low-income residents (3.7 percent), which is consistent with the remainder of the original Hamptons' Residence Agreement.

As discussed in the Project Description, of this Initial Study, the project applicant, a diversified, privately held real-estate investment company and master-planning firm since 1864,[67] which maintains a portfolio of over 6,000 apartments located in San Jose, Sunnyvale, and Santa Clara, has prepared a draft Tenant Relocation Plan for the existing 308 market rate units, and 34 below market rate units (see Appendix F, Draft Tenant Relocation Plan, of this Initial Study). The project applicant's portfolio of 6,000 apartments in the cities surrounding Cupertino would be available to temporarily displaced tenants throughout the three-year construction period. Under the draft Tenant Relocation Plan, a relocation agency would be hired six months prior to the demolition and remain under contract until all of the existing tenants, both renters of market rate units and below market rate units, have moved out of the project and found new housing. Together the project applicant and the relocation agency would keep all tenants apprised of the schedule, which is subject to change, and would be given updates regularly on the date demolition would commence that would determine the date each household would need to vacate their unit. The precise details of the Tenant Relocation Plan, which is required per Housing Element Strategy 18, Housing Preservation Program, would be finalized during the project approval process.

Therefore, because the project would result in a net increase in housing units in Cupertino, which includes 34 units that would continue to be available to very low and low income residents, and because assistance in finding temporary replacement housing would be provided, no housing would be permanently displaced either directly or indirectly, and the construction of replacement housing elsewhere would not be required that could result in a physical impact to the environment. This conclusion is consistent with the findings in the General Plan EIR. Accordingly, project impacts on the both temporary and permanent displacement of housing would be *less than significant* and no mitigation measures would be required.

[67] Irvine Company website, https://www.irvinecompany.com/about-us/, accessed March 1, 2016.

c) Would the project displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

As discussed above, a total of 342 units with approximately 985 residents currently exist on the project site. As discussed in the General Plan EIR, the development of the proposed project would necessitate that all the units be vacated and demolished; therefore, the project would result in the temporary displacement of approximately 985 people for a period of approximately three years.

The project would result in a net increase of 600 dwelling units on the project site, which could accommodate up to 1,728 more residents than under existing conditions. Therefore, because the project results in a net increase in housing units, and because assistance in finding temporary replacement housing would be provided, no people would be permanently displaced either directly or indirectly that would necessitate the construction of replacement housing elsewhere that could result in a physical impact to the environment. This conclusion is consistent with the findings in the General Plan EIR. As discussed above, the draft Tenant Relocation Plan includes over 6,000 apartment homes located in San Jose, Sunnyvale, and Santa Clara that would be available for displaced residents and procedures for relocating tenants. Therefore, project impacts on both temporary and permanent displacement of people would be *less than significant* and no mitigation measures would be required.

XII. PUBLIC SERVICES

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Result in substantial adverse physical impacts associated with the provision of 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:				
Fire protection?	❒	❒	■	❒
Police protection?	❒	❒	■	❒
Schools?	❒	❒	■	❒
Libraries?	❒	❒	■	❒

GENERAL PLAN EIR

As discussed in Chapter 4.12, Public Services and Recreation, of the General Plan EIR, impacts were determined to be less than significant as a result of intensified development of the project site. The General Plan EIR evaluates a project that is greater than that of the proposed project (820 new units compared to 600 new units).

EXISTING CONDITIONS

The public service providers for the project site are as follows:

- The City of Cupertino contracts with the Santa Clara County Fire District (SCCFD) for fire protection, emergency, medical, and hazardous material services.
- The City of Cupertino contracts with the Santa Clara County Sheriff's Office (Sheriff's Office) and West Valley Patrol Division for police protection services.
- The project site is within the boundaries of the Santa Clara Unified School District (SCUSD). Specifically, the project site is in the Laurelwood Elementary School attendance area approximately 1.5 miles away. Middle school age students would attend Peterson Middle School and high school age students would attend Wilcox High School.
- The Santa Clara County Library District (SCCLD) governs and administers seven community libraries, one branch library, two bookmobiles, the Home Service Library, and the 24-7 online library for all library users. The closest library to the project site is the Cupertino Library located at 10800 Torre Avenue in Cupertino.

A recent discussion of the existing conditions for each of these service providers is provided in Chapter 4.12.

DISCUSSION

a) *Would the project result in substantial adverse physical impacts associated with the provision of 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: fire protection, police protection, schools, and libraries?*

The primary purpose of the public services impact analysis is to examine the impacts associated with physical improvements to public service facilities required to maintain acceptable service ratios, response times or other performance objectives. Public service facilities need improvements (i.e., construction, renovation or expansion) as demand for services increase. Increased demand is typically driven by increases in population. The proposed project would have a significant environmental impact if it would exceed the ability of public service providers to adequately serve residents, thereby requiring construction of new facilities or modification of existing facilities.

As discussed in Section XII, Population and Housing, above, the proposed project would result in a net increase of 600 dwelling units and 1,728 new residents at the project site, which represents 27 percent less new development (600 new units compared to 820 new units) than what was considered in the General Plan EIR. As described in the General Plan EIR, the project applicant is required to pay developer impact fees that provide support to public services to offset the project's fair share of impacts to public service providers. Because impacts to public service providers were determined to be less than significant in the General Plan EIR and the proposed project represents less development than what was considered

in the General Plan EIR, impacts to public services providers as a result of the proposed project would also be *less than significant* and no mitigation measures would be required.

XIII. PARKS AND RECREATION

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) 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?	❒	❒	■	❒
b) Result in substantial adverse physical impacts associated with the provision of new or physically altered park and recreational facilities, or result in the need for new or physically altered park and recreational facilities, the construction of which could cause significant environmental impacts?	❒	❒	■	❒

GENERAL PLAN EIR

As discussed in Chapter 4.12, Public Services and Recreation, of the General Plan EIR, impacts were determined to be less than significant as a result of intensified development of the project site. The General Plan EIR evaluates a project that is greater than that of the proposed project (820 new units compared to 600 new units).

EXISTING CONDITIONS

The City of Cupertino Recreation and Community Services is responsible for the maintenance of the City's 14 parks and seven community and recreational facilities. The City of Cupertino has an adopted parkland dedication standard of three acres of parkland for every 1,000 residents. There is a total of approximately 156 acres of parkland in Cupertino, or approximately 2.7 acres per 1,000 residents, based on an existing population of 58,302. The City parks nearest to the project site are Portal Park, located approximately one mile to the southwest, Jenny Strand Park, located approximately three-quarters of a mile to the southeast, and Westwood Oaks Park, located approximately one-half mile to the east of the site.

Regional park facilities operated by the Midpeninsula Regional Open Space District (MROSD) and the Santa Clara County Parks could be used by residents of the project site. The closest MROSD parks to Cupertino are the Fremont Older, Picchetti Ranch, and Rancho San Antonia, which are located just southwest and west of the city boundaries, respectively. Santa Clara County Park facilities that serve Cupertino include Rancho San Antonio County Park, south of I-280 and west of Foothill Boulevard, and the Stevens Creek County Park.

DISCUSSION

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities, such that substantial physical deterioration of the facility would occur or be accelerated?

As discussed in Chapter 3, Project Description, of this Initial Study, the project includes recreational amenities available to residents and members of the general public. The proposed project's open space and balcony area totals 326,127 square feet (7.46 acres), of which approximately 32,000 square feet (0.43 acres) would be for recreational amenities. The proposed project includes an on-grade public bike hub and outdoor common-use seating area on the northern section of the project site at the corner of Wolfe Road and Pruneridge Avenue for use by residents, visitors and members of the public.

As discussed in Section XII, Population and Housing, above, the proposed project would result in a net increase of 600 new units and 1,728 new residents at the project site, which represents 27 percent less new development (600 new units compared to 820 new units) than what was considered in the General Plan EIR. To meet the City's parkland-to-resident ratio of three acres of parkland for every 1,000 residents, the proposed project would be required to provide 5.2 acres of parkland.[68] Although the proposed project would not provide on-site parkland, the proposed project's payment of City-required impact fees would contribute to the City's parks and recreation fund. As discussed in the General Plan EIR, the proposed project would be required to comply with Cupertino Municipal Code Chapter 14.05, Park Maintenance Fee, and Chapter 18.24, Dedications and Reservations, which require the payment of impact fees to maintain existing parks and recreation facilities and offset their fair share of impacts to parklands. Therefore, considering the proposed project's provision of 7.46 acres of residential open space and amenities, and public recreational amenities in conjunction with the collection of impact fees that support the City's parks and recreation fund, the project's impacts on the City's recreational facilities would be *less than significant* and no mitigation measures would be required.

Additionally, new residents of the project site would also be expected to occasionally use the regional park facilities operated by the Midpeninsula Regional Open Space District (MROSD) and the Santa Clara County Parks from time to time; however, given the vast size of the regional park facilities and the relatively infrequent usage that future residents would make of them, the proposed project would not result in their substantial deterioration. The modest increase in usage that could potentially result from the proposed project is not likely to trigger the construction of new built facilities over and above that already foreseen in the long-range planning completed for these regional park facilities in the vicinity of the project site. Therefore, a *less-than-significant* impact to regional parks would occur and no mitigation measures would be required.

[68] 1,728 residents x 0.003 (3 acres of parkland per 1,000 residents) = 5.184 acres

b) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered park and recreational facilities, or result in the need for new or physically altered park and recreational facilities, the construction of which could cause significant environmental impacts?

As discussed in criterion (a) above, the proposed project's recreational and open space features combined with the impact fees that support the City's parks and recreation fund would render the project's impact on the City's recreational facilities less than significant. The project does not propose the construction of a park or any physical alterations to an existing park or recreational facilities; however, the payment of impact fees would go toward supporting the City's park fund that could be applied to the construction or expansion of recreational facilities that could have an adverse physical effect on the environment. It is not known at what time or location such facilities would be required or what the exact nature of these facilities would be, so it cannot be determined what specific environmental impacts would occur from their construction and operation. Because the payment of impact fees is City-requirement to offset the project's fair share of impacts to parklands, the City would be responsible for any review in accordance with CEQA, as necessary, which would ensure that any environmental impacts are disclosed and mitigated to the extent possible for any future City project related to the expansion of or improvement to a City recreational facility. Accordingly, impacts to park and recreational facilities as a result of the proposed project would be would be *less than significant* and no mitigation measures would be required.

XIV. TRANSPORTATION AND CIRCULATION

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
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 design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	❒	❒	❒	■

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
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?	❒	❒	❒	■

GENERAL PLAN EIR

The General Plan EIR included an analysis of 820 additional units for the site; however, the proposed project would have only 600 additional units on the project site. Traffic impacts are found to be significant and unavoidable in the General Plan EIR. Implementation of General Plan EIR Mitigation Measure TRAF-1 requires the City to commit to preparing and implementing a Transportation Mitigation Fee Program (TMFP) to guarantee funding for roadway and infrastructure improvements that are necessary to mitigate impacts from future projects based on the then current City standards. General Plan EIR Mitigation Measure TRAF-1, which was previously adopted by the City and incorporated into the General Plan, will be implemented by the City.

EXISTING CONDITIONS

The following is based on the TIA prepared for the proposed project. The TIA is included in Appendix I, Parking and Transportation Data, of this Initial Study. The cumulative impacts, in conjunction with overall General Plan buildout were evaluated as part of the General Plan EIR; thus, the project's TIA presents a focused analysis to evaluate the near-term impacts of the project under Existing and Background Conditions.

Methodology

The TIA was prepared following the guidelines of the City of Cupertino and Santa Clara Valley Transportation Authority (VTA), the congestion management agency for Santa Clara County. The VTA Congestion Management Program (CMP) TIA Guidelines (last updated in October 2014) present guidelines for assessing the transportation impacts of development projects and identifying whether improvements are needed to adjacent roadways, bike facilities, sidewalks, and transit services affected by the proposed project. The TIA guidelines have been adopted by local agencies within Santa Clara County, and are applied to analyze the regional transportation system.

Intersections

The method described in Chapter 16 of the 2000 Highway Capacity Manual (2000 HCM) was used to prepare the level of service calculations for the study intersections. This method is approved by the City of

Cupertino, City of Sunnyvale, and VTA. The average control delay for signalized intersections is calculated using TRAFFIX analysis software and is correlated to a level of service designation as shown in Table 5-13.

TABLE 5-13 SIGNALIZED INTERSECTION LOS DEFINITIONS

Level of Service	Description	Average Control Delay (seconds per vehicle)
A	Operations with very low delay occurring with favorable traffic signal progression and/or short cycle lengths.	< 10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	> 10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	> 20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	> 35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	> 55.0 to 80.0
F	Operations with delays unacceptable to most drivers occurring due to over-saturation, poor progression, or very long cycle lengths.	> 80.0

Source: Fehr & Peers, December 2015.

Freeways

Freeway segments were evaluated using VTA's analysis procedure, which is based on the density of the traffic flow using methods described in the 2000 HCM. Density is expressed in passenger cars per mile per lane. The CMP ranges of densities for each freeway segment level of service designation are shown in Table 5-14.

TABLE 5-14 FREEWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

Level of Service	Density (passenger cars per mile per lane)
A	< 11
B	> 11.1 to 18.0
C	> 18.1 to 26.0
D	> 26.1 to 46.0
E	> 46.1 to 58.0
F	> 58.0

Source: Fehr & Peers, December 2015.

Existing Conditions Scenario

The study area generally extends along Wolfe Road between El Camino Real (State Route (SR) 82) and Stevens Creek Boulevard and along Tantau Avenue between Homestead Road and Stevens Creek Boulevard. The roadway impacts of the proposed project were evaluated for the intersections and freeway segments discussed below.

Existing Intersection Operations

Study intersections shown on Figure 5-2 were selected in consultation with the City of Cupertino and generally determined based on VTA's 10 trips per lane guideline, which indicates that intersections should be included if the proposed project adds 10 or more peak hour vehicles per lane to any intersection movement. The Existing Conditions of the study intersections were evaluated during weekday AM and PM peak periods. The results of the level of service analysis for Existing Conditions are presented in Table 5-15, that all study intersections operate at acceptable service levels (LOS D or better for City intersections and LOS E or better for regionally significant and CMP intersections).

Existing Freeway Operations

Freeway segments were selected in consultation with the City following VTA guidelines. The following segments on I-280 were selected for analysis because: a) the project site is adjacent to I-280, b) project access is provided with the Wolfe Road interchange at I-280, and c) the project is anticipated to add peak-hour traffic volumes in amounts greater than one percent of the segment's capacity.

I-280 (Northbound and Southbound)

- Saratoga Avenue to Lawrence Expressway
- Lawrence Expressway to Wolfe Road
- Wolfe Road to De Anza Boulevard
- De Anza Boulevard to SR 85

Table 5-16 shows the existing freeway segment levels of service for the mixed-flow and HOV lanes based on the segment densities. During the AM peak hour, all of the mixed-flow freeway segments exceed LOS E in the northbound direction. During the PM peak hour, all of the mixed-flow freeway segments exceed the VTA's LOS E standard in the southbound direction. Additionally, only the northbound direction of Saratoga Avenue to Lawrence Expressway exceeds the VTA's LOS E standard in during the AM peak hour.

TABLE 5-15 EXISTING INTERSECTION LEVEL OF SERVICE RESULTS

ID #	Intersection	Jurisdiction/ CMP[a]	LOS Threshold	Peak Hour[b]	Delay[c]	LOS[d]
1	Wolfe Road / El Camino Real	Sunnyvale (CMP)	E	AM	35.4	D
				PM	38.4	D
2	Wolfe Road / Fremont Avenue	Sunnyvale	D	AM	34.0	C
				PM	36.4	D
3	Wolfe Road / Marion Way	Sunnyvale	D	AM	15.0	B
				PM	21.5	C
4	Wolfe Road / Inverness Avenue	Sunnyvale	D	AM	17.9	B
				PM	17.8	B
5	Wolfe Road / Homestead Road	Cupertino	D	AM	34.0	C
				PM	36.4	D
6	Wolfe Road / Apple Campus 2	Cupertino	D	AM	Future Intersection	
				PM		
7	Wolfe Road / Pruneridge Avenue	Cupertino	D	AM	19.7	B
				PM	19.6	B
8	Wolfe Road / I-280 NB Ramps	Cupertino (CMP)	D	AM	20.8	C
				PM	22.7	C
9	Wolfe Road / I-280 SB Ramps	Cupertino (CMP)	D	AM	17.9	B
				PM	12.0	B
10	Wolfe Road / Vallco Parkway	Cupertino	D	AM	21.7	C
				PM	28.5	C
11	Wolfe Road / Stevens Creek Boulevard	Cupertino (CMP)	D	AM	42.0	D
				PM	42.8	D
12	De Anza Boulevard / Stevens Creek Boulevard	Cupertino (CMP)	E+	AM	33.2	C
				PM	44.6	D
13	Tantau Avenue / Homestead Road	Cupertino	D	AM	28.5	C
				PM	36.8	D
14	Tantau Avenue / Vallco Parkway	Cupertino	D	AM	18.6	B
				PM	24.0	C
15	Tantau Avenue / Stevens Creek Boulevard	Cupertino	D	AM	39.7	D
				PM	38.2	D
16	Lawrence Expressway / Homestead Road	Santa Clara County (CMP)	E	AM	43.3	D
				PM	48.3	D

Notes: All of the study intersections are signalized.

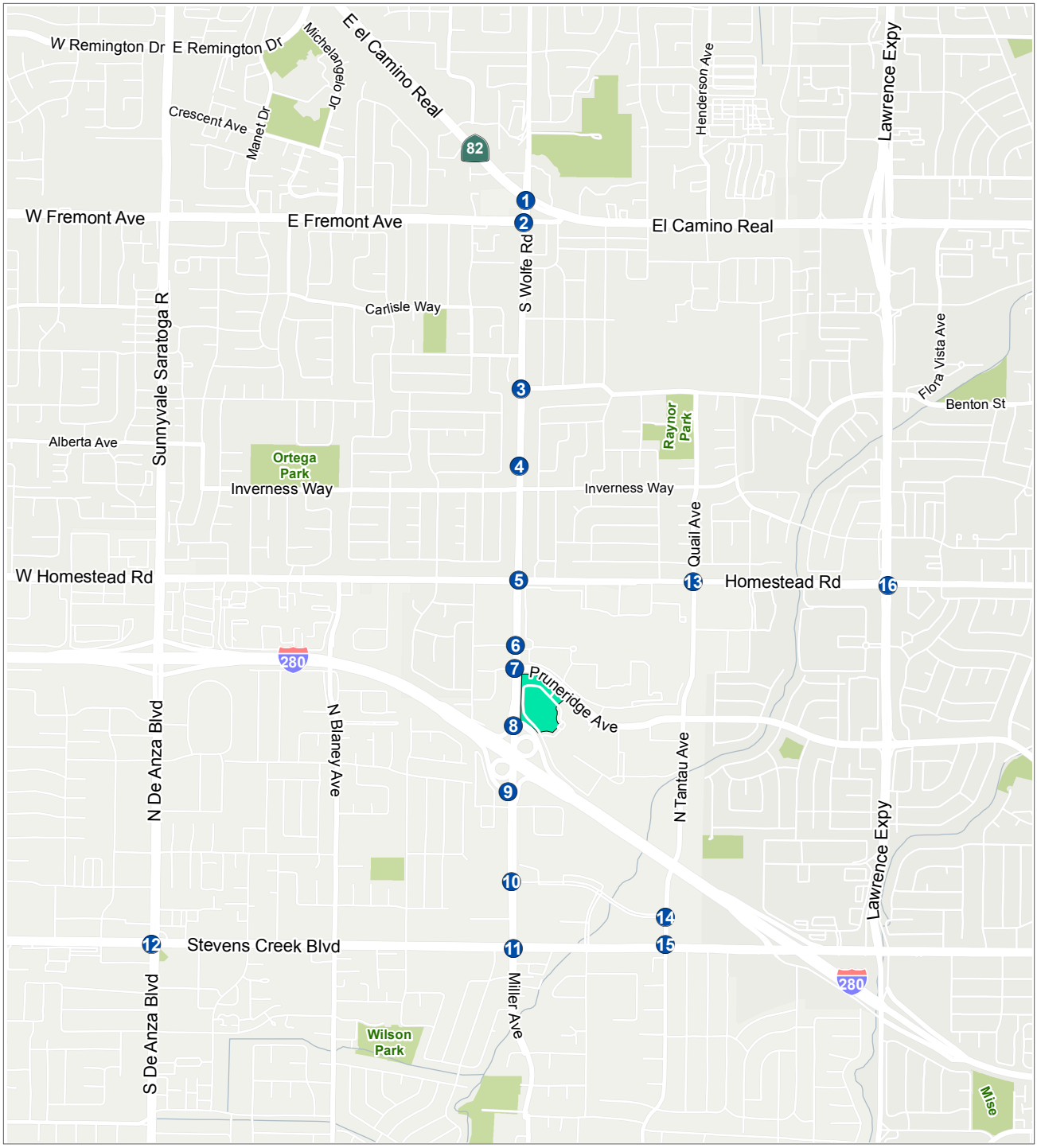
a. Intersection jurisdiction and identification of CMP (Congestion Management Program) intersections.

b. AM = morning peak hour, PM = evening peak hour.

c. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections.

d. LOS = Level of Service. LOS calculations conducted using the TRAFFIX analysis software packages, which apply the methods described in the 2000 *Highway Capacity Manual*.

Source: Fehr & Peers, December 2015, Table 2-2 of TIA.



Source: Fehr & Peers Transportation Consultants, 2015.

Project Site

Study Intersections

Figure 5-2

Study Area Intersections

TABLE 5-16 EXISTING FREEWAY (I-280) LEVEL OF SERVICE RESULTS

Freeway Segment	Peak Hour	Number of Lanes		Density		LOS	
		Mixed	HOV	Mixed	HOV	Mixed	HOV
Southbound							
SR 85 to De Anza Boulevard	AM	3	1	24	9	C	A
	PM			**103**	19	**F**	E
De Anza Boulevard to Wolfe Road	AM	3	1	36	10	D	A
	PM			**77**	30	**F**	E
Wolfe Road to Lawrence Expressway	AM	3	1	35	16	D	B
	PM			**81**	19	**F**	E
Lawrence Expressway to Saratoga Avenue	AM	3	1	37	10	D	A
	PM			**85**	37	**F**	D
Northbound							
Saratoga Avenue to Lawrence Expressway	AM	3	1	**89**	**78**	**F**	**F**
	PM			37	15	D	B
Lawrence Expressway to Wolfe Road	AM	3	1	**81**	46	**F**	D
	PM			23	10	C	A
Wolfe Road to De Anza Boulevard	AM	3	1	**62**	57	**F**	E
	PM			25	7	C	A
De Anza Boulevard to SR 85	AM	3	1	**73**	45	**F**	D
	PM			23	7	C	A

Notes: **Bold** font indicates unacceptable operations based on VTA's LOS E Standard.
Source: Fehr & Peers, December 2015, Table 2-3 of TIA.

Existing Pedestrian, Bicycle, and Transit Facilities

Pedestrian Facilities

Pedestrian facilities consist of sidewalks, crosswalks, and pedestrian signals. Pedestrian connectivity immediately surrounding the project site is provided by a mostly complete network of sidewalks and crosswalks. Sidewalks are provided along the frontage of the project site along Wolfe Road and north of the project site. The sidewalks along Wolfe Road have park strips, which act as an additional buffer between vehicles and pedestrians. Pedestrian signals and high visibility crosswalks are provided at the adjacent intersection on Wolfe Road and Pruneridge Avenue. Pedestrians are able to cross the street in both the north-south and east-west directions at this location.

Within approximately 1,000 feet of the project site, crosswalks and pedestrian signals are provided at the Wolfe Road intersections at Homestead Road, AC2, Vallco Parkway, and Stevens Creek Boulevard. These intersections have pedestrian crosswalks for all four approaches. Pedestrian crosswalks and pedestrian signals are also present at the Wolfe Road and I-280 NB off-ramp and Wolfe Road and I-280 SB off-ramp.

Pedestrian crosswalks at the ramp locations only provide access in north-south direction. Crosswalks are not provided to cross Wolfe Road at these locations.

Bicycle Facilities

Bicycle facilities in the study area are comprised of Class II bicycle lanes, and Class III bicycle routes, as described below:

Class II Bikeways (Bike Lanes) are lanes for bicyclists generally adjacent to the outer vehicle travel lanes. These lanes have special lane markings, pavement legends, and signage. Bicycle lanes are generally five (5) feet wide. Adjacent vehicle parking and vehicle/pedestrian cross-flow are permitted. Near the project site, bicycle lanes (Class II) are provided on Wolfe Road, Homestead Road, Tantau Avenue, Vallco Parkway, and Stevens Creek Boulevard. There is a discontinuity in the Class II facility along Wolfe Road at the I-280 overcrossing. South of Stevens Creek Boulevard, Tantau Avenue transitions from a Class II to a Class III bicycle facility.

Class III Bikeway (Bike Route) are designated by signs or pavement markings for shared use with pedestrians or motor vehicles, but have no separated bike right-of-way or lane striping. Bike routes serve either to: a) provide continuity to other bicycle facilities, or b) designate preferred routes through high demand corridors. Class III bike route exists Tantau Avenue south of Stevens Creek Boulevard to Barnhart Avenue. Miller Avenue is also a Class III facility that transitions to a Class II facility with bike lanes south of Calle De Barcelona. Bicycle facilities comprising bicycle lanes (Class II) and bicycle routes (Class III) connect the project site to the Lawrence Caltrain station.

In 2011, the City of Cupertino adopted its *Bicycle Transportation Plan*, which illustrates Cupertino's current bicycle network, identifies gaps in the network, and proposes improvement projects to address the identified gaps. In addition, the City has prepared a *Draft 2016 Bicycle Transportation Master Plan* (Draft Bike Plan).[69] This Draft Bike Plan includes a feasibility study of buffered bike lanes of Wolfe Road in the vicinity of the project site. Based on the outcome of the 2016 bike plan and any other applicable recommendations the project applicant would be required to contribute to implementing the recommended pedestrian and bike striping improvements in the project area.

The VTA adopted the Santa Clara Countywide Bicycle Plan (CBP). The CBP guides the development of major bicycle facilities in the County by identifying Cross County Bicycle Corridors and other bicycle projects of countywide or intercity significance. Several of the Cross County Bicycle Corridors travel through the study area, including routes along Vallco Parkway, Stevens Creek Boulevard, Wolfe Road/Miller Avenue, and Tantau Avenue.

[69] The *Draft 2016 Cupertino Bicycle Transportation Plan* is now available for public review on the City's website at http://www.cupertino.org/index.aspx?page=26&recordid=1498&returnURL=%2Findex.aspx

Transit Facilities

Nearby transit services are described below and Table 5-17 summarizes the destinations, closest stop to the project site, hours/days of operation, and service frequencies for transit services within a 2,000-foot walking distance.

TABLE 5-17 EXISTING TRANSIT SERVICE

					Weekdays		Saturdays	
Route	From	To	Distance to Nearest Stop[a]	Average Peak Load Factor[b]	Operating Hours[d]	Peak Headway[c]	Operating Hours[d]	Peak Headway[c]
VTA Bus Service								
26	Sunnyvale / Lockheed Martin Transit Center	Eastridge Transit Center	0.15	0.27	5:52 am – 11:31 pm	30	6:46 am – 10:40 pm	30
81	San Jose State University	Vallco	0.10	0.07	6:17 am – 8:19 pm	30	9:30 am – 4:30 pm	60
101	Camden & Highway 85	Palo Alto	0.55	0.23	6:51 am – 7:48 am 4:52 pm – 5:55 pm	2 NB Runs – AM 2 SB Runs – PM	No Service	
182	Palo Alto	IBM/Bailey Avenue	0.60	0.07	7:27 am – 8:34 am 5:05 pm – 6:14 pm	1 SB Run – AM 1 NB Run – PM	No Service	
Commuter Rail Service								
Caltrain	San Francisco	San Jose Diridon	3.00	N/A	4:40 am – 1:20 pm	30 (local) / 15 (express)	7:10 am – 1:26 pm	60

Notes: AM = morning commuter period; PM = evening commute period.
a. Approximate distance in miles from nearest stop to Hamptons Apartment Complex driveway.
b. Average peak load factor is the ratio of the average peak number of on-board passengers aboard during the peak period to supply of seats.
c. Headways are defined as the time interval between two transit vehicles traveling in the same direction over the same route.
d. Operating hours consider earliest and latest stop at each bus lines closest stop to the Hamptons Apartment Complex.
Source: Fehr & Peers, December 2015, Table 7-1 of TIA.

VTA Bus Service

- Bus Route 26 provides service between Sunnyvale/Lockheed Martin Transit Center and the Eastridge Transit Center. Route 26 follows major arterials and travels through Sunnyvale, Cupertino, San Jose, and Campbell on Fair Oaks Avenue, Wolfe Road, Campbell Avenue, and Tully Road. Bus stops for Route 26 are provided immediately north of the project site along Wolfe Road.
- Bus Route 81 provides service between San Jose State University and Vallco via the Santa Clara Transit Center and Downtown San Jose. This route operates on Stevens Creek Boulevard, Benton Street, West

San Carlos Street, and San Fernando Street with nearby stops at Tantau Avenue and Pruneridge Avenue.

- Bus Route 101 is an express bus route that operates on I-280, Stevens Creek Boulevard, and Lawrence Expressway; it connects a Park & Ride lot at the Camden Avenue interchange along SR 85 to Palo Alto. This route passes through the Winchester Transit Center and has a bus stop south of the project site at Wolfe Road/Vallco Mall which provides connections to Routes 26, 23, and 323.
- Bus Route 182 is an express bus route that operates on I-280, Wolfe Road, Vallco Parkway, and Stevens Creek Boulevard; it connects the Park & Ride lot at El Camino Real and Page Mill Road in Palo Alto with the IBM Santa Teresa Facility at Bailey Avenue. One Route 182 run departs Palo Alto in the morning. In the evening, one Route 182 run travels northbound. Route 182 has stops at the Vallco shopping plaza.

Commuter Rail Service

Caltrain is a commuter heavy rail service that runs from downtown San Francisco (4th and King Streets) to downtown San Jose (Diridon Station), with a limited number of commute period trains running farther south to Gilroy. During commute periods, Caltrain offers express service ("Baby Bullet") between downtown San Jose and San Francisco. Currently, Baby Bullet service is provided both in the northbound and southbound direction during the morning and evening commute periods at the Mountain View Caltrain station. Baby Bullet trains serve the Sunnyvale Caltrain station in the northbound direction during the morning peak and in the southbound direction during the evening peak.

The nearest station to the project site is the Lawrence Station, which is located on Lawrence Expressway approximately three miles northwest of the project site. During the weekdays, service in the northbound direction begins at 4:40 a.m. and ends at 10:40 p.m. In the southbound direction, service at this station begins at 6:14 a.m. and ends at 1:20 a.m. During the weekends, northbound service begins at 7:10 a.m. and ends at 10:40 p.m. Southbound service begins at 9:40 a.m. and ends at 1:26 a.m. For passengers arriving by bicycle, there are 18 bike racks and 24 bicycle lockers. Vehicle parking at this location includes 122 parking spaces.

Vehicles Miles Traveled

As discussed in the Chapter 4.13, Transportation and Traffic, of the General Plan EIR, Senate Bill (SB) 743 will eventually alter how transportation and traffic impacts are analyzed under State CEQA Guidelines. SB 743 requires the California Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to level of service (LOS) as the metric for evaluating transportation impacts under CEQA. Particularly within areas served by transit, the alternative criteria must promote the reduction of GHG emissions, development of multimodal transportation networks, and diversity of land uses. Measurements of transportation impacts may include vehicle miles travelled (VMT), VMT per capita, automobile trip generation rates, or automobile trips generated. Once alternative criteria are incorporated into the CEQA Guidelines, auto delay will no longer be considered a significant impact under CEQA. SB 743 also amended State congestion management law to allow cities and counties to opt out of

level of service standards in certain infill areas. As discussed in the General Plan EIR, under the General Plan as amended in 2014, the VMT per capita is projected to increase from 10.5 to 10.9. However, because the CEQA Guidelines amendments required by AB 743 have not yet been adopted, this Initial Study was prepared based on the current existing State CEQA Guidelines, and therefore, relies on the existing level of service criteria to evaluate potential transportation impacts.

DISCUSSION

a) *Would the project 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?*

The project would increase the number of residential apartment units on the project site from 342 to 942. Trip generation estimates were determined using ITE's rates for apartments. A detailed discussion of the methodology to calculate the project's trip generation is included in Chapter 3.1 of the TIA. The project is estimated to generate 272 net new AM peak hour vehicle trips (48 inbound and 224 outbound) and 421 net new PM peak hour vehicle trips (268 inbound and 153 outbound).

Project trips were assigned to the roadway network based on the estimated trip distribution patterns presented in Figure 3-1 of the TIA. The distribution of the traffic generated by the project onto the roadway system was based on the locations of complementary land uses, prevailing travel patterns, surrounding population densities, and recent TIAs completed in the area. Input from the City of Cupertino staff was used to refine the trip distribution patterns.

The following analysis was performed to evaluate traffic conditions during the weekday morning (AM) and weekday evening (PM) peak hours for the following scenarios:

- *Existing Conditions* – In addition to the Existing Conditions without the project discussed previously, the Existing Plus Project Conditions were evaluated by adding traffic from the proposed project.
- *Background Conditions* – Existing volumes plus traffic from "approved but not yet built" and "not occupied" developments in the area. Background conditions were evaluated without the project, and with the project.

Existing Plus Project Conditions Scenario

Intersection levels of service were calculated with the new traffic added by the project to evaluate the operating conditions of the intersections and identify potential impacts to the roadway system. The results of the intersection level of service calculations for Existing Plus Project Conditions are presented in Table 5-18.

TABLE 5-18 EXISTING PLUS PROJECT INTERSECTION LEVEL OF SERVICE RESULTS

					Existing		Existing Plus Project			
ID	Intersection	Jurisdiction/ CMP	LOS Threshold[a]	Peak Hour[b]	Delay[c]	LOS[d]	Delay[c]	LOS[d]	Δ in Crit. V/C[e]	Δ in Crit. Delay[f]
1	Wolfe Road / El Camino Real	Sunnyvale (CMP)	E	AM	35.4	D	35.4	D	0.002	0.0
				PM	38.4	D	38.6	D	0.006	0.3
2	Wolfe Road / Fremont Avenue	Sunnyvale	D	AM	34.0	C	34.2	C	0.006	0.0
				PM	36.4	D	36.7	D	0.008	0.2
3	Wolfe Road / Marion Way	Sunnyvale	D	AM	15.0	B	14.9	B	0.010	-0.2
				PM	21.5	C	21.4	C	0.007	-0.1
4	Wolfe Road / Inverness Avenue	Sunnyvale	D	AM	17.9	B	17.7	B	0.010	-0.2
				PM	17.8	B	17.6	B	0.012	-0.1
5	Wolfe Road / Homestead Road	Cupertino	D	AM	34.0	C	34.2	C	0.010	0.0
				PM	36.4	D	37.4	D	0.033	1.3
6	Wolfe Road / Apple Campus 2	Cupertino	D	Future Intersection						
7	Wolfe Road / Pruneridge Avenue	Cupertino	D	AM	19.7	B	27.8	C	0.093	8.1
				PM	19.6	B	24.5	C	0.075	4.1
8	Wolfe Road / I-280 NB Ramps	Cupertino (CMP)	D	AM	20.8	C	20.9	C	0.007	0.1
				PM	22.7	C	23.3	C	0.036	0.8
9	Wolfe Road / I-280 SB Ramps	Cupertino (CMP)	D	AM	17.9	B	17.8	B	0.007	0.2
				PM	12	B	12.4	B	0.015	-0.3
10	Wolfe Road / Vallco Parkway	Cupertino	D	AM	21.7	C	21.6	C	0.004	0.2
				PM	28.5	C	28.5	C	0.008	0.0
11	Wolfe Road / Stevens Creek Boulevard	Cupertino (CMP)	D	AM	42.0	D	42.2	D	0.006	0.3
				PM	42.8	D	43.1	D	0.013	0.6
12	De Anza Boulevard / Stevens Creek Boulevard	Cupertino (CMP)	E+	AM	33.2	C	33.4	C	0.004	0.3
				PM	44.6	D	44.7	D	0.000	0.0
13	Tantau Avenue / Homestead Road	Cupertino	D	AM	28.5	C	28.5	C	0.007	0.1
				PM	36.8	D	37	D	0.005	0.4
14	Tantau Avenue / Vallco Parkway	Cupertino	D	AM	18.6	B	18.7	B	0.000	0.0
				PM	24.0	C	24.4	C	0.007	0.6
15	Tantau Avenue / Stevens Creek Boulevard	Cupertino	D	AM	39.7	D	39.7	D	0.000	0.0
				PM	38.2	D	38.1	D	0.002	0.1
16	Lawrence Expressway / Homestead Road	Santa Clara County (CMP)	E	AM	43.3	D	43.9	D	0.004	1.5
				PM	48.3	D	48.9	D	0.004	0.5

Notes: All of the study intersections are signalized.

a. LOS Threshold is the lowest acceptable LOS (the threshold between acceptable and unacceptable level of service).

b. AM = morning peak hour, PM = evening peak hour.

c. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections.

d. LOS = Level of Service. LOS calculations conducted using the TRAFFIX analysis software packages, which apply the methods described in the 2000 *Highway Capacity Manual*.

e. Change in critical volume to capacity ratio between Existing and Existing Plus Project Conditions

f. Change in average critical movement delay between Existing and Existing Plus Project Conditions.

Source: Fehr & Peers, December 2015, Table 4-1 of the TIA.

The determination of significance for project impacts is based on applicable policies, regulations, goals, and guidelines defined by the City of Cupertino, City of Sunnyvale, Santa Clara County, and the VTA. The impact criteria presented below focuses on elements of the CEQA checklist pertaining to roadway system operations and its effects on users, including drivers, pedestrians, bicyclists, transit passengers, and first responders in emergency access vehicles.

As shown on Table 5-18, the study area intersections are under the jurisdiction of the Cities of Cupertino and Sunnyvale, and a few are part of the CMP network. Signalized intersection operations and impacts are evaluated based on the appropriate jurisdiction's LOS standards (i.e., minimum threshold for acceptable operations) as discussed below for the Cities of Cupertino, Sunnyvale, and per CMP requirements.

- City of Cupertino: Significant impacts at signalized City of Cupertino intersections would occur when the addition of project traffic causes one of the following:
  - Intersection operations to degrade from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F); or
  - Exacerbates unacceptable operations (LOS E or F) by increasing the critical delay by more than four seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more; or
  - An increase in the V/C ratio of 0.01 or more at an intersection with unacceptable operations (LOS E or F) when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.
- City of Sunnyvale: Significant impacts at signalized City of Sunnyvale intersections would occur when the addition of project traffic causes one of the following:
  - Intersection (except those on designated regionally significant roads) operations degrade from an acceptable level (LOS D or better) to an unacceptable level (LOS E or LOS F); or
  - Operations for regionally significant designated intersections deteriorate from an acceptable level (LOS E or better) to an unacceptable level (LOS F);
  - Exacerbates unacceptable operations by increasing the critical delay more than four seconds and increasing the volume-to-capacity (V/C) ratio by 0.01 or more; or
  - An increase in the V/C ratio of 0.01 or more at an intersection with unacceptable operations when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.
- Santa Clara County and Congestion Management Program (CMP): The LOS standard for Santa Clara County expressway and CMP intersections is LOS E. Traffic impacts at these intersections would occur when the addition of traffic associated with a project causes:
  - Intersection operations to deteriorate from an acceptable level (LOS E or better) to an unacceptable level (LOS F); or
  - Exacerbates unacceptable operations by increasing the average critical delay more than four seconds and increasing the critical volume-to-capacity (V/C) ratio by 0.01 or more at an intersection operating at LOS F; or

- The V/C ratio increases by 0.01 or more at an intersection with unacceptable operations (LOS F) when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

The results of the LOS calculations shown in Table 5-18 indicate that all study intersection operate at acceptable service levels (LOS D or better for signalized City intersection and LOS E or better for regionally significant and unsignalized intersections) during the AM and PM peak hours under Existing Plus Project Conditions. Based on the identified appropriate impact criteria, the project has *less-than-significant* impacts at all study intersections under the Existing Plus Project Conditions and no mitigation measures would be required.

Background Conditions Scenario

Level of service calculations were conducted to evaluate signalized intersection operations under Background Conditions and Background Plus Project Conditions. The level of service analysis results are summarized in Table 5-19. The results presented in Table 5-19 show that three study intersections would operate unacceptably during the AM peak hour or both peak hours under Background Conditions and Background Plus Project Conditions. However, based on the impact criteria previously identified, the proposed project would not exacerbate unacceptable operations; thus, impacts would be *less than significant* and no mitigation measures would be required.

TABLE 5-19 BACKGROUND PLUS PROJECT INTERSECTION LEVEL OF SERVICE RESULTS

					Background		Background Plus Project			
ID	Intersection	Jurisdiction / CMP	LOS Threshold[a]	Peak Hour[b]	Delay[c]	LOS[d]	Delay[c]	LOS[d]	Δ in Crit. V/C[e]	Δ in Crit. Delay[f]
1	Wolfe Road / El Camino Real	Sunnyvale (CMP)	E	AM	35.7	D	35.7	D	0.002	0.0
				PM	40.0	D	40.1	D	0.006	0.3
2	Wolfe Road / Fremont Avenue	Sunnyvale	D	AM	35.0	C	35.2	D	0.006	0.1
				PM	38.5	D	38.9	D	0.008	0.3
3	Wolfe Road / Marion Way	Sunnyvale	D	AM	14.3	B	14.2	B	0.010	-0.2
				PM	20.7	C	20.7	C	0.007	-0.1
4	Wolfe Road / Inverness Avenue	Sunnyvale	D	AM	24.5	C	24.2	C	0.010	-0.2
				PM	24.5	C	24.3	C	0.012	-0.1
5	Wolfe Road / Homestead Road	Cupertino	D	AM	31.5	C	31.5	C	0.007	-0.3
				PM	31.3	C	31.6	C	0.013	0.2
6	Wolfe Road / Apple Campus 2	Cupertino	D	AM	15.6	B	15.6	B	0.000	0.0
				PM	28.2	C	28.5	C	0.018	0.5
7	Wolfe Road / Pruneridge Avenue	Cupertino	D	AM	14.3	B	22.4	C	0.107	8.7
				PM	25.3	C	29.9	C	0.063	5.9
8	Wolfe Road / I-280 NB Ramps	Cupertino (CMP)	D	AM	26.0	C	26.3	C	0.008	0.3
				PM	29.7	C	33.7	C	0.036	7.1
9	Wolfe Road / I-280 SB Ramps	Cupertino (CMP)	D	AM	29.6	C	29.8	C	0.007	0.6
				PM	17.0	B	17.5	B	0.015	0.1

TABLE 5-19 BACKGROUND PLUS PROJECT INTERSECTION LEVEL OF SERVICE RESULTS

					Background		Background Plus Project			
ID	Intersection	Jurisdiction / CMP	LOS Threshold[a]	Peak Hour[b]	Delay[c]	LOS[d]	Delay[c]	LOS[d]	Δ in Crit. V/C[e]	Δ in Crit. Delay[f]
10	Wolfe Road / Vallco Parkway	Cupertino	D	AM	28.5	C	28.5	C	0.004	0.2
				PM	29.2	C	29.3	C	0.012	0.3
11	Wolfe Road / Stevens Creek Boulevard	Cupertino (CMP)	D	AM	48.3	D	48.9	D	0.006	0.8
				PM	51.4	D	52.8	D	0.016	2.6
12	De Anza Boulevard / Stevens Creek Boulevard	Cupertino (CMP)	E+	AM	37.7	D	37.8	D	0.000	0.0
				PM	54.1	D	54.2	D	0.000	0.0
13	Tantau Avenue / Homestead Road	Cupertino	D	AM	39.4	D	40.2	D	0.007	1.5
				PM	**75.6**	**E**	**76.4**	**E**	0.005	1.7
14	Tantau Avenue / Vallco Parkway	Cupertino	D	AM	27.5	C	27.5	C	0.000	0.0
				PM	29.7	C	30.1	C	0.007	0.8
15	Tantau Avenue / Stevens Creek Boulevard	Cupertino	D	AM	**82.8**	**F**	**83.0**	**F**	0.001	0.3
				PM	**58.3**	**E**	**58.7**	**E**	0.002	0.6
16	Lawrence Expressway / Homestead Road	Santa Clara County (CMP)	E	AM	**110.7**	**F**	**110.7**	**F**	0.002	-0.1
				PM	**83.4**	**F**	**86.1**	**F**	-0.033	1.6

Notes: **Bold text** indicates intersection operates at unacceptable level of service. All of the intersections are signalized.

a. Level of service threshold is the lowest acceptable level of service (the threshold between acceptable and unacceptable level of service).

b. AM = morning peak hour, PM = evening peak hour.

c. Whole intersection weighted average control delay expressed in seconds per vehicle calculated using methods described in the 2000 *Highway Capacity Manual*, with adjusted saturation flow rates to reflect Santa Clara County Conditions for signalized intersections.

d. LOS = Level of Service. LOS calculations conducted using the TRAFFIX analysis software packages, which apply the methods described in the 2000 *Highway Capacity Manual*.

e. Change in critical volume to capacity ratio between Background and Background Plus Project Conditions

f. Change in average critical movement delay between Background and Background Plus Project Conditions.

Source: Fehr & Peers, December 2015, Table 5-1 of the TIA.

Construction Traffic

During construction, the project would generate changes to the existing transportation conditions. New traffic would be generated by construction employees and construction activities. Based on the construction schedule provided by the applicant, the busiest construction period is expected to be from December 2017 to July 2018. The construction activities occurring this period include dry wall and framing. Table 5-20 presents the construction traffic trip generation which includes trips generated by general activity, construction employees and haul trucks.

Trip generation assumes an average of 4 daily trips per employee (1 trip to work, 1 trip to lunch or a meeting, 1 trip from lunch or a meeting, and 1 trip home). General activity employees include the project manager, superintendent, field engineer, and project secretary. Trip generation for construction workers are presented for the busiest construction period, which is during the dry wall and framing portion. It is estimated that a maximum of 600 employees would be on site during this activity. These construction workers however would be shuttled from an off-site location. The analysis below assumes that each of the shuttles to the project site would have at least six construction workers which equates to 100 daily trips.

Ten haul trucks were also estimated during the AM and PM peak hour (5 trucks in and 5 trucks out). Total construction trip generation estimates include 64 trips during the AM peak hour and 64 trips during the PM peak hour. As discussed above, the project is estimated to generate 272 net new AM peak hour vehicle trips and 421 net new PM peak hour vehicle trips, which is more than the number of trips that the project would generate during construction. As discussed above, the project would not result in a significant impact at any study intersection. The number of construction trips would be substantially less than the projected trips during project operation, which would be less than significant; therefore, traffic impacts during project construction would be *less than significant* and no mitigation would be required.

TABLE 5-20 CONSTRUCTION TRAFFIC TRIP GENERATION ESTIMATES

		AM			PM		
Activity	Daily	Total	In	Out	Total	In	Out
General Activity	16	4	4	0	4	0	4
Construction Worker	100	50	50	0	50	0	50
Haul Trucks	120	10	5	5	10	5	5
Total	**236**	**64**	**59**	**5**	**64**	**5**	**59**

Source: Fehr & Peers, December 2015, Table 6-1 of the TIA.

b) Would the project 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?

The VTA Congestion Management Program TIA Guidelines (last updated in October 2014) present guidelines for assessing the transportation impacts of development projects and identifying whether improvements are needed to adjacent roadways, bike facilities, sidewalks, and transit services affected by the project. The TIA guidelines have been adopted by local agencies within Santa Clara County, and are applied to analyze the regional transportation system. The CMP requires that its facilities operate at LOS E or better. The following evaluates intersections and freeway segments per CMP criteria.

CMP Intersection Analysis

The level of service standard for Santa Clara County expressway and CMP intersections is LOS E. Traffic impacts at these intersections would occur when the addition of traffic associated with a project causes:

- Intersection operations to deteriorate from an acceptable level (LOS E or better) to an unacceptable level (LOS F); or
- Exacerbates unacceptable operations by increasing the average critical delay more than four seconds and increasing the critical volume-to-capacity (V/C) ratio by 0.01 or more at an intersection operating at LOS F; or

- The V/C ratio increases by 0.01 or more at an intersection with unacceptable operations (LOS F) when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

Criterion (a) above includes an evaluation of study intersections including intersections in the CMP network (intersections 1, 8, 9, 11, 12, and 16). Tables 5-18 and 5-19 present the results of the intersection level of service under Existing and Background Conditions without and with the project. The analysis in criterion (a) concluded that the proposed project would result in *less-than-significant* impacts per CMP criteria.

CMP Freeway Segments Analysis

Traffic impacts on CMP freeway segments would occur when the addition of project traffic causes the freeway segment operations to deteriorate from an acceptable level (LOS E or better) under Existing Conditions to an unacceptable level (LOS F) or an increase in traffic of more than one percent of the capacity of the segments that operate at LOS F under Existing Conditions.

Caltrans has authority over the State highway system including freeways, interchanges, and arterial State Routes. Caltrans operates and maintains the State Highways in Santa Clara. The *Guide for the Preparation of Traffic Impact Studies* (Caltrans, 2001) includes the information needed for Caltrans to review the impact on State highway facilities, including freeway segments. However, as the Congestion Management Agency, VTA is responsible for monitoring operations on Caltrans facilities within Santa Clara County.

Significant impacts on freeway segments in Santa Clara County are determined according to VTA criteria and would occur when the addition of project traffic causes under Existing Conditions:

- Freeway segment operations to deteriorate from an acceptable level (LOS E or better) to an unacceptable level (LOS F); or
- An increase in traffic of more than one percent of the capacity of the segments that operate at LOS F.

As shown in Table 5-21, the proposed project would not cause freeway segments to deteriorate to an unacceptable level and would not add trips greater than one percent of the freeway segment capacity to the freeway study segments during the AM and PM peak hours. Therefore, the proposed project would have a *less-than-significant* freeway impact at the identified freeway study segments under Existing Plus Project Conditions and no mitigation measures would be required.

TABLE 5-21 EXISTING FREEWAY (I-280) LEVEL OF SERVICE RESULTS

			Existing Conditions			Existing Plus Project Conditions		
I-280 Freeway Segment	Capacity[a]	Peak Hour[b]	Density[c]	LOS[d]	Trips[e]	Density[c]	LOS[d]	% Impact[f]
Southbound								
SR 85 to De Anza Boulevard	6,900	AM	24	C	12	24	C	<0.01
		PM	**103**	**F**	67	**105**	**F**	<0.01
De Anza Boulevard to Wolfe Road	6,900	AM	36	D	12	36	D	<0.01
		PM	**77**	**F**	67	**78**	**F**	<0.01
Wolfe Road to Lawrence Expressway	6,900	AM	35	D	45	35	D	<0.01
		PM	**81**	**F**	31	**82**	**F**	<0.01
Lawrence Expressway to Saratoga Avenue	6,900	AM	37	D	45	37	D	<0.01
		PM	85	F	31	86	F	<0.01
Northbound								
Saratoga Avenue to Lawrence Expressway	6,900	AM	**89**	**F**	10	**89**	**F**	<0.01
		PM	37	D	54	37	D	<0.01
Lawrence Expressway to Wolfe Road	6,900	AM	**81**	**F**	10	**81**	**F**	<0.01
		PM	23	C	54	23	C	<0.01
Wolfe Road to De Anza Boulevard	6,900	AM	**62**	**F**	56	**63**	**F**	<0.01
		PM	25	C	38	26	C	<0.01
De Anza Boulevard to SR 85	6,900	AM	**73**	**F**	56	**74**	**F**	<0.01
		PM	23	C	38	23	C	<0.01

Note: **Bold text** indicates intersection operates at unacceptable level of service.
a. Measured in vehicles per hour per lane.
b. AM = morning peak hour, PM = evening peak hour.
c. Measured in passenger cars per mile per lane.
d. LOS = level of service
e. Project trips added to individual freeway segments.
f. Percent Contribution determined by dividing the number of project trips by the freeway segment's capacity.
Source: Fehr & Peers, December 2015, Table 4-2 of the TIA.

In summary, according to CMP guidelines for assessing the transportation impacts of development projects, impacts related to the project's trip to the transportation network would be *less than significant* and no mitigation measures would be required.

c) Would the project 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?

The project is a low rise apartment building complex that would not be in an airport influence area or within an airport land use plan. The nearest public use airport is Mineta San Jose International airport, 10

miles to the northeast, in the City of San Jose. Given the distance from the nearest public use airport, the project would not be subject to any airport safety hazards. The project would also not have an adverse effect on aviation safety or flight patterns. *No impacts* would occur and no mitigation measures would be required.

d) Would the project substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The primary access to the proposed project would be located off of Pruneridge Avenue, which would provide immediate access to the project parking structure. Pruneridge Avenue would be modified to provide exclusive access to the project, and a cul-de-sac would provide an end to the eastern portion of the road. The secondary access off of Wolfe Road would be for emergency vehicles only in the event of an emergency. This is discussed below in criterion (e). The proposed project would not modify any design features to a public road or introduce a potentially unsafe feature that would increase hazards. *No impacts* would occur and no mitigation measures would be required.

e) Would the project result in inadequate emergency access?

Access to the proposed project would be from Pruneridge Avenue. The driveway would have two access lanes for entry in the garage, one for residents and one for visitors. Exit lanes would be provided adjacent to the entry lanes. Vehicle circulation around the perimeter would be designated exclusively for use by emergency vehicles, moving trucks, and garbage trucks. The SCCFD and City of Cupertino Building Division coordinate the review of building permits. All access driveways would be designed in accordance with City of Cupertino standards and would have to be reviewed and approved by SCCFD.

Project plans include approved fire and emergency access through all phases of construction and operation. Compliance with the provisions of the CFC and the CBC (described above), would ensure that adequate access would be provided. Therefore, the proposed project would not result in inadequate emergency access, *no impacts* would occur and no mitigation measures would be required.

f) Would the project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Pedestrian access to the project site is provided by a mostly complete network of sidewalks and crosswalks. Sidewalks are provided along the frontage of the project site along Wolfe Road and north of the project site allowing pedestrians to enter the apartment complex from the west and the north. The sidewalks along Wolfe Road have park strips which act as an additional buffer between vehicles and pedestrians. Pedestrian signals and high visibility crosswalks are provided at the adjacent intersection on allowing pedestrian travel to and from the project site in both the north-south and east-west directions.

Bicycle access to the project site is accommodated by bicycle lanes (Class II) on surround roadways such as Wolfe Road, Homestead Road, Tantau Avenue, Vallco Parkway, and Stevens Creek Boulevard. A discontinuity in the Class II facility does exist along Wolfe Road at the I-280 Ramps. Bicyclists would need

to travel with motor vehicles for a short distance when approaching the I-280 overcrossing. Furthermore, the proposed project includes additional off-site improvements at the Wolfe Road/Pruneridge Avenue intersection that would enhance and complement the improvements required under the AC2 project. These improvements are as follows:

- Add new directional curb ramps[70] at the northwest corner.
- Relocate the southbound, left-turn bike box[71] so that it is outside of the path of southbound bike traffic
- Relocate the crosswalk at crossing the western leg of the intersection to accommodate the relocation of the southbound left-turn bike box and relocate the associated southwest corner curb ramp to align with the relocated crosswalk
- Paint green dashed lines[72] on the Class II bike lanes on Wolfe Road.

Transit stops are available immediately north of the project site. Transit routes near the project site have low peak load factors. Average peak load factors for transit routes near the project site range from 0.07 to 0.25, which indicate that the seats on these transit routes are only about 25 percent or less occupied. Because of the limited amount of transit stops available in the area, it is unlikely that the project would generate transit demand that would exceed to the transit vehicle capacity.

In summary, there would be adequate availability of alternative modes of travel including pedestrian, bicycle and transit. The proposed project would not displace modify or interfere with any transit stop, sidewalk, or bicycle lanes. In addition, the project would not generate a demand for transit that would exceed the capacity of the system. Therefore, the project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. *No impacts* would occur and no mitigation measures would be required.

[70] A curb ramp is a transition between the sidewalk and the street to bring the curb to the level of the street; thus, eliminating the curb as an obstacle.

[71] A bike box is an area of safety for bicyclist while they wait for their turn to proceed through the intersection. The bike box is located in an area that makes the bicyclist more visible to drivers.

[72] The dashed lines are indicators that create awareness to the intersection's common space shared by bikes and vehicles.

XV. UTILITIES AND SERVICE SYSTEMS

Would the proposed project:	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	❒	❒	■	❒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	■	❒
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❒	❒	■	❒
d) Have insufficient water supplies available to serve the project from existing and identified entitlements and resources?	❒	❒	■	❒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	❒	❒	■	❒
f) Not be served by a landfill with sufficient permitted capacity to accommodate the buildout of the project's solid waste disposal needs?	❒	❒	■	❒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	❒	❒	■	❒
h) Result in a substantial increase in natural gas and electrical service demands requiring new energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities?	❒	❒	■	❒

GENERAL PLAN EIR

Chapter 4.14, Utilities and Services Systems, of the General Plan EIR, includes an analysis of impacts related to water supply, wastewater, solid waste, and energy conservation. Impacts were found to be less than significant and less than significant with mitigation. The City is required to implement General Plan Mitigation Measures UTIL-6a through UTIL-6c, and UTIL-8 to ensure impacts related to wastewater and solid waste are less than significant. General Plan Mitigation Measures UTIL-6a through UTIL-6c require the City to work with the Cupertino Sanitary District (CSD) to increase the available citywide treatment and transmission capacity, identify appropriate and current wastewater generation rates that are approved by CSD and establish a monitoring and tracking system for wastewater generation to better understand the City's need for potential capacity upgrades from CSD. General Plan Mitigation Measure UTIL-8 requires the City to continue current recycling and zero-waste practices, monitor solid waste

generation and seek new landfill sites to replace the Altamont and Newby Island landfills, at such time that these landfills are closed. These mitigation measures, which were previously adopted by the City and incorporated into the General Plan, will be implemented by the City.

EXISTING CONDITIONS

Chapter 4.14 includes a recent discussion of the existing conditions for each of the utility providers listed below:

- The Santa Clara Valley Water District (SCVWD) is the primary water resources agency for Santa Clara County. The project site is located within the California Water Service (Cal Water) Los Altos Suburban District (LASD) service area, and Cal Water would supply water for the project. Water supply for the LAS District is a combination of groundwater from wells in the LASD and treated water purchased from SCVWD.
- Cupertino Sanitary District (CSD) provides sanitary sewer services for the project site. Wastewater would be treated at the San Jose/Santa Clara Water Pollution Control Plant (SJ/SCWPCP).
- Recology South Bay (Recology) would provide curbside recycling, garbage, and compost and yard waste service to the residents of the project. The City has a contract with Newby Island Sanitary Landfill until 2023, which, according to CalRecycle, had a remaining capacity of 21,200,000 cubic yards and daily disposal capacity is 4,000 tons per day as of October 31, 2014.[73]
- Gas and electricity would be supplied to the project site by Pacific Gas & Electric (PG&E).

A water supply assessment (WSA) was prepared for the project pursuant to Senate Bill 610 (SB 610). SB 610 requires the preparation of a WSA for certain types of projects, as defined by Water Code Section 10912, which are subject to the CEQA. The SB 610 WSA dated March 1, 2016 was prepared for CalWater by Yarne & Associates, Inc. and is included in Appendix C of this Initial Study.

DISCUSSION

a) Would the project exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

The CSD sewer collection system directs wastewater to the SJ/SCWPCP, which is jointly owned by the cities of San José and Santa Clara. The San Francisco RWQCB established wastewater treatment requirements for the SJ/SCWPCP in an NPDES Permit (Order No. R2-2009-0038), adopted April 8, 2009 and effective June 1, 2009.[74] The NPDES Order sets out a framework for compliance and enforcement applicable to operation of the SJ/SCWPCP and its effluent, as well as those contributing influent to the

[73] Calrecycle website, http://www.calrecycle.ca.gov/SWFacilities/Directory/43-AN-0003/Detail/, accessed March 1, 2016.
[74] San Francisco RWQCB NPDES Permit (Order No. R2-2009-0038) for SJ/SCWPCP.
http://www.waterboards.ca.gov/rwqcb2/board_info/agendas/2009/april/SJSC_FinalOrder%20-%204-09.pdf

SJ/SCWPCP. This NPDES Order currently allows dry weather discharges of up to 167 million gallons per day (mgd) with full tertiary treatment, and wet weather discharges of up to 271 mgd with full tertiary treatment.

The proposed project would have a significant environmental impact if it would result in a violation of the sanitary wastewater treatment requirements established in the NPDES Permit issued by the RWQCB. The SJ/SCWPCP, serving as the Discharger, has an approved pretreatment program, which includes approved local limits as required by prior permits. The previous permit required the Discharger to evaluate its local limits—such as those established by the CSD—to ensure compliance with updated effluent limits. These local limits are approved as part of the pretreatment program required by this permit. The SJ/SCWPCP is required to monitor the permitted discharges in order to evaluate compliance with permit conditions.

The proposed residential project does not involve industrial uses likely to substantially increase pollutant loading levels in the sanitary sewer system. Therefore, the proposed project is not expected to exceed treatment standards established by the RWQCB. Impacts to sanitary wastewater quality would be *less than significant* and no mitigation measures would be required.

b) *Would the project require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

The proposed project would result in a significant impact if it would result in the construction of new wastewater treatment facilities or the expansion of existing facilities, the construction of which would have a significant effect on the environment. As discussed above in criterion (a) above and criterion (e) below, future demands from the proposed project would not exceed the design or permitted capacity of the SJ/SCWPCP that serves the project site. Future water treatment demand was assessed in consultation with the City of Cupertino and includes consideration of development in the City through the 2040 buildout horizon of the General Plan. Therefore, development of the proposed project would not include any improvements not already considered and the impact of the proposed project on SJ/SCWPCP would be *less than significant.*

c) *Would the project require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

As discussed under criterion (d) in Section VIII, Hydrology and Water Quality, above, the proposed project is would not require the expansion of existing storm drain facilities. The project would involve the redevelopment of a previously developed site and a 10 percent increase in impervious surface is expected. All new development that, like the proposed project, creates or replaces 10,000 square feet or more of impervious surface would be subject to Provision C.3 guidelines for stormwater control, as described above. Through C.3 compliance, the proposed project would involve actions to minimize runoff from the project site as described in Section VIII, Hydrology and Water Quality, above. Consequently, the proposed project would not require the expansion of existing stormwater facilities or the construction of

new facilities, the construction of which could otherwise have significant impacts. Therefore, impacts would be *less than significant* and no mitigation measures would be required.

d) Would the project have insufficient water supplies available to serve the project from existing and identified entitlements and resources?

As shown in the General Plan EIR in Chapter 4.14, the water supply at project buildout year 2020 would be 13,078 acre feet[75] per year (afy) and at General Plan buildout year 2040 would be 16,984 afy. As discussed in the General Plan EIR, buildout of the General Plan would not result in insufficient water supplies from Cal Water under normal year conditions or during single-dry year and multiple-dry years, with the proposed and existing water conservation regulations and measures in place. The water supply evaluation prepared for the General Plan EIR included new development on the project site at a greater number of units than proposed under the project (820 net new units compared to 600 net new units); therefore, water supply impacts were adequately addressed in the General Plan EIR. However, as described above, consistent with SB 610, a Water Supply Assessment was prepared for the proposed project.

According to Cal Water, the applicable water use generation rate for multi-family dwelling units, such as the proposed project, would be 68.7 gallons per day per unit (gpd/unit) or 0.077 acre feet per year.[76] As shown in Table 5-22, and discussed in detail in the Water Supply Assessment under the Supply Adequacy and Reliability Assessment section, there would be adequate supply to meet the project's demand under normal, single-, and multiple-dry years.

TABLE 5-22 WATER SUPPLY PROJECTIONS AND DEMAND IN NORMAL, SINGLE-DRY YEAR AND MULTI-DRY YEARS

Water Supply Sources	2010	2015	2020	2025	2030	2035	2040
Normal Hydrologic Years							
SCVWD Purchased Water	8,887	10,500	10,850	11,200	11,550	11,900	12,250
Groundwater Wells	3,892	3,940	4,034	3,961	3,901	3,855	3,822
Recycled Water	0	0	175	175	175	175	175
Total Supply	**11,648**	**14,440**	**15,059**	**15,336**	**15,626**	**15,930**	**16,247**
Total Demand	**11,648**	**14,440**	**15,059**	**15,336**	**15,626**	**15,930**	**16,247**
Difference	***0***	***0***	***0***	***0***	***0***	***0***	***0***

[75] One *acre-foot* equals about 326,000 gallons, or enough water to cover an *acre* of land, about the size of a football field, one *foot* deep.

[76] Wilson, Christopher, Superintendent II, Cal Water, email to Jeff Yarne, November 19, 2015 and the SB 610 Water Supply Assessment, prepared for CalWater by Yarne & Associates, Inc., March 1, 2016, page 4 (see Appendix C of this Initial Study).

TABLE 5-22 WATER SUPPLY PROJECTIONS AND DEMAND IN NORMAL, SINGLE-DRY YEAR AND MULTI-DRY YEARS

Water Supply Sources	2010	2015	2020	2025	2030	2035	2040
Single-Dry Hydrologic Year[a]							
SCVWD Purchased Water	8,887	10,500	10,850	11,200	11,550	11,900	12,250
Groundwater Wells	3,892	3,940	4,034	3,961	3,901	3,855	3,822
Recycled Water	0	0	175	175	175	175	175
Total Supply	**11,648**	**14,440**	**15,059**	**15,336**	**15,626**	**15,930**	**16,247**
Total Demand	**11,648**	**14,440**	**15,059**	**15,336**	**15,626**	**15,930**	**16,247**
Difference	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Multiple-Dry Hydrologic Years: Years 1 – 3							
SCVWD Purchased	n/a	10,500	10,850	11,200	11,550	11,900	12,250
Recycled Water	n/a	0	175	175	175	175	175
Cal Water Wells	n/a	3,940	4,034	3,961	3,901	3,855	3,822
Total Supply	n/a	**14,440**	**15,059**	**15,336**	**15,626**	**15,930**	**16,247**
Total Demand: Years 1 - 3	n/a	14,440	15,059	15,336	15,626	15,930	16,247
Difference	*n/a*	***0***	***0***	***0***	***0***	***0***	***0***
Multiple-Dry Hydrologic Years: Year 4[b]							
SCVWD Purchased	n/a	n/a	8,680	8,960	9,240	9,520	9,800
Recycled Water	n/a	n/a	175	175	175	175	175
Cal Water Wells	n/a	n/a	3,192	3,158	3,086	3,049	3,023
Total Supply	n/a	n/a	**15,059**	**15,336**	**15,626**	**15,930**	**16,247**
Total Demand: Year 4	n/a	n/a	**12,047**	**12,293**	**12,501**	**12,744**	**12,998**
Difference	*n/a*	*n/a*	***3,012***	***3,043***	***3,125***	***3,086***	***3,249***

Notes:
a. Note that supply always equals demand due to the fact that Cal Water can vary its groundwater production in response to the availability of SCVWD purchased water. *Water Supply Assessment*, Supply Adequacy and Reliability Assessment, 2016, page 23.
b. Year 4 represents a 20 percent decrease in demand and the delivery of SCWVD Contract Water.
Source: *SB 610 Water Supply Assessment, prepared for CalWater by Yarne & Associates, Inc., March 1, 2016,* Tables 12, 13 and 14, *(see Appendix C of this Initial Study.*.

Accordingly, the proposed project's water demand would not exceed the available water supply in 2020 at project buildout, or General Plan buildout by year 2040 horizon of the General Plan. Accordingly, impacts to water supply under the proposed project would be *less than significant*.

e) Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The proposed project would have a significant impact if project demand exceeds the wastewater service capacity of the SJ/SCWPCP or the CSD collection systems.

Wastewater generation is determined by estimating the flow per unit for residential uses. Using a demand factor of 263.2 gpd per multi-family unit for the 600 new residential units, the estimated wastewater generation based on buildout of the project would be 157,920 gpd (or approximately 0.16 mgd). Added to existing average demand of 105 mgd, the proposed project's demand would not exceed the SJ/SCWPCP treatment plant's current total capacity of 450 mgd. The CSD has a contractual treatment allocation with the SJ/SC WPCP of 7.85 million gallon per day (mgd), on average. Current CSD wastewater flow to the SJ/SCWPCP is 5.3 mgd.[77] Added to this existing demand, the wastewater flow form the proposed project of 0.16 mgd would not exceed the City's contractual allocation limits. As a result, impacts related to wastewater service capacity would be *less than significant* and no mitigation measures would be required.

The CSD's primary trunk lines that serve the project site are 12- and 15-inch facilities on Wolfe Road, and a 27-inch line on Pruneridge Avenue that was recently replaced and relocated as part of the AC2 project. As shown on Figures 3-21 and 3-22 in Chapter 3, Project Description, of this Initial Study, the proposed project would connect to these existing sewer lines. According to the CSD, the CSD can provide sanitary sewer service to the proposed project subject to entering into an "installer's agreement" once the project is approved by the City and the payment of all fees identified in the installer's agreement to address the project's fair-share of costs for the CSD's planned improvements and ongoing maintenance of the sewer lines that would serve the project site.[78]

f) Would the project be served by a landfill with sufficient permitted capacity to accommodate the buildout of the project's solid waste disposal needs?

As discussed in the existing conditions, above, the City contracts with Recology South Bay (Recology) to provide solid waste collection services to residents and businesses in the city. The City has a contract with Newby Island Sanitary Landfill until 2023. In addition to the Newby Island Landfill, solid waste generated in Cupertino can also be disposed of at the Altamont Landfill and Resource Recovery facility, the Corinda Los Trancos Landfill, Forward Landfill Inc., Guadalupe Sanitary Landfill, Kirby Canyon Recycling and Disposal Facility, the Monterey Peninsula Landfill, Recology Hay Road, the Vasco Road Sanitary Landfill, the Zanker Material Processing Facility, and the Zanker Road Class III Landfill.

[77] Tanaka, Richard. District Manager-Engineer. Letter to Ms. Aarti Shrivastava, Assistant City Manager. 23 May 2014.
[78] Tanaka, Richard. District Manager-Engineer. Letter to Ms. Catarina S. Kidd, Senior Planner, 10 March 2016.

The proposed waste management for the proposed project would focus on waste, recycling, and composting.

Solid waste generated by construction of the proposed project would largely consist of demolition waste from the existing buildings as well as construction debris. The project would be required to comply with Cupertino Municipal Code Chapter 16.72, Recycling and Diversion of Construction and Demolition Waste, which requires the recycling or diversion at least 60 percent of all generated construction and demolition (C&D) waste by salvage or by transfer to an approved facility. Prior to the permit issuance, the applicant is required to submit a properly completed Waste Management Plan, which includes the estimated maximum amount of C&D waste that can feasibly be diverted, which facility would handle the waste, and the total amount of C&D waste that would be landfilled. Compliance with the Chapter 16.72 would reduce solid waste and construction-related impacts on the landfill capacity would be *less than significant*.

Based on an average household size of 2.88 persons,[79] it is assumed the proposed project would introduce 1,728 new residents.[80] The project would also include 25 employees. As discussed in the General Plan EIR, in 2012, the city of Cupertino's actual disposal rate for residents was 2.6 pounds per person per day (PPD) with the target of 4.3 PPD. For employees, the disposal rate was 4.3 PPD with the target rate of 8.1 PPD.[81] The city of Cupertino's disposal rates for both residents and employees have been below target rates and steadily decreasing since 2007.[82]

Applying these disposal rates, the project would generate approximately 4,600 pounds per day or 2 tons per day of new waste, which is well within the Newby Island Sanitary Landfill permitted daily disposal capacity of 4,000 tons per day. Anticipated rates of solid waste disposal would have a *less-than-significant* impact in regard to target disposal rates, and the project would comply with the City's current recycling ordinances and zero-waste policies, which would further reduce solid waste disposed of in the landfill. Thus, operation-related impacts on landfill capacity would be *less than significant.*

g) Would the project comply with federal, state, and local statutes and regulations related to solid waste?

The proposed project would have a significant environmental impact if it would conflict with standards relating to solid waste or litter control. The City's per capita disposal rate is below the target rate established by CalRecycle. Cupertino adopted a Source Reduction and Recycling Element (SRRE) and a Household Hazardous Waste Element (HHWE) in compliance with the California Integrated Waste Management Act. The City has gone beyond the SRRE by implementing several programs, including the City's and Recology's organics or food waste collection program and Environmental Recycling Day events

[79] This analysis is based on the Association of Bay Area Governments (ABAG) 2013 projections of the average household size of 2.88 persons for Cupertino in 2020. This is the standard approach for population and housing analysis in Cupertino.
[80] 600 new units multiplied by 2.88 persons per unit equals 1,728 new residents.
[81] CalRecycle, "Jurisdiction per Capita Disposal Trends: Cupertino," http://www.calrecycle.ca.gov/, accessed May 15, 2014.
[82] CalRecycle, "Jurisdiction per Capita Disposal Trends: Cupertino," http://www.calrecycle.ca.gov/, accessed May 15, 2014.

offered to residents 3 times per year by Recology. Implementation of the referenced strategies, programs and plans, as well as the Climate Action Plan that launched in May 2014, will enable the city to meet the 75 percent solid waste diversion rate by the year 2020. These programs will be sufficient to ensure that future development in Cupertino, including the proposed project, would not compromise the ability to meet or perform better than the State mandated target. Additionally, construction and any demolition debris associated with the project would be subject to the Municipal Code Chapter 16.72, requiring that a minimum of 50 percent of C&D debris be diverted from landfill. Compliance with applicable statutes and regulations would ensure that the impact would be *less than significant* and no mitigation measures would be required.

h) Would the project result in a substantial increase in natural gas and electrical service demands requiring new energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities?

The proposed project would demolish the existing residential buildings and replace them with new structures that would meet the current Building and Energy Efficiency Standards. The 2013 Building and Energy Efficiency Standards became effective July 1, 2014. The 2013 Standards are 25 percent more energy efficient than the 2008 standards for residential buildings and 30 percent more energy efficient for non-residential buildings. The project provides connectivity to existing transit, bicycle and pedestrian facilities and locates a high-density housing development in close proximity to existing residential-serving land uses and employment centers.

The project site is currently served by existing PG&E distribution systems that would provide natural gas and electricity. As described in Section IX, Land Use, above, the proposed project complies with the General Plan land use designation requirements as well as the Zoning district requirements and would not result in new growth potential from what was considered in the General Plan. The project would include appropriate on-site infrastructure to connect to the existing PG&E systems and would not require new off-site energy supply facilities and distribution infrastructure or capacity enhancing alterations to existing facilities. Accordingly, impacts would be *less than significant* and no mitigation measures would be required.

XVI. MANDATORY FINDINGS OF SIGNIFICANCE

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

DISCUSSION

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As described above, the project site is in an urbanized, extensively developed area of Cupertino. Almost entirely built out with residential development and associated surface parking, the project site has few green spaces and trees within and surrounding the on-site buildings. There are no sensitive natural communities, no areas of sensitive habitat, and no areas of critical habitat occurring at the project site. Additionally, there are no buildings currently listed or eligible for listing on the California Register of Historical Resources (CRHR), no recorded archaeological sites, and no known paleontological resources located on the project site. Therefore, implementation of the proposed project would result in a *less-than-significant* impact to the environment and wildlife on the project site.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

As described in the environmental checklist, the impacts of the proposed project would be mitigated to *less-than-significant* levels. Therefore, the proposed project would not be expected to contribute to significant cumulative impacts when considered along with other impacts under the General Plan.

c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

As discussed previously, the proposed project would not result in a significant impact that could not be mitigated to a less-than-significant level, thus the proposed project's environmental effects would be *less than significant.*