SECTION 4.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

In accordance with Section 15143 of the CEQA Guidelines, the discussion in this SEIR is focused on the significant effects on the environment resulting from the proposed Communications Hill 2 Project.

Significant impacts are numbered using an alpha-numerical system that identifies the environmental issue by the letter code for the specific section, as seen in the list below. For example, Impact HAZ – 1, denotes the first impact discussed in the hazards and hazardous materials section. Mitigation" Measures" are identified for all significant project impacts. Mitigation measures are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines 15370). Measures that are required by law or are City standard conditions of approval are categorized as "Standard Project Conditions." Measures that would further reduce already less than significant impacts are categorized as "Avoidance Measures." Mitigation measures (MM) and avoidance measures (AM) are also numbered to correspond to the impact they address. For example, MM NOI – 2.3 refers to the third mitigation measure for the second impact in the noise section. The letter codes used to identify environmental issues are listed below.

Letter Code	Environmental Issue
AES	Aesthetics
AQ	Air Quality
BIO	Biological Resources
C	Cumulative
CUL	Cultural Resources
EN	Energy
GEO	Geology and Soils
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
LU	Land Use
NOI	Noise
PS	Public Services
REC	Recreation
TRAN	Transportation
UTIL	Utilities and Service Systems

Cumulative Impacts

Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, are considerable or which compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant projects taking place over a period of time. CEQA Guideline Section 15130 states that an EIR should discuss cumulative impacts "when the project's incremental effect is cumulatively considerable." The discussion does not need to be in as great detail as is necessary for project impacts, but is to be "guided by the standards of practicality and reasonableness." The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence.

The purpose of the cumulative analysis is to allow decision-makers to better understand the potential impacts which might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed project addressed in this SEIR. Cumulative analyses are based on the premise that impacts of specific actions may be less than significant when viewed on a project-by-project basis, but when considered along with the impacts of other projects involving similar activities, these specific actions may be cumulatively considerable.

The effects of past projects are generally reflected in the existing conditions described in the specific sections of this SEIR. Present projects are those approved but not yet developed.

Reasonably foreseeable projects include the approved, planned, and proposed projects below:

Table 4.0-1:
Cumulative Projects

Project Name and File #	Location	Description
Pending Projects		
Great Oaks Mixed Use Project PDC 04-100	76-acre site located adjacent to and just north SR 85 and south of Monterey Highway	154,000 square feet of commercial uses, 260,000 square feet of office uses, and 720 residential units. Also, redistribution of existing entitlements of 1.0 million square feet of office/R&D and 450,000 square feet of commercial uses from the site to elsewhere in Edenvale Area 2.
Valley Christian Schools Expansion PDC-12-012	53-acre site is along the ridgeline west of Diamond Heights Drive (a private driveway) and south of Senter Road	Increase current student enrollment at an existing junior and high school campus from 1,850 to 2,300 students
Approved But Not Yet Constructed/Occupied		
Hitachi Campus and Mixed-Use Transit Village Project GP04-02-01 PDC04-031	HGST Campus: 320-acre site located at 5601 Cottle Road west of the project site	2,930 residential dwelling units, 460,000 square feet of commercial uses, and 3,600,000 square feet of industrial space
San José/Santa Clara Water Pollution Control Plan (WPCP) Master Plan PP11-043	2,684 acres located at 700 Los Esteros Road	Technical improvements to the Plant's wastewater treatment operations, including changing the 700-acre biosolids dewatering and drying operations to a mechanical operation. Proposed land uses include future areas for WPCP and recycled water operations (629 acres), new roads and economic development areas (387 acres), flood control protection and environmental habitat restoration benefiting endangered and threatened species (1,190 acres), recreational facilities such as parks (42 acres) and trails (16 miles), and other uses (436 acres).
Recently Completed		
Newby Island Sanitary Landfill and The Recyclery Rezoning Project PDC07-071	1601 Dixon Landing Road	Rezoning of the landfill and adjacent Recyclery to allow the maximum height of the landfill to be raised to 245 feet above mean sea level and conform and clarify the legal non-conforming uses on the landfill and specify the allowable current and future uses on the landfill property and Recyclery. The height increase would allow for an approximately 15 million cubic yards of landfill capacity.

These projects have already been evaluated in previous environmental documents.

The analysis of cumulative impacts is included at the end of each impact section. For each subject area, the following aspects of cumulative impacts are discussed:

- Would the effects of the proposed project, when combined with the effects of all past, present, and pending development result in a cumulatively significant impact on the resources in question?

- If a cumulative impact is likely to be significant, would the contribution of the proposed project to that impact be cumulatively considerable?

4.1 LAND USE

The analysis in this section is based primarily upon the Envision PEIR and Communications Hill Specific Plan EIR, except where noted.

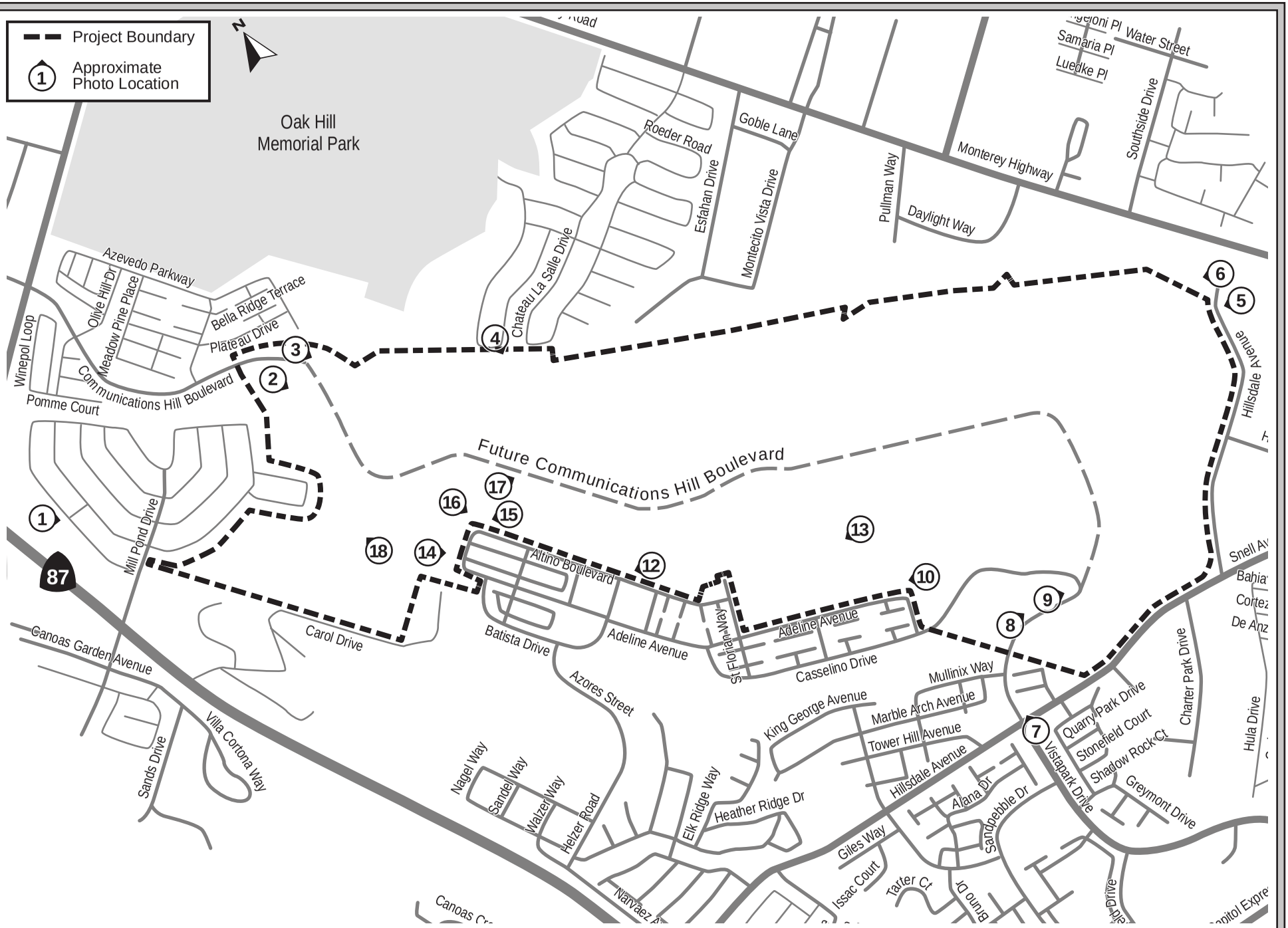
4.1.1 Existing Setting

Approximately 275.3 acres of the vacant 331.6-acre project site are located within the jurisdiction of the County of Santa Clara. The project site has been planned for development by the City of San José for over 30 years, as described in the Communications Hill Specific Plan and previous General Plans. The vacant hillside site with surrounding flat lands was the previous location of a rock quarry and mercury mine, which has left the site somewhat disturbed, although quarry reclamation has occurred over several years. Photos of the site and adjacent land uses are shown on the following pages.

As shown on Figure 1.0-3, the project area to the north, west, and south is primarily developed with residential uses of varying densities, including the Tuscany Hills development, adjacent to the southern boundary of the project site. The Millpond Mobile Home Park, Dairy Hill residential development, and large-lot single-family residential uses on Carol Drive are located northwest of the site. Additional multi-family residential developments are located north of the site on Esfahan Drive and Goble Lane.

Industrial and commercial uses are located east of the project site along Monterey Road and Old Hillsdale Avenue. Two communications facilities are located near the top of the hill west and south of the site; a communication tower, previously used by AT&T but now inactivated, and the County of Santa Clara's Communication Center. The County facility consists of a fenced area with numerous antennae, a single-story building, and parking lot. The facility provides coordinated emergency 911 call answering and dispatching services.

The areas where off-site improvements would occur include the SR 87 freeway interchanges at Narvaez Avenue and Curtner Avenue, along Curtner Avenue between Communications Hill Boulevard and Almaden Expressway, bike lanes near SR 87, and an overcrossing of the Caltrain tracks. These areas are currently developed with streets, with the exception of a trail/bike lane to be completed at the base of the western side of Communications Hill, on the east side of SR 87, generally between Mill Pond Drive and Carol Drive. These improvements are shown on Figure 2.0-3.



APPROXIMATE PHOTO LOCATIONS FIGURE 4.1-1

1) View of Communications Hill taken from the north. The Millpond Mobile Home Park can be seen in the foreground.

2) View of Communications Hill Boulevard and Dairy Hill Drainage Basin looking south toward the project site. The Communications Hill Boulevard bridge would be constructed over the Caltrain tracks.

3) Terminus of the northern end of Communications Hill Boulevard looking to the south.

PHOTOS (1-3)

4) View of the eastern side of the project site looking to the southwest. The communication tower at the top of the hill can be seen.

5) This photo shows the southeastern portion of the site looking to the northwest. Industrial Park uses would be constructed in this portion of the site.

6) This photo was taken from near the terminus of Hillsdale Avenue showing existing heavy industrial uses on the site which is on the left side of the photo.

PHOTOS (4-6)

7) Existing entrance to the Communications Hill residential development taken looking to the north from Hillsdale Avenue. The existing Tuscany Hills development can be seen at the top of the hill on the left.

8) Existing Communications Hill Boulevard and trail looking to the east.

9) The southern terminus of Communications Hill Boulevard looking to the east.

PHOTOS (7-9)

10) View near the top of the hill looking to the northeast. The interface between the existing development on the left and the project site on the right can be seen.

11) The existing fire station at the top of the hill which would eventually be part of the Village Center to serve the Communications Hill residential area.

12) View of the existing park that serves the Tuscany Hills development looking to the southwest. The County Communications Center can be seen in the background.

PHOTOS (10-12)

13) View of the project site looking to the northwest with the Tuscany Hills development in the background.

14) View of the Tuscany Hills development taken from near the County Communications Center looking to the southeast.

15) This photo was taken from the project site looking to the west toward the portion of the site located below the County Communications Center.

PHOTOS (13-15)

16) The project site is shown on the left side of the photo looking toward the southeast. The interface between the existing development and the project site can be seen.

17) View of the site looking to the east. The varying topography of the site can be seen.

18) View of the northern portion of the project site looking towards the north and downtown San Jose. The Mill Pond neighborhood, Dairy Hill development, and the northern segment of Communications Hill Boulevard can be seen at the base of the hill.

PHOTOS (16-18)

4.1.2.1 *County of Santa Clara Plans and Policies*

County of Santa Clara General Plan

For urban, unincorporated areas, there are three policy directions or "strategies" defined by the Santa Clara County General Plan:

Strategy #1: Promote Eventual Annexation
Strategy #2: Ensure Conformity of Development with Cities' General Plans
Strategy #3: Provide Services as Efficiently and Equitably as Possible

The County's long-term goal is for all lands within the cities' Urban Service Areas to eventually become incorporated by the surrounding City. Until that happens, it is incumbent upon the County to ensure that land use and development within these areas conforms with that which is prescribed by the applicable City's General Plan and that services are provided in the most efficient and equitable manner possible.

The project site is designated as *Urban Service Area* in the County's General Plan.[5] These areas consist primarily of "pockets" or islands of unincorporated land surrounded by incorporated territory, most of which is fully developed, and some areas of not fully developed lands at the periphery of the incorporated areas.

County of Santa Clara Zoning Ordinance

The proposed project site has two Santa Clara County zoning designations: *A-1* (APN 455-09-057) and *R1-8* (455-28-017).[6] The *A-1* district is a General Use district which provides a flexible base zoning for general residential and agricultural uses. It provides opportunities through the use permit process for other uses and developments that are appropriate for a particular location, consistent with the objectives, goals, and policies of the County's General Plan. The *R1-8* district allows single-family dwellings with a minimum lot area of 8,000 square feet. This district is intended to allow the orderly and efficient arrangement of dwellings, yards, accessory buildings, and other residential site improvements.

4.1.2.2 *City of San Jose Plans and Policies*

Envision San José 2040 General Plan

As described in Section 1.1, the Envision San José 2040 General Plan provides a vision of future growth, development, and the provision of municipal services for San José. It provides capacity for the development of up to 470,000 new jobs and 120,000 new dwelling units, supporting a population of approximately 1.3 million people by 2035. The vision is based on 12 major strategies:

[5] Santa Clara County General Plan, Book B, *General Land Use Management* and Map, www.sccgov.org/sites/planning/GIS/GPMap/Documents/LandusePlan_map_2013.pdf, accessed on 8/6/13.
[6] www.sccgov.org/sites/planning/GIS/Zoning/Documents/zoning_atlas.pdf, accessed on 8/6/13.

1) **Community Based Planning:** Embody the community values and goals articulated through an extensive and meaningful community based planning process.

2) **Form Based Plan:** Use the General Plan Land Use/Transportation Diagram designations and Plan Goals and Policies to address the form and character as well as land uses and densities for the future development of San José.

3) **Focused Growth:** Strategically focus new growth into areas of San José that will enable the achievement of City goals for economic growth, fiscal sustainability and environmental stewardship and support the development of new, attractive urban neighborhoods.

4) **Innovation/Regional Employment Center:** Emphasize economic development within the City to support San José's growth as center of innovation and regional employment.

5) **Urban Villages:** Promote the development of Urban Villages to provide active, walkable, bicycle-friendly, transit-oriented, mixed-use urban settings for new housing and job growth attractive to an innovative workforce and consistent with the Plan's environmental goals.

6) **Streetscapes for People:** Design streets for people, not just cars, and to support a diverse range of urban activities and functions, develop important roadways as Grand Boulevards to connect multiple neighborhoods and act as urban design elements at a citywide scale, and promote the development of Main Streets to foster community identity and walkability.

7) **Measurable Sustainability/Environmental Stewardship:** Advance the City's Green Vision through 2040 and establish Measurable Environmental Sustainability indicators consistent with Green Vision Goal #7.

8) **Fiscally Strong City:** Establish a land use planning framework that promotes the right fiscal balance of revenue and costs to allow the City to deliver high-quality municipal services, consistent with community expectations.

9) **Destination Downtown:** Support continued growth in the Downtown as the City's cultural center and as a unique and important employment and residential neighborhood to support the General Plan's economic, fiscal, environmental, and urban design/place making goals.

10) **Life Amidst Abundant Natural Resources:** Promote access to the natural environment and a favorable climate as important strengths for San José by building a world-class trail network, reinforcing the Greenline/Urban Growth Boundary, and adding parks and other recreational amenities to serve existing and new populations.

11) **Design for a Healthful Community:** Support the physical health of community members by promoting walking and bicycling as commute and recreational options, encouraging access to healthful foods, and supporting the provision of health care and safety services.

12) **Phasing and Periodic Review:** Ensure that the General Plan addresses the current community context and values and closely monitor the achievement of key Plan goals through a periodic major review of the General Plan and the use of Plan Horizons to phase implementation of the Plan over time.

A key component of the General Plan is the emphasis given to directing new job and housing growth to areas served by transit and other existing City services in order to minimize the fiscal and environmental impacts of that new growth. In support of that basic premise, the General Plan established "Growth Areas" to accommodate nearly all of the city's planned housing and job growth

capacity. These Growth Areas include the existing Downtown Core, North San José, Specific Plan areas, employment land areas, major commercial/transit corridors, and new "Villages" located at transit stations or within walking distance of existing neighborhoods.
The project site is located within the Communications Hill Specific Plan area and therefore, is considered a Growth Area. As stated in the General Plan (Chapter 1, page 28), because the Specific Plans were developed through extensive community-based planning processes, the Envision General Plan incorporates, with only very limited modifications, the land uses designated within the Specific Plan areas.

General Plan Land Use/Transportation Diagram

The General Plan 2040 Land Use/Transportation Diagram is intended to promote the compatibility of existing and future land uses. The existing and proposed land use designations currently found within and adjacent to the project site are shown on Figure 2.0-9 and summarized as follows:

- *Industrial Park,*
- *Combined Industrial/Commercial*
- *Public/Quasi-Public,*
- *Urban Residential (30-95 dwelling units per acre),*
- *Open Space, Parklands, and Habitat,*
- *Mixed Use Commercial,*
- *Neighborhood /Community Commercial*, and
- *Residential Neighborhood*.

Table 4.1-2 below summarizes the allowable densities and uses for the designations on the project site, consistent with the General and Specific Plans. The allowable density is identified in dwelling units per acre (DU/AC) or floor area ratio (FAR). FAR is calculated by dividing the total area of all floors in a building(s) by the total area of the site.[7]

Table 4.1-2:
Summary of Land Use Designations on the Project Site

Designation	Land Use Types	Density
Industrial Park	This designation allows for a wide variety of industrial users such as R&D, manufacturing, assembly, testing and offices.	FAR Up to 10.0 (2 to 15 stories)
Public/Quasi-Public	This designation allows public land uses including schools, colleges, corporation yards, homeless shelters, libraries, fire stations, water treatment facilities, convention centers and auditoriums, museums, governmental offices, and airports.	FAR N/A

[7] For example, an FAR of 2.0 would indicate that the floor area of a multi-story building is twice as large as the gross area of the site. A single-story building would have an FAR of less than 1.0, while tall buildings could have an FAR of 15.0 or higher.

Table 4.1-2:
Summary of Land Use Designations on the Project Site

Designation	Land Use Types	Density
Neighborhood/ Community Commercial	This designation allows a very broad range of commercial uses, including neighborhood-serving retail, services, and office development.	FAR Up to 2.0 (1 to 4 stories)
Urban Residential	This designation allows for medium density residential development and a fairly broad range of commercial uses, including retail, offices, hospitals, and private community gathering facilities, within Specific Plans.	30-95 DU/AC; FAR 1.0 to 4.0 (3 to 12 stories)
Mixed-Use Neighborhood	This designation is applied to areas intended for development primarily with either townhouse or small lot single-family residences and also to existing neighborhoods that were historically developed with a wide variety of housing types, including a mix of residential densities and forms.	Up to 30 DU/AC; FAR 0.25 to 2.0 (1 to 3.5 stories)
Open Space, Parklands, and Habitat	These lands can be publicly- or privately-owned and are intended for low intensity uses. Lands are typically devoted to open space, parks, recreation areas, trails, habitat buffers, nature preserves, and other permanent open space areas.	N/A

General Plan Policies

The General Plan includes numerous policies and actions aimed at avoiding or mitigating an environmental effect, as listed in the applicable sections of this SEIR. The most relevant policies related to Specific Plans/Growth Areas and adopted for the purpose of avoiding or mitigating land use impacts are summarized in the following table. Please refer to the General Plan for a complete listing of all policies.

LAND USE POLICIES
Policy LU-1.1: Foster development patterns that will achieve a complete community in San Jose, particularly with respect to increasing jobs and economic development and increasing the City's jobs-to-employed resident ratio while recognizing the importance of housing and a resident workforce.
Policy LU-1.2: Create safe, attractive, and accessible pedestrian connections between developments and to adjacent public streets to minimize vehicular miles traveled.
Policy LU-1.3: Within identified Growth Areas, where consolidation of parcels is necessary to achieve viable designated land uses or other objectives of the Envision General Plan, limit residential development of individual parcels that do not conform to approved Village Plans or further other plan objectives.
Policy LU-1.8: Preserve existing Public/Quasi-Public lands in order to maintain an inventory of sites suitable for Private Community Gathering Facilities, particularly within the Residential Neighborhoods, Urban

Villages and commercial areas, and to reduce the potential conversion of employment lands to non-employment use.

Policy LU-2.1: Provide significant job and housing growth capacity within strategically identified "Growth Areas" in order to maximize use of existing or planned infrastructure (including fixed transit facilities), minimize the environmental impacts of new development, provide for more efficient delivery of City services, and foster the development of more vibrant, walkable urban settings.

Policy LU-2.2: Include within the *Envision General Plan* Land Use/Transportation Diagram significant job and housing growth capacity within the following identified Growth Areas: Downtown, Specific Plan Areas, North San Jose, Employment Lands, Urban Villages: Bart/Caltrain Station Areas, Urban Villages: Transit/Commercial Corridors, Urban Villages: Commercial Centers, and Urban Villages: Neighborhood Urban Villages.

Policy LU-5.8: Encourage outdoor cafes and other outdoor uses in appropriate commercial areas to create a vibrant public realm, maximize pedestrian activity, and capitalize on San Jose's temperate climate.

Policy LU-6.4: Encourage the development of new industrial areas and the redevelopment of existing older or marginal industrial areas with new industrial uses, particularly in locations which facilitate efficient commute patterns. Use available public financing to provide necessary infrastructure improvements as one means of encouraging this economic development and revitalization.

Policy LU-11.3: Direct all significant new residential growth to identified Growth Areas to further the environmental, transit, healthy community, and other *Envision General Plan* objectives. Limit infill development within areas designated as Residential Neighborhood on the Land Use/Transportation Diagram to projects that maintain the prevailing neighborhood form and density as it exists on adjoining properties, with particular emphasis upon establishing and/or maintaining a consistent streetscape form between new and existing development.

Policy LU-18.1: Allow development in hillside areas only if potential danger to health, safety, and welfare of residents, due to landslides, fire, or other environmental hazards, can be mitigated to an acceptable level as defined in State and City ordinances and policies. Demonstrate that all new development will not result in significantly increased risks and public costs associated with natural hazards.

COMMUNITY DESIGN

Policy CD-1.1: Require the highest standards of architectural and site design, and apply strong design controls for all development projects, both public and private, for the enhancement and development of community character and for the proper transition between areas with different types of land uses.

Policy CD-1.7: Require developers to provide pedestrian amenities, such as trees, lighting, recycling and refuse containers, seating, awnings, art, or other amenities, in pedestrian areas along project frontages. When funding is available, install pedestrian amenities in public rights-of-way.

Policy CD-1.8: Create an attractive street presence with pedestrian-scale building and landscaping elements that provide an engaging, safe, and diverse walking environment. Encourage compact, urban design, including the use of smaller building footprints, to promote pedestrian activity throughout the City.

Policy CD-1.12: Use building design to reflect both the unique character of a specific site and the context of surrounding development and to support pedestrian movement throughout the building site by providing convenient means of entry from public streets and transit facilities where applicable, and by designing ground level building frontages to create an attractive pedestrian environment along building frontages. Unless it is appropriate to the site and context, franchise-style architecture is strongly discouraged.

Policy CD-1.23: Further the Community Forest Goals and Policies in this Plan by requiring new development to plant and maintain trees at appropriate locations on private property and along public street frontages. Use trees to help soften the appearance of the built environment, help provide transitions between land uses, and shade pedestrian bicycle areas.

FUNCTION POLICIES

Policy CD-2.5: Integrate Green Building Goals and Policies of the General Plan into site design to create healthful environments. Consider factors such as shaded parking areas, pedestrian connections, minimization of impervious surfaces, incorporation of stormwater treatment measures, appropriate building orientations, etc.

Policy CD-2.10: Recognize that finite land area exists for development and that density supports retail vitality and transit ridership. Use land use regulations to require compact, low-impact development that efficiently uses land planned for growth, especially for residential development which tends to have a long life-span. Strongly discourage small-lot and single-family detached residential product types in Growth Areas.

CONNECTIONS

Policy CD-3.4: Encourage pedestrian cross-access connections between adjacent properties and require pedestrian and bicycle connections to streets and other public spaces, with particular attention and priority given to providing convenient access to transit facilities. Provide pedestrian and vehicular connections with cross-access easements within and between new and existing developments to encourage walking and minimize interruptions by parking areas and curb cuts.

COMPATIBILITY POLICIES

Policy CD-4.5: For new development in transition areas between identified growth areas and non-growth areas, use a combination of building setbacks, building step-backs, materials, building orientation, landscaping, and other design techniques to provide a consistent streetscape that buffers lower-intensity areas from higher-intensity areas and that reduces potential shade, shadow, massing, viewshed, or other land use compatibility concerns.

Policy CD-4.9: For development subject to design review, the design of new or remodeled structures will be consistent or complementary with the surrounding neighborhood fabric (including but not limited to prevalent building scale, building materials, and orientation of structures to the street).

LAND USE/TRANSPORTATION DIAGRAM POLICIES

Policy IP-1.5: Maintain a Zoning Ordinance and Subdivision Ordinance that aligns with and supports the Land Use/Transportation Diagram and the General Plan goals and policies. Develop new Zoning Districts which enumerate uses and establish development standards including heights to achieve vital mixed-use complete communities and facilitate their implementation.

Policy IP-1.6: Ensure that proposals to rezone and prezone properties conform to the Land Use/Transportation Diagram and advance General Plan Vision, goals and policies and benefit community welfare.

Policy IP-1.8: Consider and address potential land use compatibility issues, the form of surrounding development, and the availability and timing of infrastructure to support the proposed land use when reviewing rezoning or prezoning proposals.

EMPLOYMENT LANDS

Policy LU-6.1: Prohibit conversion of lands designated for light and heavy industrial uses to non-industrial uses. Prohibit lands designated for industrial uses and mixed industrial-commercial uses to be converted to non-employment uses. Lands that have been acquired by the City for public parks, public trails, or public open space may be re-designated from industrial or mixed-industrial lands to non-employment uses. Within Five Wounds BART Station Urban Village Area, phased land use changes, tied to the completion of the planned BART station, may include the conversion of lands designated for Light Industrial, Heavy Industrial or other employment uses to non-employment use provided that the Urban Village area maintains capacity for the overall total number of existing and planned jobs.

Policy LU-6.3: When new uses are proposed in proximity to existing industrial uses, incorporate measures within the new use to minimize its negative impacts on existing nearby land uses and to promote the health and safety of individuals at the new development site.

Policy LU-8.1: In areas that are designated for mixed industrial and commercial uses, commercial uses that are compatible with industrial uses may be allowed. Non-employment uses should be prohibited in these areas.

FISCALLY SUSTAINABLE LAND USE FRAMEWORK

Policy FS-3.9: Per City, County, and LAFCO policy, locate existing and future urban development within city boundaries. Implement this policy through San José's existing agreement with Santa Clara County which requires that unincorporated properties within the Urban Service Area either annex to the City, if possible, or execute a deferred annexation agreement prior to approval of development.

Policy FS-3.12: Encourage the County and LAFCO to join in cooperative efforts to seek the annexation of urbanized County pockets within the Urban Service Area.

COMMUNITY HEALTH, SAFETY, AND WELLNESS POLICIES

Policy CD-5.9: To promote safety and to minimize noise and vibration impacts in residential and working environments, design development that is proposed adjacent to railroad lines to provide the maximum separation feasible between the rail line and dwelling units, yards, or common open space areas, offices and other job locations, facilities for the storage of toxic or explosive materials and the like. To the extent possible, devote areas of development closest to an adjacent railroad line to use as parking lots, public streets, peripheral landscaping, the storage of non-hazardous materials and so forth. In industrial facilities, where the primary function is the production, processing or storage of hazardous materials, for new development follow the setback guidelines and other protective measures called for in the City's Industrial Design Guidelines when such facilities are to be located adjacent to or near a main railroad line.

COMMUNITY NOISE LEVELS AND LAND USE COMPATIBILITY POLICIES

Policy EC-1.7: Construction operations within the City will be required to use best available noise suppression devices and techniques and continue to limit construction hours near residential uses per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would:

- Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.

For such large or complex project, a construction noise logistics plan that specifies hours of construction, noise, and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.

LAND USE ENTITLEMENT PROCESS – SPECIFIC PLANS, ZONING, SUBDIVISIONS, AND ANNEXATIONS

Policy IP-7.1: Allow specific plans to vary in detail ranging from a level of analysis consistent with General Plan review and policy direction to the planned Development zoning level which contains detailed development standards.

Policy IP-7.4: Typically incorporate specific plans into the General Plan as Planned Residential Communities or Planned Communities.

Policy IP-7.5: Typically accomplish implementation of specific plans through the rezoning and site development entitlement process.

Policy IP-8.3: For the review of privately or public initiated rezoning applications, consider the appropriateness of the proposed zoning district in terms of how it will further the Envision General Plan goals and policies as follows:

1. Align with the Envision General Plan Land Use/Transportation Diagram designations.
2. Retain or expand existing employment capacity.
3. Preserve existing retail activity.
4. Avoid adverse land use incompatibilities.
5. Implement the Envision General Plan goals and policies including those for Urban Design.
6. Support higher density land uses consistent with the City's transition to a more urban environment.
7. Facilitate the intensification of Villages and other Growth Areas consistent with the goal of creating walkable, mixed-use communities.
8. Address height limits, setbacks, land use interfaces and other design standards so as to provide for the intensification of land uses adjacent to already developed areas.

Policy IP-8.5: Use the Planned Development zoning process to tailor such regulations as allowed uses, site intensities, and development standards to a particular site for which, because of unique circumstances, a Planned Development zoning process will better conform to Envision General Plan goals and policies than may be practical through implementation of a conventional Zoning District. These development standards and other site design issues implement the design standards set forth in the Envision General Plan and design guidelines adopted by the City Council. The second phase of this process, the Planned Development Permit, is a combined site/architectural permit and conditional use permit which implements the approved Planned Development zoning on the property.

Policy IP-9.1: Use the subdivision process to identify specific infrastructure improvements necessary to ensure that intensification of land use will be consistent with *Envision General Plan* Level of Service policies.

Policy IP-11.1: Carefully consider the implications for both the City and the affected properties of proposed annexations related to achievement of the City's fiscal sustainability and Level of Service goals, since annexation signifies the acceptance of responsibility to provide a wide range of necessary municipal facilities and services.

City of San José Zoning Ordinance

The City of San José's Zoning Ordinance (Title 20 of the Municipal Code) is intended to promote the public peace, health, safety, and general welfare of residents, while supporting the goals and policies of the General Plan. The Zoning Ordinance regulates development through the designation of zoning districts for various land use types. Each zoning district has development standards for building height, density, size, yard areas, setbacks, parking, and operations. These standards are adopted for the purposes of protecting visual character, preserving open space, and preventing overcrowding of the land, traffic hazards, and unwarranted deterioration of the environment.

Rezoning can be accomplished by a conventional rezoning to an established zoning district, or through the Planned Development (PD) rezoning process. PD rezoning is a means of tailoring the unique attributes of a development project to an individual site, in order to meet the needs of the community. The ability to customize setbacks and height limits in a PD rezoning provides an avenue to achieving consistency with higher-density General Plan designations.

Because the majority of the project site is located within the County of Santa Clara, it does not have City of San José zoning designations at this time. There are other properties located within Santa Clara County adjacent to the boundaries of the site; however, the City of San José generally surrounds the site. It should be noted that San José is a Charter City, as opposed to a General Law

City. As a Charter City, the zoning of land in San José is not required to be consistent with its General Plan. However, it is City policy that zoning should be consistent with the General Plan.[8]

Communications Hill Specific Plan

As previously described, the proposed project site is within the boundaries of the Communications Hill Specific Plan area. The vision for the Specific Plan area is for a very urban, high density, pedestrian-oriented community with 4,700 residential units atop the very visible Communications Hill in central San José. The Specific Plan includes a grid street pattern to accentuate the hill and maximize high density residential development and community facilities with the lower sides reserved for substantial swaths of grassy open space hillsides. The Plan also calls for construction of parks, an elementary school and civic use area, fire station, and neighborhood-serving commercial uses. Medium- to high-density residential uses, a fire station, and some parks were constructed previously at the top of the hill as part of the Tuscany Hills project.

The CHSP includes design standards for all components of development, including topography and grading, stairs and trails, parks, streets, and residential, commercial, and industrial development. Design standards for infrastructure and utilities such as storm drainage, water storage, sanitary sewer, and parking are also included. The overall intent of the design standards is to create not just residential development, but a neighborhood with a sense of social interaction much like older successful neighborhoods. The Specific Plan directs growth by integrating uses and establishing a specific urban structure.

Design Guidelines and Review Process

The San José City Council has adopted design guidelines for various land use types: residential, industrial, commercial, Downtown/historic, and Downtown. The guidelines generally seek to provide a common understanding of the minimum design standards to be applied to various land uses, development types, and sometimes, specific locations. The design review process evaluates projects for conformance with City ordinances and requirements of previous entitlements such as Planned Development zoning approvals or concurrent processes such as subdivisions.

4.1.2.3 *Santa Clara Valley Habitat Conservation Plan*

The Plan area is covered by the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP). As described in Section 4.7 *Biological Resources*, the HCP/NCCP is a conservation program that has been developed to promote the recovery of endangered species while accommodating planned growth in Santa Clara County. The proposed project would participate in the mitigation strategy of the HCP.

[8] The existing zoning maps for all of San José and the Zoning Ordinance itself can be found on the City's website: http://www.sanjoseca.gov/planning/zonemap/default.asp.

4.1.2.4 *LAFCO/Annexations*

In response to the rapid conversion of agricultural lands to urban uses in California in the 1950s, 60s, and 70s, the State enacted three laws to reduce the misuse of land resources and the growing complexity of overlapping, local government jurisdictions. In 1985, the three laws were consolidated into the Cortese-Knox-Hertzberg Local Government Reorganization Act. In 2000, the Act was further modified to streamline and clarify procedures to strengthen LAFCO's role and powers to encourage orderly formation of local agencies, discourage urban sprawl, and preserve and protect agricultural and open space resources. LAFCOs have approval authority for any proposal by private property owners, public agencies, or special districts to change boundaries.
LAFCO last amended their adopted island annexation policies in 2009. The most pertinent of these policies are listed below:

1. In order to fulfill the intent of the state legislature and implement the joint urban development policies of the cities, County, and LAFCO and in the interests of efficient service provision and orderly growth and development, the cities should annex unincorporated urban islands.
2. LAFCO will collaborate with the cities and County in facilitating annexation of unincorporated urban islands.
3. LAFCO will provide a LAFCO fee waiver for annexations that result in the elimination of entire unincorporated islands. This fee waiver will remain effective until rescinded by the commission.
4. Where feasible, and in furtherance of goals to support orderly growth and development, cities are encouraged to annex entire islands, rather than conduct single parcel annexations.
5. In the interests of orderly growth and development, cities should annex urban unincorporated islands existing within their current USAs (Urban Service Areas), before seeking to add new lands to their USAs.
6. LAFCO encourages the County to remove incentives for property owners in the unincorporated islands to remain in the County, by making development standards in the unincorporated islands comparable to development standards in the surrounding City.

There are approximately 336.8 gross contiguous acres of unincorporated county land within the project area. This county "pocket", which is entirely within the City's Sphere of Influence, Urban Services Boundary, and City limits, overlaps numerous public and private parcels of land, as shown on Figure 2.0-10. The majority of the project site (approximately 275.3 acres) is located within this County pocket. The Santa Clara County LAFCO has identified this unincorporated area as having a high priority for annexation by the City of San José.[9]

[9] Letter from Neelima Palacherla, LAFCO Executive Officer to Joe Horwedel, City of San José Planning Director, dated May 2, 2011. www.santaclara.lafco.ca.gov/index.html.

4.1.3 Land Use Impacts

4.1.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a land use impact is significant if implementation of the proposed project would:

- Introduce a new land use that would conflict with existing or planned uses in the area;
- Physically divide or disrupt an established community;
- 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; or
- Conflict with any applicable habitat or natural community conservation plan.

4.1.3.2 *Land Use Compatibility Impacts*

Land use impacts can occur when a particular use is placed at a location that is unsuitable for that use. For example, the development of industrial uses in proximity to residential uses has the potential to result in land use conflicts. Land uses may also be incompatible with each other if they are too close or if their design does not minimize conflicts (such as a "good neighbor" fence). The intensification of land uses can also cause conflicts with adjacent lower intensity neighborhoods. According to the Envision PEIR, conformance with General Plan policies, the Zoning Ordinance, and adopted design guidelines would limit or preclude land use impacts to existing businesses and residential development resulting from new development in Growth Areas.

The 2040 General Plan acknowledges that several of the existing Specific Plans, including the CHSP, provide important growth capacity within the City and that growth capacity is retained in the General Plan. The Envision General Plan did not include modifications to the CHSP growth capacities or Design Standards.

Land Use Compatibility at the Top of the Hill

Consistent with the Specific Plan and Envision General Plan, the proposed project is the development of the remaining 2,200 dwelling units and commercial/retail/office uses within the undeveloped residential portions of the Specific Plan area. The project also includes the extension of streets and infrastructure and the construction of parks, trails, and open space necessary to implement the Specific Plan. This development would be very similar to the existing approximately 733-unit Tuscany Hill development located at the top of the hill. New streets, parks, commercial/retail/office uses would be integrated into the existing uses, yet would have distinct architecture and provide a variety of residential unit types.

Existing Tuscany Hills Development

The existing Tuscany Hills residential development would be most affected by the proposed project from a land use compatibility perspective because the new development would be located immediately adjacent to the existing residential development. Adverse effects on adjacent residential

development could include increased lighting, visual intrusion, and elevated noise levels due to increased traffic and activity. Other residential development located at the base of the hill would experience some of the effects such as an increase in traffic, aesthetic impacts, and construction-related air quality and noise impacts, but to a lesser extent than the Tuscany Hills development, as described in the section below.

The Tuscany Hills development includes medium- to high-density attached dwellings consisting of townhouses, row houses, condominiums, and podium-style buildings similar to the proposed development. While these uses are considered to be compatible with the densities and heights of the proposed development, 2,200 additional residential units would significantly increase the land use intensity of the site compared to existing conditions. The vacant project site has the appearance of open space at the top of the hill. While open space areas would be retained on the flanks of the hill, consistent with the Specific Plan, the construction of residential/commercial/retail/office uses on these vacant lands would significantly change the open space character of the project area.

The commercial/retail/office uses would require additional vehicle trips to the site by employees and delivery trucks. Depending on the uses ultimately included, additional noise from restaurants and entertainment venues could also affect adjacent residents. Traffic and noise impacts of the proposed development are described in detail in Sections 4.2, *Transportation* and 4.3, *Noise and Vibration*, of this SEIR.

The proposed project includes the construction of up to six podium buildings up to 85 feet in height, which would be approximately 45-55 feet taller than most of the other residential structures on the hill. As shown on Figure 1.0-4, two of these buildings would be located within the Village Center (central portion of the site). The other four would be located in the central/eastern portion of the site. The Specific Plan included the construction of a total of nine podium structures, one of which was constructed as part of the Tuscany Hills project. With development of the proposed project, two less podium buildings than originally envisioned in the approved Specific Plan would be constructed.

Given the locations of the proposed podium structures and the directionality of the sun, the proposed podium structures would only shade the future proposed development. The existing Tuscany Hills development would not generally be affected by shade and shadow from the podium structures. Similarly, future park uses near the central portion of the site may be shaded for short periods of time during the winter months by one or two podium structures when the sun is lowest in the southern sky.

The existing residents would be exposed to construction-related air quality, noise, traffic, and hazardous materials impacts during construction. Construction is anticipated to occur in different locations of the site over a 12- to 15-year period with the first phase including mass grading of the site to facilitate overall development, as shown on Figure 2.0-6. Impacts would be related to dust generation during grading, exhaust and noise from construction equipment, release of naturally-occurring asbestos during grading, and truck traffic. The project includes standard measures to reduce dust, noise, traffic, and hazardous materials impacts to existing residents as described in detail in the air quality, noise, traffic, and hazardous materials sections of this SEIR. These impacts were previously identified in the Specific Plan and the Envision San José EIRs.

Future Residents of the Proposed Project

Future residents of the proposed project would be subjected to similar construction-related impacts because new units would be occupied as construction occurs. As described in the respective sections of this SEIR, these impacts have been identified and mitigation measures are included in the project to reduce these impacts, which were previously identified in the Specific Plan and Envision San José General Plan EIRs. The future residents could also be affected by the long-term noise typically generated within dense developments. These impacts are identified in *Section 4.3 Noise and Vibration*.

Future residents of the project site would also be impacted by rail noise and vibration from passing trains on the Caltrain tracks located along the northern boundary of the site, as described in *Section 4.3 Noise and Vibration*. In addition to noise, railroad lines could pose hazards and safety risks to nearby development. Implementation of General Plan policy CD-5.9 would reduce these impacts to a less than significant level.

Other Surrounding Land Uses

As described in the Specific Plan EIR, there are surrounding residential developments, primarily at the base of the hill that would be affected by the proposed project. These residential developments would be affected in the long-term by an increase in traffic on the surrounding streets that provide access to and from the proposed development. These impacts are described in greater detail in *Section 4.2 Transportation* of this SEIR and are also identified in the Specific Plan and Envision San José EIRs.

Construction impacts to these surrounding land uses would also be primarily related to construction truck traffic. Construction-related noise and air quality impacts would be greatly reduced by the distances to these surrounding developments, the steep topography of the hill, typical wind direction (from the northwest), and by the mitigation measures included in the project to reduce these impacts.

To minimize impacts from the intensification of development on adjoining neighborhoods, the Specific Plan contains Design Standards related to all components of development including grading, building interfaces, open spaces, streets and streetscapes, and landscaping. The Design Standards are intended to create a unique urban structure with an integrated mix of uses and housing types which makes an architecturally diverse neighborhood. Consistent with the Specific Plan, building and unit types and density would be more urban than suburban with townhouses with tuck-under (podium) parking, stacked walk-up flats, small podium apartment houses, and mid-rise apartment buildings.

The Design Standards include requirements and policies for building massing, height, articulation, architectural elements, setbacks, parking ratios, and private driveways and alleys, among others. For example, a minimum front or side setback of five feet from the public right-of-way is required for all multi-family residential blocks. Encroachments into this setback are allowed but limited to 65% of the street frontage. Building with breaks in the overall massing give residential scale to the street frontage. Buildings must be modulated or stepped back every 30 feet. The maximum length of a building is limited to 130 feet. All parking garages much be enclosed to secure access.

In addition to the CHSP Design Standards, future development would be subject to General Plan policies intended to reduce and avoid conflicts between various land uses. For example, new development will be required to use a combination of building setbacks, building step-backs, materials, building orientation, landscaping, and other design techniques to provide a consistent streetscape that buffers lower-intensity areas from higher-intensity areas. Potential shade, shadow, massing, viewshed, or other land use compatibility concerns (GP Policy CD-4.5) would be reduced. In accordance with GP Policy CD-4.9, the final design of new structures shall be consistent with or complementary to the surrounding neighborhood fabric (including but not limited to prevalent building scale, building materials, and orientation of structures to the street).

Construction-related impacts would also be reduced with implementation of Envision San José 2040 General Plan policies including GP Policy EC-1.7 and MS-13.4, which require preparation of a noise logistic plan and conformance with construction mitigation measures recommended in the current BAAQMD CEQA Guidelines, as described in *Section 4.4 Air Quality* of this SEIR.

Industrial Park Land Use Compatibility

The proposed project also includes the development of approximately 1.44 million square feet of Industrial Park uses. The Industrial Park uses could generate elevated noise, odors, lighting, dust, truck traffic, and/or pollution that can adversely affect sensitive land uses such as residences and schools. Conflicts between sensitive receptors and industrial facilities can also result in the loss of businesses who cannot afford the liability and limitations that result from such conflicts.[10] Even companies that do not handle noxious substances or emit pollutants usually require access to truck services that may create problems for substantial numbers of pedestrians or bicycle riders, particularly children.

The future industrial development would be located at the eastern base of the hill near Hillsdale Avenue on lands currently occupied with heavy industrial uses as shown in Photos 5 and 6. This represents a change from the current General Plan, which shows the industrial area occupying the northern portion of the site. The proposed acreage of the industrial area would remain unchanged. This location is of sufficient distance and down-slope from proposed and existing residences and schools such that these sensitive uses would not be substantially affected. In addition, as stated in the Envision PEIR, replacing the existing heavy industrial uses with newer buildings meeting current zoning standards that prohibit spillover of impacts from undesirable actives would reduce land use impacts.

Access to the industrial portion of the site would be provided via Hillcap Avenue and a proposed frontage road that would extend east from Communications Hill Boulevard along the railroad tracks. It is anticipated at this time that industrial development construction traffic would access the site from Hillcap Avenue via Capitol Expressway, thus bypassing streets where residential uses are located. Noise and air quality impacts would generally be contained within the primarily industrial area near Monterey Road and would not be expected to significantly impact surrounding residential land uses.

[10] Envision PEIR.

Construction-related impacts of these developments are similar to the proposed residential component of the project. Implementation of General Plan policies, including Policy EC-1.7, would reduce these impacts to a less than significant level. Additional analysis, including a project-specific noise assessment, may be required once specific industrial park development is identified.

School

This SEIR provides program-level environmental review for the future construction of a 5.7-acre school site, along with an associated 3-acre playfield area. Future construction of a school could result in traffic impacts during drop-off and pick-up and can generate school-related noise on playgrounds during recess and at other times of the day. These impacts are consistent with residential development, as schools are located all over San José in residential neighborhoods.

Construction-related impacts of the school would be similar to the proposed project. Hazardous materials remediation of the site is discussed in *Section 4.6 Hazards and Hazardous Materials*. Implementation of General Plan policies, including Policy EC-1.7, will reduce these impacts to a less than significant level. Construction of the school would require subsequent environmental review, including preparation of a traffic report.

With implementation of the CHSP Design Standards, General Plan policies, Zoning Ordinance, and other applicable regulations, the proposed project would not result in significant land use compatibility impacts. This conclusion is consistent with the analysis in the Envision PEIR and CHSP EIR. **(Less than Significant Impact)**

4.1.3.3 *Impacts to Established Communities*

As described above, there are several established neighborhoods within the project area, including adjacent to the project site. Due to the location of the site at the top of Communications Hill, the project would not physically divide or disrupt these neighborhoods. The development is consistent with the existing Tuscany Hills development and would require the construction of additional roadways for site access, including the extension of Communications Hill Boulevard north to Curtner Avenue. This extension has been planned since the CHSP was approved in 1992. Other roadway, trail, and bike lane improvements and connections to nearby transit facilities are proposed as part of the CHSPADP to further improve transportation conditions within the project area.

While the project would result in additional traffic on neighboring roadways, most of this traffic would occur on arterial streets. The additional traffic would not divide any of the communities. Neither residents nor housing would be displaced as a result of the project as discussed further in Section 4.15 *Population and Housing*.

The construction of the proposed project would further the goals and policies of the CHSP by constructing the remaining residential units, some of the industrial park uses, and providing for the future construction of a school. The purpose of the CHSP is to create not merely a place of dwelling, but a desirable neighborhood in a unique setting. Application of the CHSP Design Standards and Envision San José General Plan Policies will create a cohesive community and urban structure with convenient commercial and retail uses. The construction of streets and trail and transit connections

would provide attractive amenities for use by residents and visitors within and surrounding the Plan area.

For these reasons, the proposed project does not include any features that would physically divide or disrupt surrounding neighborhoods. With implementation of the CHSP Design Standards, General Plan policies, Zoning Ordinance, and other applicable regulations, the proposed project would not result in a significant impact on established communities. This conclusion is consistent with the analysis in the Envision PEIR and CHSP EIR. **(Less than Significant Impact)**

4.1.3.4 *Consistency with Plans and Policies*

As described further in Section 4.7 *Biological Resources*, the proposed project would not conflict with the Santa Clara County HCP/NCCP.

County of Santa Clara Plans and Policies

The majority of the project site is located within an unincorporated area of Santa Clara County. The pocket is generally surrounded by the City of San José, as shown on Figure 2.0-10. It is the intent of the project to allow for the annexation of approximately 310.2 acres into the City of San José such that it can be developed consistent with the Communications Hill Specific Plan and the City's General Plan. This acreage also includes approximately 35 acres that are proposed for annexation on properties that are not part of the project site. Annexation of these properties is proposed to minimize the creation of additional County pockets and to reduce the size of any residual pockets within the City's Sphere of Influence.

The County has determined that annexation of the site to the City is a high priority. The project does not require changes to the existing County General Plan or zoning designations of the site. Prezoning to *A(PD)*, *Industrial Park*, *Open Space*, and *Public/Quasi-Public* would allow for annexation consistent with LAFCO policies as described below. For this reason, the project is consistent with the Santa Clara County General Plan and zoning ordinance goals and policies.

Envision San José 2040 General Plan

The Envision San José 2040 General Plan identifies the Communications Hill Specific Plan area as a Growth Area and incorporates the land uses designated within the Specific Plan. The CHSP provides significant capacity for residential and mixed-use development at an important infill site in proximity to transit and other City services. The General Plan also acknowledges that further review and updating of the Specific Plans within the City will be important to fully realize the goals and policies of the Envision General Plan.

The CHSP included the construction of 4,700 residential units, of which, approximately 2,500 have been constructed. The project is the construction of the remaining approximately 2,200 residential units, commercial/retail/office, and Industrial Park uses, consistent with the CHSP. Future development of a school is also evaluated at a program-level in this SEIR. All of this development is consistent with the land use designations shown on the Envision San José 2040 Land Use Transportation diagram (Figure 2.0-9); however, some changes to the Land Use Transportation

Diagram and the CHSP are proposed. These changes preserve the acreage for industrial uses and will not facilitate more units than were originally set forth in the CHSP in 1992.

Land Use Transportation Diagram Amendments

The proposed project would result in changes to the General Plan land use designations as shown in the table below and Figure 2.0-9. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described. Table 2.5 outlines the overall proposed changes in the General Plan Land Use Transportation Diagram designations for the site.

Residential Amendments

While the proposed project does not include significant changes to the existing land use designations, number of residential units, or square footage of commercial, retail, office, and industrial park development, the project does propose to modify the density requirements of the General Plan and CHSP. The General Plan and CHSP require a minimum density of 24 DU/AC per block. The project proposes an average block density of at least 24.8 DU/AC over the development area to allow some blocks to develop at a density below 24 DU/AC (net) provided the total acreage of such development does not exceed 106 net acres. This is roughly 34% of the total project site for all undeveloped lands.

The CHSP discourages designs that allow streets to be dominated by garages, carports, or parking lots. The proposed project seeks to modify this requirement along the outlying edges of the gridiron street network next to steep slopes where there is not ample space for buildings with a deep footprint. While several units would have individual garage doors facing the street, there would be ample living area placed alongside the garages to avoid the unwanted appearance of long processions of garage doors and curb cuts. Where such units are proposed with individual garage doors facing the street, they would not be located on the project's major streets and would be used in moderation only where grading conditions make it impractical to serve such units with rear loaded alleys. In no case would such units be allowed on both sides of the same street except for the two curvilinear cul-de-sacs at the northwest end of the site. These streets are somewhat removed from the main gridiron network of streets that make up the majority of the development.

As previously described, the Specific Plan envisioned the construction of nine tall podium residential structures, one of which was constructed as part of the Tuscany Hills development. The proposed project includes the construction of up to six podium buildings that would reach up to seven stories in height, two of which would be located within the Village Center (central portion of the site). The other four would be located in the central/eastern portion of the site. With development of the proposed project, two less podium buildings (but no fewer units) than originally envisioned in the approved Specific Plan would be constructed.

The project also proposes to relocate some of the areas of residential and industrial uses, as shown on Figure 2.0-9. The General Plan land use transportation diagram shows *Urban Residential* uses to be located along Old Hillsdale Avenue in the northern portion of the site, consistent with the CHSP. The proposed project would relocate these units to the west to reduce potential land use compatibility

issues with the existing and future industrial and industrial park uses located adjacent to and on the site in this area.

Industrial Park Amendments

The CHSP designates up to 1.44 million square feet of *Industrial Park* uses on the project site. As described above, these lands are proposed to be moved to the northheastern area of the site. The industrial park uses are anticipated to consist of multiple buildings of various square footages on approximately 55 acres. While the CHSP states that industrial park buildings on the project site would be limited to two stories in height, the project proposes to limit building heights to four (4) stories, although these heights may be extended if future city-wide General Plan policies are modified. Specific restrictions on building heights may be included in the zoning on the site.

Retail/Commercial/Office Amendments

The CHSP Design Standards for Retail/Commercial/Office development states that building height in the Village Center is limited to two stories of housing or offices over the ground floor of retail or offices. While retail uses are anticipated to be predominantly on the ground floor, the project proposes to allow office uses on the second floor of the structures in the Village Center. Restaurants may also be allowed on upper floors to take advantage of view opportunities. Outdoor eating areas may be provided at grade and along the street or on upper floor decks or rooftops.

Transportation Amendments

The CHSP identifies that a shuttle bus route connection from the top of the hill to Mill Pond Drive be provided. The project proposes to include a shuttle program at the Planned Development (PD) Permit stage that may utilize other potential shuttle route options such as Carol Drive, Communications Hill Boulevard/Curtner Avenue, or Narvaez Avenue. The shuttle service may also be extended to serve future industrial uses within the south and eastern portions of the Specific Plan area to reduce vehicle trips.

The Specific Plan included the roadway extension of Pullman Way between Communications Hill Boulevard and the Hillcap Avenue extension on the northern side of the project site. The intended purpose of this new street connection was to provide additional vehicular access to the site, disperse commute hour traffic away from congested freeway interchanges, and provide better overall connectivity in the project area. This improvement would require an undercrossing of the active Caltrain tracks, which was determined to be cost prohibitive due to land acquisition and the excavation and geotechnical retaining systems required. Further, the traffic analysis determined that the connection would provide only modest traffic benefits within the project area. For these reasons, the project proposes to eliminate this street connection from the Specific Plan. Additional roadway and on/off-ramp improvements and trail connections would be provided by the project as part of the proposed CHSPADP.

The proposed changes to the General Plan and CHSP would not significantly change the intent or vision for the Specific Plan. The residential development consistent with the CHSP and adjacent development would still occur, thus facilitating new transit-oriented housing and the development of a well-planned neighborhood in a unique setting. The swapping of residential and industrial lands

would allow uses to be developed in more compatible areas of the site, thus reducing future potential land use compatibility issues.

The proposed project is consistent with the major strategies embodied in the General Plan, as listed in Section 4.1.2.3 of this SEIR and the CHSP. Specifically, the project would provide a significant amount of the remaining development envisioned in the CHSP, which is a key strategy for achieving many of the City's goals related economic growth, fiscal sustainability, and environmental stewardship. For example, the project directly supports the objectives of focusing growth within Growth Areas and Specific Plan areas near transit, existing and future employment centers, and Downtown. The project incorporates design standards and strategies to advance the City's Green Vision and goals for environmental sustainability. Overall, the project is intended to transform the CHSP into a vibrant, attractive, and complete neighborhood that would provide an active, walkable, bicycle-friendly, transit-oriented, and mixed-use urban setting for new housing and job growth.

Implementation of the General Plan policies, CHSP Design Standards, and other applicable standards and regulations would reduce any land use incompatibility issues. Other environmental effects due to the intensification of development are addressed throughout this SEIR. Program-level mitigation is provided for all potential impacts associated with the future school site. For these reasons, the proposed land use designation amendments would not result in a significant land use impact or conflict with General Plan policies related to land use compatibility.

Communications Hill Specific Plan

The Communications Hill Specific Plan is incorporated into the Envision General Plan. Thus, changes to the Specific Plan are also changes to the General Plan, as described above. With the proposed project, all of the goals and policies of the CHSP would remain intact. In addition, the vision of the Specific Plan as an urban hillside development with walkable grid streets, a diversity of high-density residential types, and neighborhood-serving commercial uses that make special places within the neighborhood would be retained. The Specific Plan allows the City to guide new residential development at locations and in a form consistent with the City's goals of promoting transit use, building walking environments, and supporting the City's Downtown.

The 2040 General Plan incorporates the CHSP and other Specific Plan areas as Growth Areas to accommodate nearly all of the City's planned housing and job development. The proposed modifications to the CHSP would not result in a net change in the City's housing and job growth capacity. Therefore, the proposed project would be consistent with the assumptions regarding planned growth in the 2040 General Plan and would preserve the CHSP as a transit-oriented development near Downtown.

Zoning Ordinance

The majority of the project site does not have a City of San José zoning designation because it is currently in the County. The portion of the proposed project site that would be annexed (approximately 275.3 acres) would be pre-zoned and rezoned to *A(PD)* to allow development of the site. As shown on Figure 2.0-10, additional properties are also being annexed at this time to eliminate or reduce the overall size of the existing County pocket. The project would pre-zone/rezone these properties as shown in the table below.

Table 4.1-5: Proposed Pre-Zoning/Rezoning Designations	
Zoning Designations	**Approximate Acreages**
A(PD), Agricultural (Planned Development)	275.3
IP, Industrial Park	1.0
OS, Open Space	6.9
P/QP, Public/Quasi-Public	27.0
TOTAL	**310.2**

The project would require a Planned Development Permit prior to issuance of any building permits. The proposed project would be constructed consistent with the Planned Development Permit issued by the City which will include performance standards and design guidelines consistent with the CHSP, City of San José Zoning Ordinance, and the General Plan.

Annexations

As previously described, the site has been identified by the County of Santa Clara as having a high priority for annexation to the City of San José. The proposed project includes the annexation of approximately 275.3 acres of the 331.6-acre project site for construction of the project. An additional approximately 35 additional acres outside the project boundary would be annexed to the City of San José, as shown on Figure 2.0-10, consistent with State Government Code, LAFCO, County, and City policies.

The proposed project would not conflict with the Santa Clara County General Plan or Zoning Ordinance, City of San José 2040 General Plan, Zoning Ordinance, CHSP, SCCHCP, LAFCO, or other adopted plans and policies adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

4.1.4 Cumulative Impacts

The proposed project has the potential to contribute to cumulative land use impacts in the Communications Hill area and surrounding neighborhoods. In the short-term, construction activities associated with future development could combine with other construction projects, which could affect sensitive land uses. Construction-related effects are discussed in greater detail in the *Noise*, *Air Quality*, *Traffic*, and *Hazardous Materials* sections of this SEIR. In the long-term, land use impacts could occur if future development conflicts with other planned development or infrastructure projects.

4.1.4.1 *Land Use Compatibility*

The Envision PEIR acknowledged that new development proposed by the *Envision San José 2040 General Plan* in conjunction with other planned development could create land use conflicts with existing development that will be adjacent to or near the new development. However, implementation of General Plan policies, City design guidelines, and the Municipal Code would substantially limit or preclude land uses conflicts. For this reason, the Envision PEIR did not identify any significant impacts related to land use. The Specific Plan EIR concluded that land uses

surrounding the Specific Plan area would not be significantly impacted. The CHSP EIR found that with the implementation of General Plan policies and project-level mitigation measures, internal land use compatibility impacts associated with traffic, noise, glare, commercial and industrial uses, schools, privacy, would be less than significant.

4.1.4.2 *Loss of Open Space*

The proposed project would result in the loss of open space on Communications Hill. This impact was previously identified in the CHSP EIR. There are few areas of open space left in San José and those that remain are not located within the project vicinity; therefore, the cumulative loss of open space is considered on a City-wide basis. The Envision General Plan acknowledges that given the development densities expected within the City's Urban Growth Boundary, the protection of open space is best implemented at the City's Greenbelt and natural habitats along the City's edges.

General Plan Policy ER-1.1 states that the City shall continue to maintain the Greenline/Urban Growth Boundary and focus development and redevelopment within the existing urban envelope of the City. The proposed project would reduce open space within the project area; however, this development has been envisioned for many years. Implementation of General Plan policies and CHSP design standards would reduce cumulative impacts associated with the loss of open space to a less than significant level.

The proposed project would result in approximately 44 fewer acres of open space than originally envisioned in the Specific Plan. The methods by which the original number of open space acres was determined is unknown, however, because construction of the development was not proposed at that time, it is considered to be a gross estimate. The proposed amount of open space (approximately 126 acres) is based upon current, detailed topographic information that has been refined using actual boundary locations and the acres needed to develop the project as currently proposed.

The amount of open space included in the proposed project reflects the need for neighborhood amenities consistent with current San José design criteria and General Plan goals and policies. The inclusion of wider trails, streets with bike lanes ("complete streets"), pedestrian-friendly sidewalks, and traffic-calming features, required additional acres than what was originally envisioned in the CHSP. Incorporating these beneficial design amenities increased the amount of "development" acreages internal to the plan, thereby reducing the perimeter open space areas. The reduction in open space areas was a trade-off to allow implementation of General Plan policies including those related to providing safe, attractive, and accessible pedestrian and bicycle connections within neighborhoods and to transit. The project development footprint was also enlarged to accommodate stormwater treatment bioswales within the neighborhood areas.

The CHSP describes the open space component as sloping grasslands intended to give the hillside definition and provide boundaries for the neighborhood. These lands are very steep and may require some terracing for erosion control; therefore, they are not considered to be useable in the traditional open space sense. While a trail is planned within the open space areas, the land, due to its physical characteristics would not be available for park-like uses. Parklands were and continue to be calculated separately from the open space acreages. For these reasons, the loss of 44 acres of what is considered to be unusable open space would be less than significant.

4.1.4.3 *High Speed Rail Impacts*

California High Speed Rail is planned to be constructed near the existing Caltrain alignment that serves as the northern boundary of the site. The HSR project could result in land use conflicts due to increased noise and vibration levels. These effects would combine with similar effects associated with the existing Caltrain line; however, because the lines would be on a similar alignment, the high speed line would not physically divide the community. As described in Section 4.3 *Noise*, operation of HSR is not expected to significantly increase the noise levels to which existing and future residential developments would be exposed with the incorporation of site design and noise reduction techniques.

The HSR project could also influence the type of businesses, building heights, and other design features of future industrial park development in the eastern portion of the site due to potential noise and vibration impacts. Industrial uses that utilize sensitive types of equipment for manufacturing and/or testing may not be compatible with vibration from rail lines.

According to the Program EIR prepared for the HSR project (as partially revised), high speed rail is considered highly compatible if it is located in areas planned for multi-modal transportation centers, transit-oriented development, redevelopment/revitalization, and/or high-intensity employment uses.[11] The future project-level EIRs for the San José to Merced HSR alignment will evaluate the potential for specific land use impacts and identify mitigation to minimize noise exposure, visual effects, and other conflicts. For example, the CHSRA will maintain a high level of visual quality for HSR facilities by incorporating measures such as visual buffers, trees and other landscaping, architectural design, and public artwork. Therefore, the proposed project is not anticipated to conflict with the HSR project and cumulative impacts would not be significant.

The proposed project would not result in or make a considerable contribution to a cumulative impact related to land use compatibility. This conclusion is consistent with the analysis in the Envision PEIR and the CHSP EIR. **(Less than Significant Cumulative Impact)**

4.1.5 Conclusion

With implementation of the CHSP Design Standards, General Plan policies, Zoning Ordinance, and other applicable regulations, the proposed project would not result in significant land use conflicts. The project would not conflict with the County of Santa Clara General Plan or Zoning Ordinance, Envision San José 2040 General Plan, Zoning Ordinance, LAFCO, or other adopted plans and policies adopted for the purpose of avoiding or mitigating an environmental effect. The project would not result in or make a considerable contribution to a cumulative impact related to land use compatibility. These conclusions are consistent with the analysis in the Envision PEIR and the CHSP EIR. **(Less than Significant Impact) (Less than Significant Cumulative Impact)**

[11] 2012 Bay Area to Central Valley HST Partially Revised Final Program EIR, www.hsr.ca.gov/Programs/Environmental_Planning/bay_area.html

4.2 TRANSPORTATION

The following discussion is based on a Transportation Impact Analysis (TIA) completed by *Hexagon Transportation Consultants* in May 2014. The transportation impacts of the project were evaluated following the standards and methodologies set forth by the City of San José and the Santa Clara Valley Transportation Authority (VTA). Since the project would generate more than 100 peak hour gross vehicle trips, an analysis in accordance with the VTA's Congestion Management Program (CMP) guidelines was prepared. A copy of the TIA is included in Appendix B.

4.2.1 Existing Setting

4.2.1.1 *Existing Roadway Network*

The existing roadway network serving the project area includes regional facilities and local roadways. Regional and local access to the project site is provided via the streets described below and shown on Figure 4.2-1.

Regional Access

SR 87 is a six-lane freeway that is aligned in a north-south orientation. SR 87 begins at its interchange with SR 85 and extends northward to US 101. Access to the project site is provided by ramps at Capitol Expressway/Narvaez Avenue and Curtner Avenue.

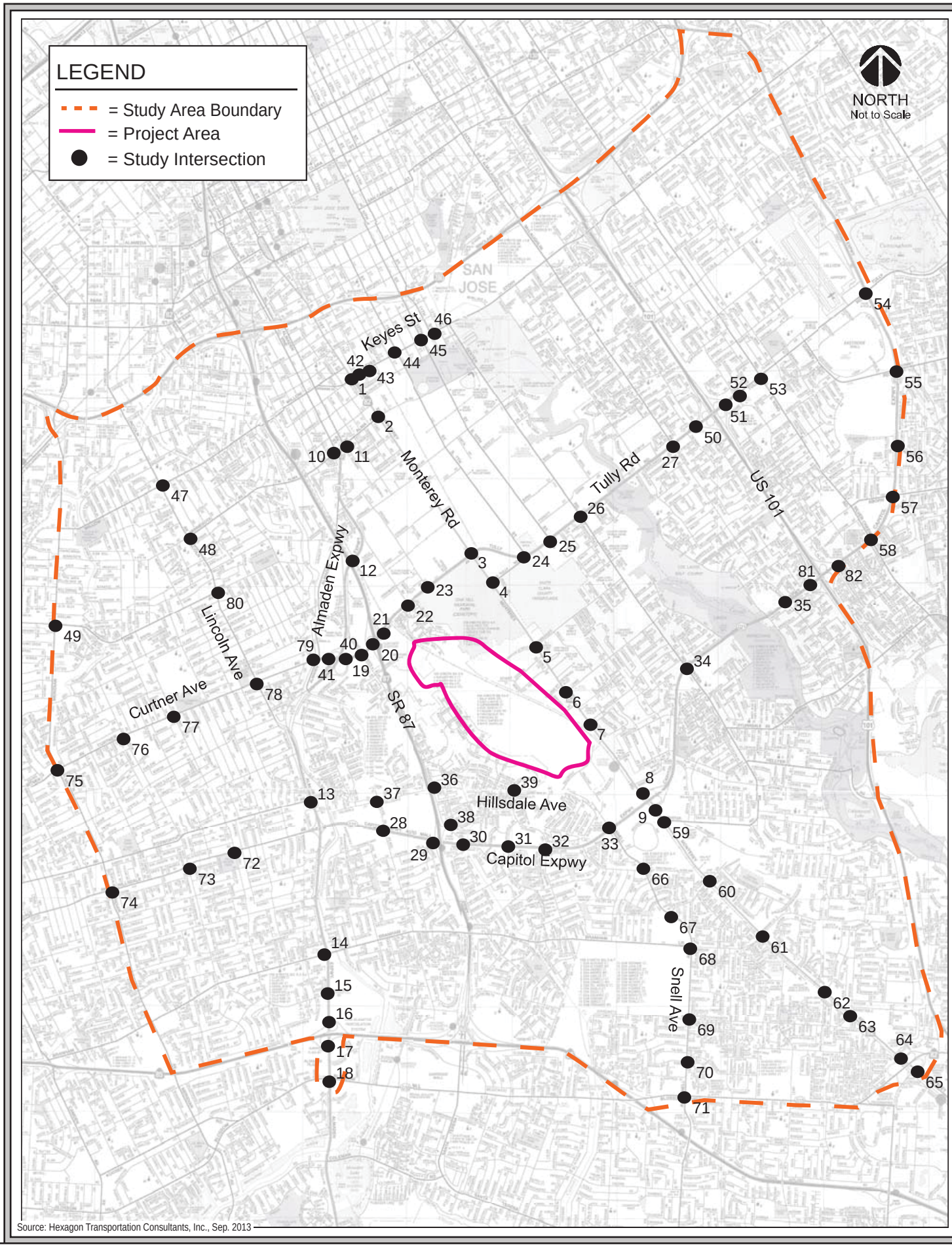
US 101 is an eight-lane freeway (three mixed-flow lanes and one HOV lane in each direction) in the vicinity of the site. In the Bay area, US 101 extends northward through San Francisco and southward through Gilroy. Access to and from the site is provided via full interchanges at Capitol Expressway, Tully Road, and SR 85.

Interstate-280 connects from US 101 in San José to I-80 in San Francisco. It is generally an eight-lane freeway in the vicinity of downtown San José. It also has auxiliary lanes between some interchanges. The section of I-280 just north of the Bascom Avenue overcrossing has six mixed-flow lanes and two high- occupancy-vehicle (HOV) lanes. I-280 provides access to the project area via its interchanges with SR 87 and US 101.

Interstate-680 is an eight-lane freeway that extends north from its transition from I-280 at US 101 through Milpitas and to the north. Access to the project area is provided indirectly via its transition to I-280 near US 101.

Local Access

Monterey Road (SR 82) is a six-lane major arterial that is oriented in a north-south direction. Monterey Road extends southward into Morgan Hill and northward into San Francisco. Access to the site is provided via Capitol Expressway and Curtner Avenue.



Source: Hexagon Transportation Consultants, Inc., Sep. 2013

ROADWAY NETWORK AND STUDY INTERSECTIONS FIGURE 4.2-1

Curtner Avenue is an east-west arterial street extending from Camden Avenue near SR 17 to Tully Road just east of Monterey Road. Curtner Avenue is generally four lanes, however it widens to six lanes south of Communications Hill Boulevard. Curtner Avenue provides access to SR 87 and the project site via its intersection with Communications Hill Boulevard.

Capitol Expressway is a six-lane major arterial that is aligned in an east-west orientation. Capitol Expressway begins at its interchange with I-680 in east San José, where it changes designation from San Antonio Street, and extends to the south and west where it changes designation to Hillsdale Avenue at Almaden Expressway. Access to the site is provided via Vistapark Drive, Narvaez Avenue, and Snell Avenue.

Almaden Expressway is predominantly a six-lane expressway that extends from the Almaden Valley in south San José to Alma Avenue in the downtown area, where it narrows and transitions into a one-way couplet. Almaden Expressway provides access to the site via Curtner Avenue, Hillsdale Avenue, and Capitol Expressway.

Hillsdale Avenue is currently an east-west two-to-four lane arterial. Hillsdale Avenue begins at Pearl Avenue and extends eastward beyond Snell Avenue terminating just west of the railroad tracks. Access to Hillsdale Avenue is provided via Narvaez Avenue and Snell Avenue and direct access to the site is provided by the intersection of Vistapark Drive and Hillsdale Avenue.

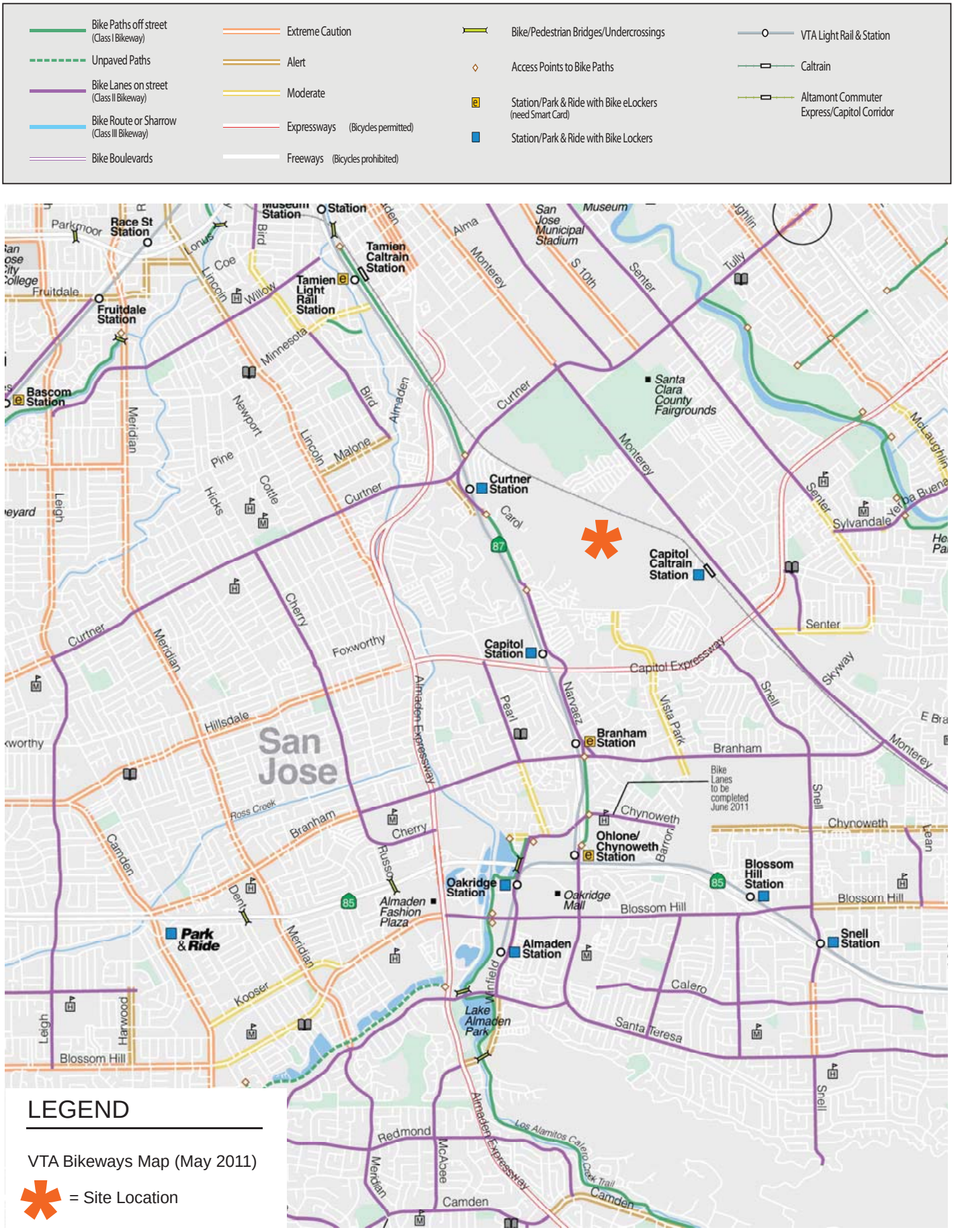
Narvaez Avenue is a two-lane collector that begins near Helzer Road east of SR 87 and extends southward beyond Branham Lane where it terminates at Calpella Drive. Narvaez Avenue provides direct access to the SR 87 northbound ramps and to the project site via Hillsdale Avenue.

Snell Avenue is a four-lane collector that begins south of Santa Teresa Boulevard and extends northward to Hillsdale Avenue where it terminates. Access to the site is provided via Capitol Expressway and Hillsdale Avenue.

Existing Bicycle and Pedestrian Facilities

Class II bicycle facilities (bike lanes) are provided along the following roadways in the project area, as shown in Figure 4.2-2:

- Cherry Avenue between Curtner Avenue and Almaden Expressway
- Curtner Avenue/Tully Road between Quimby Road and Leigh Avenue
- Monterey Road between Metcalf Road and Curtner Avenue
- Narvaez Avenue between Hillsdale Avenue and Branham Lane
- Snell Avenue between Hillsdale Avenue and Curie Drive
- Pearl Avenue between Capitol Expressway and Branham Lane
- Branham Lane between Cherry Avenue and Monterey Road
- Senter Road between Keyes Street and south of Capitol Expressway
- Seventh Street between San José State University and Curtner Avenue



Source: Hexagon Transportation Consultants, Inc., Sep. 2013

EXISTING BICYCLE FACILITIES FIGURE 4.2-2

A City of San José and Santa Clara County Class I bicycle facility (off-street bike trail) is located adjacent to the east side of SR 87 between Willow Street and Curtner Avenue. At Curtner Avenue, the facility becomes on-street bike lanes to Carol Drive, where it again becomes a Class I facility on the east side of SR 87 to Narvaez Avenue. This trail accesses the Tamien Caltrain/Light Rail station, located just north of Alma Avenue, and the Curtner Light Rail station on Canoas Garden Avenue. Bike lockers and bike racks are provided at the Curtner, Capitol, and Branham LRT stations. These bike trails are also available for use by pedestrians.

Pedestrian facilities in the project area consist primarily of sidewalks along the streets in most residential and commercial areas, as well as the aforementioned bike/pedestrian trail. Sidewalks are found along virtually all previously described local roadways in the study area, with a few exceptions, and along the local residential streets and collectors near the site. There are no sidewalks along the north side of Curtner Avenue between Communications Hill Boulevard and Canoas Garden Avenue, the north side of Hillsdale Avenue between Old Hillsdale Avenue and Victoria Place, and the west side of Narvaez Avenue along its entire extent.

4.2.1.2 *Existing Transit Service*

Bus and light rail transit (LRT) service in Santa Clara County is operated by the Santa Clara Valley Transportation Authority (VTA). Commuter rail service (Caltrain) from San Francisco to Gilroy is operated by the Peninsula Corridor Joint Powers Board (PCJPB). The existing transit facilities in the vicinity of the project site are described below and shown on Figure 4.2-3.

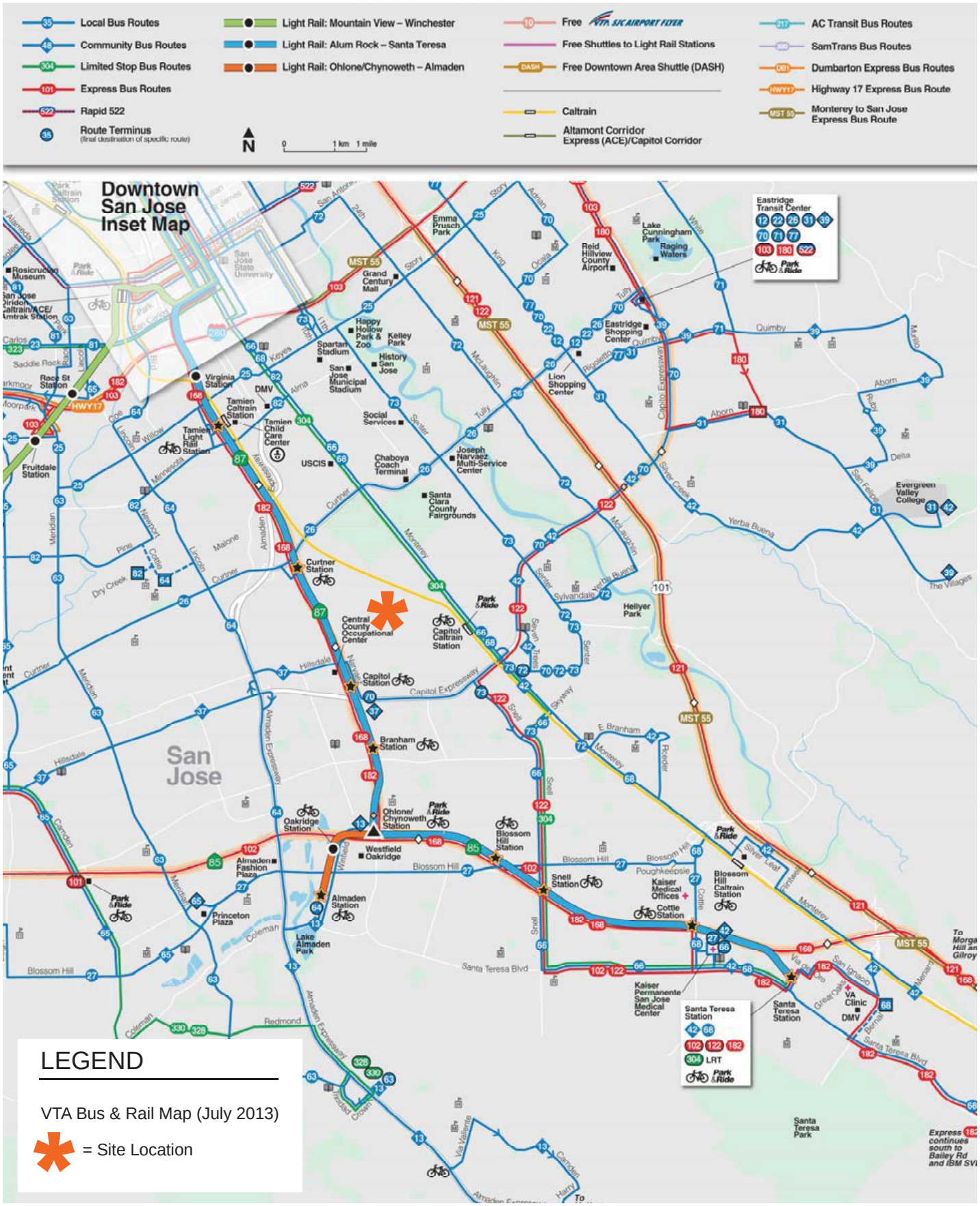
Bus Service

The project site is primarily served by six VTA bus lines. The closest bus stops are located near the intersections of Communications Hill Boulevard/Curtner Avenue and Capitol Expressway/Vistapark Drive.

Local Route 26 provides service between the Eastridge Transit Center and the Sunnyvale/Lockheed Martin Transit Center. Route 26 operates along Curtner Avenue and Tully Road in the project study area, with 30-minute headways during the weekday peak commute hours and 30-minute headways during most of the day on weekends. Bus stops for Route 26 are located approximately one mile from the project site and are situated on the south side of Curtner Avenue just east of Communications Hill Boulevard, and on the north side of Curtner Avenue just west of Little Orchard Street.

Local Route 37 provides weekday service between the Capitol LRT Station and West Valley College. Route 37 operates along Narvaez and Hillsdale Avenues in the project study area, with 30-minute headways during the weekday peak commute hours.

Local Route 66 provides service between Kaiser Hospital and Dixon Landing Road in Milpitas. Route 66 operates along Monterey Road in the project study area, with 15-minute headways during the weekday peak commute hours and 30-minute headways during most of the day on weekends.



Source: Hexagon Transportation Consultants, Inc., Sep. 2013

EXISTING TRANSIT FACILITIES FIGURE 4.2-3

Local Route 68 provides service between the San José Diridon Station and Gavilan College in Gilroy. Route 68 operates along Monterey Highway in the project study area, with 15- to 30-minute headways during the weekday peak commute hours and 30-minute headways during most of the day on weekends.

Local Route 70 provides service between the Capitol LRT Station and the Great Mall Transit Center in Milpitas. Route 70 operates along Capitol Expressway in the project study area, with 30-minute headways during the weekday peak commute hours and 20-minute headways during most of the day on weekends.

Limited Stop Route 304 provides service between the Santa Teresa LRT station and the Sunnyvale transit center, with stops in Downtown San José. It operates along Monterey Highway in the project study area. Limited Stop Route 304 operates on 30-minute headways during the weekday peak commute hours and does not operate on weekends.

Light Rail Transit (LRT) Service

There are two LRT stations located approximately one mile from the project site. The Curtner LRT station is located at the Curtner Avenue and Canoas Garden Avenue intersection and provides a direct connection to VTA bus service (Local Route 26). The Capitol LRT station is located near the SR 87/Capitol Expressway interchange and provides a direct connection to VTA bus service (Local Routes 37 and 70). Each of the LRT stations offer bicycle lockers, a Park & Ride lot, and long-term airport parking.

LRT service at the Curtner and Capitol LRT stations is provided by the Alum Rock-Santa Teresa LRT line, which operates nearly 24 hours a day (4:00 AM to 1:00 AM) with 10-15-minute headways during peak commute and midday hours. The Alum Rock-Santa Teresa LRT line provides service from the Santa Teresa station in south San José, through Downtown San José to north San José where it curves east and operates along the Tasman Corridor, bends south and runs along the Capitol Corridor, and ultimately terminates in east San José just south of Alum Rock Avenue.

Caltrain

Caltrain operates a commuter rail service seven days a week between the Diridon Station in San José and San Francisco. During weekday commuting hours, Caltrain also serves south San José and the South County including Gilroy, San Martin, and Morgan Hill.

The Capitol Caltrain station is the nearest Caltrain station and is located at the intersection of Monterey Road and Fehren Drive. Caltrain provides weekday commute service to the Capitol Caltrain station with three northbound trains during the AM peak commute hour and three southbound trains during the PM peak commute hours. The Capitol Caltrain station offers a 379-space parking lot and a direct connection to VTA bus routes (Local Routes 66 and 68, and Express Route 304).

4.2.1.3 *Regulatory Framework*

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating transportation impacts resulting from planned development within the City. All future development addressed by this SEIR for the project site will be subject to the transportation policies listed in the City's 2040 General Plan, including policies related to the importance of trails in a balanced transportation system. These policies are listed below. The project's consistency with these policies is discussed in *Section 4.1.3.4 Consistency with Relevant Plans and Policies.*

BALANCED TRANSPORTATION SYSTEM
Policy TR-1.2: Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects.
Policy TR-1.4: Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling, walking, and transit facilities. Encourage investments that reduce vehicle travel demand.
Policy TR-1.5: Design, construct, operate, and maintain public streets to enable safe, comfortable, and attractive access and travel for motorists and for pedestrians, bicyclists, and transit users of all ages, abilities, and preferences.
Policy TR-1.6: Require that public street improvements provide safe access for motorists and pedestrians along development frontages per current City design standards.
Policy TR-1.7: Require that private streets be designed, constructed and maintained to provide safe, comfortable, and attractive access and travel for motorists and pedestrians, bicyclists, and transit users of all ages, abilities, and preferences.
Policy TR-1.10: Require needed public street right-of-way dedication and improvements as development occurs. The ultimate right-of-way shall be no less than the dimensions as shown on the Functional Classification Diagram except when a lesser right-of-way will avoid significant social, neighborhood or environmental impacts and perform the same traffic movement function. Additional public street right-of-way, beyond that designated on the Functional Classification Diagram, may be required in specific locations to facilitate left-turn lanes, bus pullouts, and right-turn lanes in order to provide additional capacity at some intersections.
WALKING AND BICYCLING POLICIES
Policy TR-2.8: Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements.
Policy TR-2.11: Prohibit the development of new cul-de-sacs, unless it is the only feasible means of providing access, or gated communities, that do not provide through and publicly accessible bicycle and pedestrian connections. Pursue the development of new through bicycle and pedestrian connections in existing cul-de-sacs where feasible.

MAXIMIZE USE OF PUBLIC TRANSIT POLICIES

Policy TR-3.3: As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute towards transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities.

Policy TR-3.4: Maintain and improve access to transit stops and stations for mobility-challenged population groups such as youth, the disabled, and seniors.

VEHICULAR CIRCULATION POLICIES AND ACTIONS

Policy TR-5.3: The minimum overall roadway performance during peak travel periods should be level of service "D" except for designated areas. How this policy is applied and applicable exceptions to this policy are listed in bullets below.

- Vehicular Traffic Mitigation Measures. Review development proposals for their impacts on the level of service and require appropriate mitigation measures if development of the project has the potential to reduce the level of service to "E" or worse. These mitigation measures typically involve street improvements. Mitigation measure for vehicular traffic should not compromise or minimize community livability by removing mature street trees, significantly reducing front or side yards, or creating other adverse neighborhood impacts.
- Area Development Policy. An "area development policy" may be adopted by the City Council to establish special traffic level of service standards for a specific geographic area which identifies development impacts and mitigation measures. These policies may take other names or forms to accomplish the same purpose. Area development policies may be first considered only during the General Plan Annual Review and Amendment Process; however, the hearing on an area development policy may be continued after the Annual Review has been completed and the area development policy may thereafter be adopted or amended at a public meeting at any time during the year.

INCOMPATIBLE USES/RAILROAD LINES

Policy CD-5.9: To promote safety and to minimize noise and vibration impacts in residential and working environments, design development that is proposed adjacent to railroad lines to provide the maximum separation feasible between the rail line and dwelling units, yards, or common open space areas, offices and other job locations, facilities for the storage of toxic or explosive materials and the like. To the extent possible, devote areas of development closest to an adjacent railroad line to use as parking lots, public streets, peripheral landscaping, the storage of non-hazardous materials and so forth. In industrial facilities, where the primary function is the production, processing or storage of hazardous materials, for new development follow the setback guidelines and other protective measures called for in the City's Industrial Design Guidelines when such facilities are to be located adjacent to or near a main railroad line.

San José Bike Plan 2020

The City's Bike Plan 2020, adopted in 2009, provides a foundation for enhancing the bikeways network and increasing the mode share of bicycle travelers. The Bike Plan lays out specific goals to improve bicycle access and connectivity in San José by the year 2020. These goals include completing 500 miles of bikeways; achieving a five percent bike mode share; reducing bike collision rates by 50 percent; adding 5,000 bicycle parking spaces; and achieving gold-level bicycle friendly community status. Planned bicycle facilities identified in the Bike Plan in the project area include bicycle lanes along Hillsdale Avenue and Snell Avenue.

4.2.1.4 *Study Intersections and Freeway Segments*

The traffic analysis determined the impacts of the proposed project on key signalized intersections and freeway segments in the vicinity of the project site during the weekday AM and PM peak periods of traffic. The study intersections and freeway segments are identified below. The study intersections are shown on Figure 4.2-1.

Study Intersections

1 First Street and Keyes Street*
2 First Street and Alma Avenue*
3 Monterey Road and Curtner Avenue*
4 Monterey Road and Old Tully Road*
5 Monterey Road and Umbarger Road
6 Monterey Road and Lewis Road
7 Monterey Road and Southside Drive
8 Monterey Road and Capitol Expressway (N)*
9 Monterey Road and Capitol Expressway (S)*
10 Vine Street and Alma Avenue
11 Almaden Road and Alma Avenue
12 SR-87 and Almaden Expressway
13 Almaden Expressway and Foxworthy Avenue
14 Almaden Expressway and Branham Lane*
15 Almaden Expressway and Cherry Avenue
16 Almaden Expressway and SR- 85 (N)*
17 Almaden Expressway and SR- 85 (S)*
18 Almaden Expressway and Blossom Hill Road*
19 Canoas Garden Avenue and Curtner Avenue
20 SR-87 and Curtner Avenue (W)
21 SR-87 and Curtner Avenue (E)
22 Communications Hill Boulevard and Curtner Avenue
23 Little Orchard Avenue and Curtner Avenue
24 Seventh Street and Tully Road
25 10th Street and Tully Road
26 Senter Road and Tully Road*
27 McLaughlin Avenue and Tully Road*
28 Pearl Avenue and Capitol Expressway*
29 SR-87 and Capitol Expressway*
30 Narvaez Avenue and Capitol Expressway*
31 Copperfield Drive and Capitol Expressway
32 Vistapark Drive and Capitol Expressway
33 Snell Avenue and Capitol Expressway*
34 Senter Road and Capitol Expressway*
35 McLaughlin Avenue and Capitol Expressway*
36 Narvaez Avenue and Hillsdale Avenue
37 Pearl Avenue and Hillsdale Avenue
38 Narvaez Avenue and SR-87
39 Vistapark Drive and Hillsdale Avenue
40 Almaden Expressway and Curtner Avenue (E)
41 Almaden Expressway and Curtner Avenue (W)
42 2nd Street and Keyes Street
43 3rd Street and Keyes Street
44 7th Street and Keyes Street
45 10th Street and Keyes Street
46 11th Street and Keyes Street
47 Lincoln Avenue and Willow Street
48 Lincoln Avenue and Minnesota Avenue
49 Meridian Avenue and Hamilton Avenue
50 US 101 (W) and Tully Road
51 US 101 (E) and Tully Road
52 Alvin Avenue and Tully Road
53 King Road and Tully Road*
54 Capitol Expressway and Tully Road*
55 Capitol Expressway and Quimby Road*
56 Capitol Expressway and Nieman Boulevard
57 Capitol Expressway and Aborn Road*
58 Capitol Expressway and Silver Creek Road*
59 Monterey Road and Senter Road*
60 Monterey Road and Skyway Drive*
61 Monterey Road and Branham Lane*
62 Monterey Road and Edenview Drive
63 Monterey Road and Chynoweth Avenue
64 Monterey Road and Blossom Hill Road (N)*
65 Monterey Road and Blossom Hill Road (S)*
66 Snell Avenue and Rosenbaum Avenue
67 Snell Avenue and Skyway Drive
68 Snell Avenue and Branham Lane
69 Snell Avenue and Chynoweth Avenue
70 Snell Avenue and Avenida Del Roble
71 Snell Avenue and Blossom Hill Road*
72 Cherry Avenue and Hillsdale Avenue
73 Jarvis Avenue and Hillsdale Avenue
74 Meridian Avenue and Hillsdale Avenue*
75 Meridian Avenue and Curtner Avenue
76 Booksin Avenue and Curtner Avenue
77 Cherry Avenue and Curtner Avenue
78 Lincoln Avenue and Curtner Avenue
79 Almaden Road and Curtner Avenue
80 Lincoln Avenue and Pine Avenue
81 US 101 (W) and Capitol Expressway
82 US 101 (E) and Capitol Expressway
83 Old Hillsdale Avenue and Hillsdale Avenue (one-way stop)

CMP intersections are denoted with an asterisk (*).

Freeway Segments

- Northbound SR 85 between US 101 and Cottle Road
- Northbound SR 85 between Cottle Road and Blossom Hill Road
- Northbound SR 85 between Blossom Hill Road and SR 87
- Northbound SR 85 between SR 87 and Almaden Expressway
- Northbound SR 85 between Almaden Expressway and Camden Avenue
- Northbound SR 87 between SR 85 and Capitol Expressway
- Northbound SR 87 between Capitol Expressway and Curtner Avenue
- Northbound SR 87 between Curtner Avenue and Almaden Road
- Northbound SR 87 between Almaden Road and Alma Avenue
- Northbound SR 87 between Alma Avenue and I-280
- Northbound SR 87 between I-280 and Julian Street
- Northbound US 101 between Lane Drop (SB) and SR 85
- Northbound US 101 between SR 85 and Bernal Road
- Northbound US 101 between Bernal Road and Silver Creek Valley Road
- Northbound US 101 between Silver Creek Valley Road and Hellyer Avenue
- Northbound US 101 between Hellyer Avenue and Yerba Buena Road
- Northbound US 101 between Yerba Buena Road and Capitol Expressway
- Northbound US 101 between Capitol Expressway and Tully Road
- Northbound US 101 between Tully Road and Story Road
- Northbound US 101 between Story Road and I-280
- Northbound US 101 between I-280 and Santa Clara Street
- Eastbound I-280 between Meridian Avenue and Bird Avenue
- Eastbound I-280 between Bird Avenue and SR 87
- Eastbound I-280 between SR 87 and 10th Street
- Eastbound I-280 between 10th Street and McLaughlin Avenue
- Eastbound I-280 between I-280 McLaughlin Avenue and US 101
- Northbound I-680 between US 101 and King Road
- Northbound I-680 between King Road and Capitol Expressway
- Southbound I-680 between Capitol Expressway and King Road
- Southbound I-680 between King Road and US 101
- Westbound I-280 between US 101 and McLaughlin Avenue
- Westbound I-280 between McLaughlin Avenue and 10th Street
- Westbound I-280 between 10th Street and SR 87
- Westbound I-280 between SR 87 and Bird Avenue
- Westbound I-280 between Bird Avenue and Meridian Avenue
- Southbound US 101 between Santa Clara Street and I-280
- Southbound US 101 between I-280 and Story Road
- Southbound US 101 between Story Road and Tully Road
- Southbound US 101 between Tully Road and Capitol Expressway
- Southbound US 101 between Capitol Expressway and Yerba Buena Road
- Southbound US 101 between Yerba Buena Road and Hellyer Avenue
- Southbound US 101 between Hellyer Avenue and Silver Creek Valley Road
- Southbound US 101 between Silver Creek Valley Road and Bernal Road
- Southbound US 101 between Bernal Road and SR 85
- Southbound US 101 between SR 85 and Lane Drop (SB)
- Southbound SR 87 between Julian Street and I-280
- Southbound SR 87 between I-280 and Alma Avenue
- Southbound SR 87 between Alma Ave and Almaden Road
- Southbound SR 87 between Almaden Road and Curtner Avenue
- Southbound SR 87 between Curtner Avenue and Capitol Expressway
- Southbound SR 87 between Capitol Expressway and SR 85
- Southbound SR 85 between Camden Avenue and Almaden Expressway
- Southbound SR 85 between Almaden Expressway and SR 87
- Southbound SR 85 between SR 87 and Blossom Hill Road
- Southbound SR 85 between Blossom Hill Road and Cottle Road
- Southbound SR 85 between Cottle Road and US 101

4.2.1.5 *Study Methodology*

Traffic conditions at the study intersections were evaluated using level of service (LOS). Level of service is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

City of San José Intersections

The City of San José level of service methodology for signalized intersections is the 2000 *Highway Capacity Manual* (HCM) method. This method is applied using TRAFFIX software. The 2000 HCM operations method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the County Congestion Management Program (CMP) designated intersection level of service methodology, the City of San José methodology employs the CMP default values for the analysis parameters. The City of San José level of service standard for signalized intersections is LOS D or better. The correlation between average control delay and level of service is shown in Table 4.2-1.

Table 4.2-1:
Signalized Intersection Level of Service Definitions

Level of Service	Description of Operations	Average Control Delay* (seconds/vehicle)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0

Table 4.2-1: Signalized Intersection Level of Service Definitions		
Level of Service	**Description of Operations**	**Average Control Delay*** (seconds/vehicle)
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	Greater than 80.0
Note: * Average Control Delay includes the time for initial deceleration delay, queue move-up time, stopped delay, and final acceleration. Source: Transportation Research Board. *2000 Highway Capacity Manual.* 2000. Pages 10-16.		

CMP Intersections

The designated level of service methodology for the CMP is also the 2000 HCM operations method for signalized intersections, using TRAFFIX. The only difference in level of service standards is that the City of San José standard is LOS D or better, and the CMP level of service standard for signalized intersections is LOS E or better.

Freeway Segments

The LOS for freeway segments is estimated based on vehicle density, considering vehicles per mile per lane (vpmpl), peak hour volume in vehicles per hour (vph), number of travel lanes, and average travel speed in miles per hour (mph). Freeway LOS criteria are summarized in Table 4.2-2. The CMP defines an acceptable level of service for freeway segments as LOS E or better.

Table 4.2-2: Freeway Level of Service Based on Density		
Level of Service	**Description**	**Density (vehicles/ mile/lane)**
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	11.0 or less
B	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	11.1 to 18.0
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	18.1 to 26.0

Table 4.2-2: Freeway Level of Service Based on Density		
Level of Service	**Description**	**Density (vehicles/ mile/lane)**
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	26.1 to 46.0
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	46.1 to 58.0
F	Vehicular flow breakdowns occur. Large queues form behind breakdown points.	Greater than 58.0
Source: Santa Clara County 2004 CMP.		

Traffic Scenarios Analyzed

Traffic conditions at the study intersections and on the study freeway segments were analyzed for the weekday AM and PM peak hours of traffic. The AM peak hour of traffic is generally between 7:00 and 9:00 AM and the PM peak hour is typically between 4:00 and 6:00 PM. It is during these periods on an average weekday that the most congested traffic conditions occur.

Traffic conditions were evaluated for the following scenarios:

- *Existing Conditions:* Existing AM and PM peak hour traffic volumes were obtained from the City of San José and supplemented with new manual turning-movement counts conducted in September 2012 and March 2013.

- *Existing Plus Project Conditions:* Existing plus project peak hour traffic volumes were estimated by adding forecasted traffic growth due to the proposed project to existing traffic volumes. Forecasted traffic volumes due to the proposed project were developed with the use of the City's CUBE traffic forecasting model. The forecasted traffic volumes consist of the traffic estimated to be generated by the proposed project development along with adjustments to existing traffic volumes due to changes in traffic patterns. The net forecasted traffic growth was applied to existing traffic volumes to produce existing plus project conditions volumes. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.

- *Background Conditions:* Background traffic volumes were estimated by adding to existing peak hour volumes the projected volumes from approved but not yet completed developments. The added traffic from approved but not yet completed developments was provided by the City of San José in the form of the Approved Trips Inventory (ATI).

Background conditions represent the baseline conditions to which project conditions are compared for the purpose of determining project impacts.

- *Background Plus Project Conditions:* The City's CUBE model was used to forecast traffic growth associated with the proposed development levels. The forecasted traffic volumes consist of the traffic estimated to be generated by the proposed project development along with adjustments to existing traffic volumes due to changes in traffic patterns. The net forecasted traffic growth was applied to background traffic volumes to produce background plus project conditions volumes. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts, according to the City of San José Level of Service (LOS) Policy. The City of San José LOS Policy is the adopted established threshold for the CEQA analysis.

4.2.1.6 Existing Conditions

Existing Intersection Levels of Service

The results of the intersection level of service analysis under existing conditions are summarized in Table 4.2-3.

The results show that, measured against the City of San José level of service policy, the following six signalized study intersections currently operate at an unacceptable LOS E during at least one of the peak hours:

18 Almaden Expressway and Blossom Hill Road*
49 Meridian Avenue and Hamilton Avenue
55 Capitol Expressway and Quimby Road*
57 Capitol Expressway and Aborn Road*
58 Capitol Expressway and Silver Creek Road*
74 Meridian Avenue and Hillsdale Avenue.

Measured against CMP standards, all of the CMP intersections currently operate at an acceptable level of service (LOS E or better) during both peak hours.

Table 4.2-3:
Existing and Existing + Project
Unacceptable Intersection Levels of Service

Study Intersection	Peak Hour	Existing		Existing + Project	
		Average Delay (sec)	**LOS**	**Average Delay** (sec)	**LOS**
13. Almaden Expressway and Foxworthy Avenue	AM	41.6	D	39.6	D
	PM	44.0	D	**57.1**	**E**
18. Almaden Expressway and Blossom Hill Road*	AM	51.6	D	52.2	D
	PM	**57.5**	**E**	**57.6**	**E**
22. Communications Hill Boulevard and Curtner Avenue	AM	25.5	C	50.3	D
	PM	30.9	C	**57.7**	**E**
33. Snell Avenue and Capitol Expressway*	AM	45.6	D	48.9	D
	PM	37.3	D	**61.9**	**E**
49. Meridian Avenue and Hamilton Avenue	AM	54.2	D	54.3	D
	PM	**56.6**	**E**	**56.8**	**E**
55. Capitol Expressway and Quimby Road*	AM	40.6	D	40.3	D
	PM	**61.3**	**E**	**61.9**	**E**
57. Capitol Expressway and Aborn Road*	AM	42.0	D	42.2	D
	PM	**60.0**	**E**	**59.8**	**E**
58. Capitol Expressway and Silver Creek Road*	AM	42.7	D	43.5	D
	PM	**57.1**	**E**	**57.3**	**E**
74. Meridian Avenue and Hillsdale Avenue*	AM	**57.6**	**E**	**57.0**	**E**
	PM	51.7	D	51.7	D

Notes: * Denotes CMP intersection
Bold text indicates unacceptable LOS

Existing Freeway Levels of Service

Traffic volumes and levels of service for the subject freeway segments were taken from the 2012 CMP Annual Monitoring Report. Based on the monitoring report, the mixed-flow lanes on 30 of the 56 directional freeway segments analyzed currently operate at an unacceptable LOS F during at least one of the peak hours. In addition, the HOV lanes on eight directional freeway segments studied also are operating at LOS F during at least one of the peak hours (refer to Table 4.2-4).

Nearly all peak direction freeway segments studied area are currently operating under poor traffic conditions. The peak directions of travel are northbound during the AM peak hour and southbound during the PM peak hour. Congested conditions are apparent on northbound SR 87 between SR 85 to I-280 during the AM peak hour. Poor levels of service on the SR 87 freeway segments are primarily attributable to traffic moving through the project area bound for employment destinations to the north. Poor conditions on US 101 and I-280 in both peak directions of travel are due to the inadequate capacity of the freeways.

Table 4.2-4:
Existing Freeway Levels of Service

Freeway Segment		Direction	Peak Hour	Mixed-Flow Lanes	HOV Lane
				LOS	
SR 85	US 101 to Cottle Rd	NB	AM	B	A
			PM	C	A
	Cottle Rd to Blossom Hill Rd	NB	AM	**F**	E
			PM	D	A
	Blossom Hill Rd to SR 87	NB	AM	**F**	C
			PM	D	A
	SR 87 to Almaden Expressway	NB	AM	**F**	**F**
			PM	C	A
	Almaden Expressway to Camden Ave	NB	AM	**F**	**F**
			PM	D	B
	Camden Ave to Almaden Expressway	SB	AM	C	A
			PM	D	D
	Almaden Expressway to SR 87	SB	AM	B	B
			PM	C	B
	SR 87 to Blossom Hill Rd	SB	AM	D	A
			PM	D	B
	Blossom Hill Rd to Cottle Rd	SB	AM	C	A
			PM	D	C
	Cottle Rd to US 101	SB	AM	B	A
			PM	C	A
SR 87	SR 85 to Capitol Expressway	NB	AM	**F**	**F**
			PM	D	A
	Capitol Expressway to Curtner	NB	AM	**F**	**F**
			PM	D	A
	Curtner to Almaden Rd	NB	AM	**F**	**F**
			PM	D	B
	Almaden Rd to Alma Ave	NB	AM	**F**	D
			PM	**F**	C
	Alma Ave to I-280	NB	AM	**F**	D
			PM	C	B
	I-280 to Julian St	NB	AM	E	C
			PM	B	A
	Julian St to I-280	SB	AM	B	A
			PM	**F**	C
	I-280 to Alma Ave	SB	AM	B	A
			PM	**F**	C
	Alma Ave to Almaden Rd	SB	AM	C	A
			PM	**F**	D
	Almaden Rd to Curtner	SB	AM	B	A
			PM	E	D
	Curtner to Capitol Expressway	SB	AM	C	A
			PM	D	C
	Capitol Expressway to SR 85	SB	AM	C	A
			PM	D	B

Table 4.2-4:
Existing Freeway Levels of Service

Freeway Segment		Direction	Peak Hour	Mixed-Flow Lanes	HOV Lane
				LOS	
US 101	Lane Drop (SB) to SR 85	NB	AM	D	B
			PM	C	A
	SR 85 to Bernal Rd	NB	AM	D	C
			PM	D	C
	Bernal Rd to Silver Creek Valley Rd	NB	AM	C	B
			PM	B	A
	Silver Creek Valley Rd to Hellyer Ave	NB	AM	D	C
			PM	C	A
	Hellyer Ave to Yerba Buena Rd	NB	AM	**F**	D
			PM	D	B
	Yerba Buena Rd to Capitol Expressway	NB	AM	**F**	D
			PM	C	B
	Capitol Expressway to Tully Rd	NB	AM	**F**	D
			PM	C	B
	Tully Rd to Story Rd	NB	AM	**F**	**F**
			PM	C	A
	Story Rd to I-280	NB	AM	**F**	**F**
			PM	B	A
	I-280 to Santa Clara St	NB	AM	**F**	**F**
			PM	C	A
	Santa Clara St to I-280	SB	AM	C	A
			PM	D	C
	I-280 to Story Rd	SB	AM	B	A
			PM	D	B
	Story Rd to Tully Rd	SB	AM	C	A
			PM	**F**	D
	Tully Rd to Capitol Expressway	SB	AM	C	A
			PM	**F**	D
	Capitol Expressway to Yerba Buena Rd	SB	AM	C	A
			PM	C	B
	Yerba Buena Rd to Hellyer Ave	SB	AM	D	B
			PM	D	C
	Hellyer Ave to Silver Creek Valley R	SB	AM	C	A
			PM	D	B
	Silver Creek Valley Rd to Bernal Rd	SB	AM	B	B
			PM	C	D
	Bernal Rd to SR 85	SB	AM	B	A
			PM	C	C
	SR 85 to Lane Drop (SB)	SB	AM	B	A
			PM	C	C

Table 4.2-4: Existing Freeway Levels of Service

Freeway Segment		Direction	Peak Hour	Mixed-Flow Lanes	HOV Lane
				LOS	
I-280	Meridian Ave to Bird Ave	EB	AM	E	--
			PM	**F**	--
	Bird Ave to SR 87	EB	AM	C	--
			PM	**F**	--
	SR 87 to 10th St	EB	AM	C	--
			PM	**F**	--
	10th St to McLaughlin Ave	EB	AM	C	--
			PM	D	--
	McLaughlin Ave to US 101	EB	AM	B	--
			PM	D	--
	US 101 to McLaughlin Ave	WB	AM	**F**	--
			PM	C	--
	McLaughlin Ave to 10th St	WB	AM	**F**	--
			PM	D	--
	10th St to SR 87	WB	AM	**F**	--
			PM	D	--
	SR 87 to Bird Ave	WB	AM	**F**	--
			PM	D	--
	Bird Ave to Meridian Ave	WB	AM	**F**	--
			PM	D	--
I-680	US 101 to King Rd	NB	AM	C	--
			PM	D	--
	King Rd to Capitol Expressway	NB	AM	D	--
			PM	D	--
	Capitol Expressway to King Rd	SB	AM	**F**	--
			PM	D	--
	King Rd to US 101	SB	AM	**F**	--
			PM	C	--

Note: **Bold** text indicates unacceptable level of service. Source: Santa Clara Valley Transportation Authority. *Congestion Management Monitoring Study.* 2012.

Existing Freeway On-Ramp Operations

As a supplement to the intersection level of service analysis, the freeway on-ramps serving the project site were analyzed to identify their current operation levels. The project would primarily be served by two freeway on-ramps: (1) northbound SR 87 on-ramp at Narvaez Avenue, and (2) northbound SR 87 on-ramp at Curtner Avenue. Both of these on-ramps were found to be controlled by a meter during the AM peak hour. The existing queue length at each of these ramps and the existing service rate of the meters at the ramps were measured in the field during the AM peak hour. Since the meters at the northbound on-ramps are not operating during the PM peak hour, the PM peak hour was not surveyed. With the information obtained, the maximum observed queue lengths

and their corresponding wait times (the time it took a vehicle at the end of the queue to go through the meter) were derived.

The queue lengths at the study freeway on-ramps were measured for two hours in the morning (peak AM period) on two different days. The queues were measured every five minutes and the longest observed queue during the peak hour used as base information in the analysis. In addition, the ramp meters' service rate also was measured. This was done by simply measuring the length of time needed to serve ten queued vehicles. Based on the surveyed queue length and the meters' service rate, the maximum wait time for a vehicle waiting at the end of the queue was estimated. It should be noted that the wait times shown on Table 4.2-5 below correspond to the maximum observed queue length, which means this is the longest time any given person waiting at the queue has to wait to go through the meter.

Table 4.2-5:
Existing Freeway Ramp Operations

Ramp	Peak Hour	Volume	Queue Length[1] (vehicles)	Meter Rate (seconds/ vehicle)	Wait Time[1] (min:sec)
SR 87 NB on-ramp @ NB Narvaez[2]	AM	558	128	3.2	06:49
SR 87 NB on-ramp @ SB Narvaez[2]	AM	339	60	3.2	03:12
SR 87 NB on-ramp @ WB Curtner	AM	237	60	10.5	10:30
SR 87 NB on-ramp @ EB Curtner	AM	222	54	10.5	09:27

Notes:
[1] Existing queue length represents the longest queue observed during an hour period.
Existing wait times were estimated based on surveyed times at the ramps conducted on August/September 2013.
[2] The reported northbound and southbound Narvaez queues at SR 87 includes 34 vehicles on the loop ramp (from the meter to the signal).

Field Observations

Traffic conditions in the field were observed to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to intersection level of service, and (2) to identify any locations where the level of service calculation does not accurately reflect level of service in the field.

Field observations revealed the following operational problems that may not be reflected in level of service calculations:

SR 87 and Narvaez Avenue – During the AM peak hour, the queue of vehicles accessing the SR 87 northbound on-ramp from northbound and southbound Narvaez Avenue is considerably long. The northbound queue on Narvaez Avenue extends beyond the intersection of Narvaez Avenue/Capitol Expressway along both the eastbound left-turn approach and the westbound right-turn approach. It was observed that because of the long queues along Narvaez Avenue, eastbound left-turning traffic on Capitol Expressway to northbound Narvaez Avenue would constantly block the intersection, hindering the flow of westbound traffic along Capitol Expressway. Adequate queue storage space for the southbound queue on Narvaez Avenue was observed.

SR 87 and Curtner Avenue – During the AM peak hour, the queue of vehicles accessing the northbound SR 87 on-ramp from westbound Curtner Avenue is considerably long. The vehicle queue was observed to extend on the ramp and extends beyond the intersection of SR 87 northbound ramps/Curtner Avenue along both the eastbound left-turn approach and the westbound right-turn approach. It was observed that because of the long queues on the on-ramp, eastbound left-turning traffic on Curtner Avenue to the on-ramp would constantly block the intersection hindering the flow of westbound traffic along Curtner Avenue.

All other study intersections operate without any major operational problems.

4.2.1.7 *Background Conditions*

Background conditions are defined as conditions just prior to completion of the project. Background conditions include traffic from other approved but not yet completed projects, as well as planned transportation improvements.

Background Transportation Network

It is assumed in this analysis that the transportation network under background conditions would be the same as the existing transportation network with the exception of the following intersection improvements planned as part of other development or Capital Improvement Projects (CIP):

- *King Road and Tully Road* - Addition of a second southbound left-turn lane and third eastbound through lane (Evergreen Development Policy)

- *Almaden Road and Alma Avenue* – Conversion of Almaden Road from one-way to two-way operations (CIP)

- *Vine Street and Alma Avenue* – Conversion of Vine Street from one-way to two-way operations (CIP)

- *2nd Street and Keyes Street* – Conversion of 2nd Street from one-way to two-way operations (CIP)

- *3rd Street and Keyes Street* – Conversion of 3rd Street from one-way to two-way operations (CIP)

- *Almaden Expressway and Cherry Avenue* – Addition of a fourth northbound and southbound through lanes, second southbound left-turn lane, exclusive eastbound left-turn lane, and second westbound left- turn lane (Development)

- *McLaughlin Avenue and Capitol Expressway* - Addition of second northbound and southbound left-turn lanes (Evergreen Development Policy)

- *Capitol Expressway and Aborn Road* - Addition of second northbound and eastbound left-turn lanes and fourth northbound and southbound through lanes (Evergreen Development Policy)

- *Capitol Expressway and Quimby Road* - Addition of a second eastbound left-turn lane and fourth northbound and southbound through lanes (Evergreen Development Policy)

- *Capitol Expressway and Tully Road* - Addition of fourth northbound and southbound through lanes (Evergreen Development Policy)

- *Capitol Expressway and Nieman Boulevard* - Addition of fourth northbound and southbound through lanes (Evergreen Development Policy)

Background Traffic Volumes

Background peak hour traffic volumes were estimated by adding existing volumes to the estimated traffic from approved but not yet constructed developments. The added traffic from approved but not yet constructed developments was obtained from the City of San José's Approved Trips Inventory (ATI) database. The background traffic scenario predicts a realistic traffic condition that would occur as approved development is built. The approved trips and traffic volumes for all components of traffic are tabulated in Appendix B.

Background Intersection Levels of Service

The results of the level of service analysis are summarized in Table 4.2-7. The results show that, measured against the City of San José level of service policy, the following seven signalized study intersections are projected to operate at an unacceptable LOS E or worse during at least one of the peak hours under background conditions:

18 Almaden Expressway and Blossom Hill Road*
34 Senter Road and Capitol Expressway*
55 Capitol Expressway and Quimby Road*
57 Capitol Expressway and Aborn Road*
58 Capitol Expressway and Silver Creek Road*
63 Monterey Road and Chynoweth Avenue
74 Meridian Avenue and Hillsdale Avenue*

Five of the seven intersections are CMP designated intersections. All other study intersections are projected to operate at an acceptable LOS D or better during both the AM and PM peak hours of traffic.

Additionally, the results of the level of service analysis show that, measured against CMP standards, the intersection of Capitol Expressway and Quimby Road is projected to operate at LOS F conditions during the PM peak hour under background conditions. All other CMP intersections are projected to operate at an acceptable LOS E or better during the AM and PM peak hours of traffic.

Background Freeway Segments

The VTA guidelines for the analysis of freeway segments state that background conditions need not be analyzed because to do so would require volume data for approved projects throughout and outside of Santa Clara County. Such data is not readily available to complete a near-term background freeway analysis for the proposed project.

4.2.2 Transportation Impacts

4.2.2.1 *Thresholds of Significance*

For the purposes of this SEIR, a transportation impact is considered significant if the project would:

- 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 trails, and mass transit;
- 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;
- 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;
- Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- Result in inadequate emergency access; or

- Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Intersection Impact Criteria

For the purpose of this SEIR, the criteria used to determine significant impacts on signalized intersections are based on City of San José LOS standards. The City of San José LOS Policy is the adopted established threshold for CEQA. Project impacts also were analyzed according to the County Congestion Management Program (CMP) methodology for the CMP study intersections and freeway segments. While the City acknowledges Caltrans' methodology and threshold of significance for analyzing freeway segments, the City uses the CMP methodology for analyzing freeway segment impacts.

City of San José Definition of Significant Intersection Impacts

A project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of San José if for either peak hour:

- The level of service at the intersection degrades from an acceptable LOS D or better under background conditions to an unacceptable LOS E or F under background plus project conditions; or
- The level of service at the intersection is an unacceptable LOS E or F under background conditions and the addition of project trips causes both the critical-movement delay at the intersection to increase by four (4) or more seconds and the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more.

An exception to this rule applies when the addition of project traffic reduces the amount of average stopped delay for critical movements (i.e., the change in average stopped delay for critical movements is negative). In this case, the threshold of significance is an increase in the critical V/C value by .01 or more.

A significant impact by City of San José standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection level of service to background conditions or better.

CMP Definition of Significant Intersection Impacts

The definition of a significant impact at a CMP intersection is the same as for the City of San José, except that the CMP standard for acceptable level of service at a CMP intersection is LOS E or better. A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to background conditions or better.

Freeway Segment Impact Criteria

CMP Definition of Significant Freeway Segment Impacts

The CMP defines an acceptable level of service for freeway segments as LOS E or better. A project is said to create a significant impact on traffic conditions on a freeway segment if for either peak hour:

- The level of service on the freeway segment degrades from an acceptable LOS E or better under existing conditions to an unacceptable LOS F under background plus project conditions; or
- The level of service on the freeway segment is LOS F under background plus project conditions and the number of project trips on that segment constitutes at least one percent of capacity on that segment.

A significant impact by CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore freeway conditions to background conditions or better.

4.2.2.2 *Project Trip Estimates*

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic entering and exiting the site is estimated for the AM and PM peak hours. As part of the project trip distribution, an estimate is made of the directions to and from which the project trips would travel. In the project trip assignment, the project trips are assigned to specific streets. These procedures are described further below; additional detail is included in Appendix B.

Project Trip Generation

Project trip generation estimates for the proposed project were determined utilizing the City's CUBE-based traffic forecasting model and adjusted after comparing the results to estimates using standard trip generation rates, as described below.

CUBE-based Trip Generation Rates

The City of San José's CUBE-based traffic forecasting procedures generate projections of AM and PM peak hour traffic generation based on projected land uses. The forecasted trip generation estimates are based on the trip making characteristics of the proposed number of dwelling units and jobs. The forecasts also account for mode-choice and interaction of trips between land uses. The forecasts indicate that the project as proposed would generate a net total of 2,636 trips occurring during the AM peak hour and 3,221 trips during the PM peak hour based on the projected trips that start and/or end in the traffic analysis zones (TAZs) that correspond to the project area.

Standard Trip Generation Rates

The standard trip rates recommended for use in the City of San José are detailed in the City of San José Traffic Impact Analysis Handbook Vol. 1, 2009. The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. The trip estimates for each of the proposed land use components of the proposed project were reduced to account for internalization, or interaction, between each of the proposed land uses. The reductions are based on the assumption that vehicle trips to each of the proposed land uses of the site would be reduced due to internal circulation (i.e. residents patronizing the proposed retail space, or trips made to school and/or work). A reduction of 15 percent was applied for the internalization of trips associated with residential and retail uses, as recommended by the VTA's Transportation Impact Analysis Guidelines, January 2009.

Similarly, the trip generation for the retail portion of the project also was estimated. The retail space, intended to be neighborhood-serving retail not major retail establishments, is planned to be centrally located within the project area and proposed residential units. As such, it is assumed that the majority of trips generated by the retail space would originate from within the project area. Since it is anticipated that the proposed retail space would mainly serve the residential uses within the project area, the trip estimates for the residential land uses of the project were reduced to account for internalization, or interaction, between the retail and residential land uses. It was assumed that 90 percent of the retail trips would originate from the surrounding residential units located on Communications Hill, including both existing and proposed units. Only 10 percent of the trips estimated to be generated by the retail use were assumed to come from outside Communications Hill.

The trip generation estimates do not include estimates for the proposed school and parks. Trip estimates for residential uses account for trips made to schools and other types of land uses. It is assumed that trips to the supporting land uses would originate from within the project area and the proposed residential units.

Based on trip generation rates recommended by the City of San José and the above assumptions regarding trip reductions and internalization, the project as proposed is estimated to generate a net total of 31,409 daily trips, with 3,969 trips occurring during the AM peak hour and 3,620 trips during the PM peak hour (refer to Table 4.2-6).

Adjusted Trip Generation Estimates

A comparison of trip generation estimates produced using standard trip rates and the model forecasts indicates that the traffic model estimates that the proposed project would generate approximately 35 percent and 10 percent less AM and PM peak hour trips, respectively, when compared to estimates produced using the standard trip rates. The projected lower trips are likely due to the traffic model assuming a larger percentage of non-auto trips (transit, walk, and bicycle usage).

In order to evaluate a conservative estimate of trips to be generated by the project, the trip generation estimates projected by the model forecasts were adjusted to nearly match, within 0.5 percent, those

estimated using the City's standard trip rates. Based on the adjustments, it is estimated that the proposed project would generate a net total of 3,983 trips occurring during the AM peak hour and 3,638 trips during the PM peak hour. The adjusted project trip generation estimates are presented in Table 4.2-6, below.

Table 4.2-6:
Project Trip Generation Estimates

Land Use	AM Peak-Hour			PM Peak-Hour		
	Trips			Trips		
	In	Out	Total	In	Out	Total
Residential						
Standard CSJ Rate Estimates[1]	549	1,005	1,554	999	528	1,527
Raw Model Estimates[2]	336	753	1,089	899	539	1,438
Adjusted Model Estimates	*543*	*1,024*	*1,567*	*1,009*	*532*	*1,541*
Difference-Standard vs. Adjusted	-6	19	13	10	4	14
Industrial						
Standard CSJ Rate Estimates[1]	2,174	242	2,415	293	1,800	2,093
Raw Model Estimates[2]	1,340	207	1,547	387	1,395	1,783
Adjusted Model Estimates	*2,168*	*249*	*2,416*	*303*	*1,794*	*2,097*
Difference-Standard vs. Adjusted	-6	7	1	10	-6	4
Total (Residential + Industrial)						
Standard CSJ Rate Estimates[1]	2,723	1,247	3,969	1,292	2,328	3,620
Raw Model Estimates[2]	1,676	960	2,636	1,287	1,934	3,221
Adjusted Model Estimates	*2,711*	*1,273*	***3,983***	*1,312*	*2,326*	***3,638***
Difference-Standard vs. Adjusted	*-12*	*26*	*14*	*20*	*-2*	*18*

[1] Same as Table 9 in TIA.
[2] Based on City of San José Cube model runs completed July 2013, by Hexagon Transportation Consultants.

Trip Distribution and Assignment

The assignment of project generated traffic to the roadway network and each of the study intersections was completed using the CUBE model. The trips estimated to be generated by the project were assigned using a route selection procedure based on minimum travel time paths (as opposed to minimum travel distance paths) between development zones. This capacity-constrained traffic assignment process enables the model to reflect diversion of traffic, including existing traffic already on the roadway network, around congested areas of the overall street system.

4.2.2.3 *Existing Plus Project Conditions*

This condition could potentially occur if all development planned as part of the project was constructed and occupied prior to other approved projects in the area. It is unlikely, however, that this condition would occur since other approved projects expected to add traffic to the study area would likely be built and occupied prior to development of the project, including the industrial park uses.

Existing Plus Project Transportation Network

It is assumed in this analysis that the transportation network under existing plus project conditions would be the same as the existing transportation network, with the following exception:

- Communications Hill Bridge - A vehicle bridge over the Caltrain/UPRR tracks will be constructed as part of Communications Hill Boulevard extension. The extension of Communications Hill Boulevard and new bridge will provide a continuous roadway connection between Hillsdale Avenue and Curtner Avenue.

Existing Plus Project Traffic Volumes

Existing plus project peak hour traffic volumes were estimated by adding forecasted traffic growth due to the proposed project to existing traffic volumes. Forecasted traffic volumes were developed with the use of the City's CUBE traffic forecasting model. The forecasted traffic volumes consist of the traffic estimated to be generated by the proposed project development along with adjustments to existing traffic volumes due to changes in traffic patterns. The existing plus project peak-hour intersection volumes at each study intersection are included in Appendix B.

Existing Plus Project Intersection Levels of Service

Intersection levels of service were evaluated against City of San José and CMP standards. The results of the level of service analysis under existing plus project conditions are summarized in Table 4.2-3.

The results show that, measured against the City of San José level of service policy, the following three signalized study intersections are projected to operate at an unacceptable LOS E or worse during at least one of the peak hours under existing plus project conditions, where critical-movement delay at the intersection increases by four (4) or more seconds and the volume-to-capacity ratio (V/C) increases by one percent (.01) or more:

13 Almaden Expressway and Foxworthy Avenue
22 Communications Hill Boulevard and Curtner Avenue
33 Snell Avenue and Capitol Expressway*

One of the three intersections is a CMP intersection. Measured against CMP standards, this intersection is projected to operate at an acceptable LOS E or better during the AM and PM peak hours of traffic under existing plus project conditions. All other study intersections are projected to operate at an acceptable LOS D or better during both the AM and PM peak hours of traffic.

Impact TRAN-1: The project would have a significant impact under existing plus project conditions at the intersections of Almaden Expressway and Foxworthy Avenue, Communications Hill Boulevard and Curtner Avenue, and Snell Avenue and Capitol Expressway. **(Significant Impact)**

The existing plus project traffic conditions analyzed above could potentially exist if the project was constructed and occupied prior to the other approved projects in the area. However, it is unlikely that this traffic condition would occur, since other approved projects expected to add traffic to the study area would likely be built and occupied during the time the project is going through the development review and construction process. In addition, the City's Level of Service Policy is applicable to only background plus project conditions. Therefore, the existing plus project conditions analysis is presented for informational purposes only.

CEQA Guidelines Section 15125(a) states that the existing environmental setting will normally constitute the baseline physical conditions against which the impacts of a project are to be evaluated. The courts have held that a Lead Agency has the discretion to use an alternate baseline, as long as the exercise of discretion is supported by substantial evidence. For the analysis of traffic impacts, the City of San Jose uses an alternate baseline, background conditions, which includes projected traffic from approved but not yet constructed or occupied projects in addition to existing conditions. The purpose of identifying a background condition for calculating impacts is to ensure that all possible care is taken to identify the actual capacity of the roadways that will be available to accommodate any newly proposed development project. This methodology also more accurately characterizes the real world conditions under which the newly proposed project would be implemented, should it be approved.

4.2.2.4 *Background Plus Project Conditions*

Background Plus Project Transportation Network

It is assumed in this analysis that the transportation network under background plus project conditions would be the same as the existing transportation network, with the following exception:

- Communications Hill Bridge - A vehicle bridge over the Caltrain/UPRR tracks will be constructed as part of Communications Hill Boulevard extension. The extension of Communications Hill Boulevard and new bridge will provide a continuous roadway connection between Hillsdale Avenue and Curtner Avenue.

Background Plus Project Traffic Volumes

Background plus project peak hour traffic volumes were estimated by adding forecasted traffic growth due to the proposed project to background traffic volumes. Forecasted traffic volumes were developed with the use of the City's CUBE traffic forecasting model. The forecasted traffic volumes consist of the traffic estimated to be generated by the proposed project development along with adjustments to existing traffic volumes due to changes in traffic patterns. The background plus project peak-hour intersection volumes at each study intersection are included in Appendix B.

Background Plus Project Intersection Levels of Service

Intersection levels of service were evaluated against the City of San José and CMP significant impact criteria. The results of the level of service analysis under background plus project conditions are summarized in Table 4.2-7.

The results show that, measured against the City of San José level of service policy, the following 11 signalized study intersections are projected to operate at an unacceptable LOS E or worse during at least one of the peak hours under background plus project conditions:

3 Monterey Road and Curtner Avenue*
13 Almaden Expressway and Foxworthy Avenue
18 Almaden Expressway and Blossom Hill Road*
22 Communications Hill Boulevard and Curtner Avenue
33 Snell Avenue and Capitol Expressway*
49 Meridian Avenue and Hamilton Avenue
55 Capitol Expressway and Quimby Road*
57 Capitol Expressway and Aborn Road*
58 Capitol Expressway and Silver Creek Road*
63 Monterey Road and Chynoweth Avenue
74 Meridian Avenue and Hillsdale Avenue*

Seven of the 11 intersections are CMP intersections. The only CMP intersection projected to operate at LOS F conditions during at least one peak hour under background plus project conditions is Capitol Expressway and Quimby Road. All other CMP intersections are projected to operate at an acceptable LOS E or better during the AM and PM peak hours of traffic.

Based on the City of San José and CMP significance criteria, four of the 11 intersections identified to operate at unacceptable levels of service would be significantly impacted by the traffic generated by the proposed project:

3 Monterey Road and Curtner Avenue* (PM Peak Hour)
13 Almaden Expressway and Foxworthy Avenue (PM Peak Hour)
22 Communications Hill Boulevard and Curtner Avenue (PM Peak Hour)
33 Snell Avenue and Capitol Expressway* (PM Peak Hour)

Table 4.2-7: Existing, Background, and Background + Project Intersection Levels of Service

Study Intersection	Peak Hour	Existing		Background		Background + Project			
		Average Delay (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Average Delay** (sec)	**LOS**	**Increase in Critical Delay** (sec)	**Increase in Critical V/C**
3. Monterey Road and Curtner Avenue*	AM	--	--	42.0	D	46.6	D	5.8	0.054
	PM	--	--	55.0	D	**59.9**	**E**	**2.7**	**0.024**
13. Almaden Expressway and Foxworthy Avenue	AM	41.6	D	41.6	D	39.5	D	-1.5	-0.019
	PM	44.0	D	44.0	D	**57.1**	**E**	**15.9**	**0.131**
18. Almaden Expressway and Blossom Hill Road*	AM	51.6	D	52.0	D	52.8	D	0.9	0.015
	PM	**57.5**	**E**	**58.9**	**E**	**59.0**	**E**	**0.5**	**0.000**
22. Communications Hill Boulevard and Curtner Avenue	AM	25.5	C	24.5	C	49.7	D	38.7	0.344
	PM	30.9	C	30.8	C	**59.8**	**E**	**43.0**	**0.283**
33. Snell Avenue and Capitol Expressway*	AM	45.6	D	46.3	D	50.1	D	15.5	0.173
	PM	37.3	D	37.3	D	**62.6**	**E**	**42.3**	**0.184**
49. Meridian Avenue and Hamilton Avenue	AM	54.2	D	54.2	D	54.3	D	0.9	0.010
	PM	**56.6**	**E**	**56.6**	**E**	**56.8**	**E**	**0.7**	**0.006**
55. Capitol Expressway and Quimby Road*	AM	40.6	D	43.8	D	43.8	D	0.0	-0.006
	PM	**61.3**	**E**	**102.0**	**F**	**103.3**	**F**	**3.2**	**0.005**
57. Capitol Expressway and Aborn Road*	AM	42.0	D	43.0	D	43.1	D	0.0	-0.002
	PM	**60.0**	**E**	**71.2**	**E**	**70.0**	**E**	**-2.6**	**-0.009**
58. Capitol Expressway and Silver Creek Road*	AM	42.7	D	46.0	D	46.9	D	1.2	0.018
	PM	**57.1**	**E**	**66.1**	**E**	**66.4**	**E**	**0.1**	**0.003**
63. Monterey Road and Chynoweth Avenue	AM	--	--	**59.6**	**E**	**61.4**	**E**	**3.1**	**0.012**
	PM	--	--	47.3	D	48.8	D	2.2	0.017
74. Meridian Avenue and Hillsdale Avenue*	AM	**57.6**	**E**	**58.1**	**E**	**57.6**	**E**	**-0.9**	**-0.008**
	PM	51.7	D	51.8	D	51.8	D	5.7	0.009

Notes: * Denotes CMP intersection; **Bold** text indicates a significant project impact.

Two of the four intersections identified to be significantly impacted by the project based on San José criteria are CMP intersections. The two CMP intersections are projected to meet the CMP LOS standard of E. The addition of project traffic at the remaining intersections identified to operate at an unacceptable LOS E will not be sufficient to meet significance criteria.

Impact TRAN-2: The project would have a significant impact under background plus project conditions at the intersection of Monterey Road and Curtner Avenue. **(Significant Impact)**

The necessary improvements to mitigate the project impact would consist of the addition of an exclusive southbound right-turn lane. This improvement would require the acquisition of approximately four feet of right-of-way along approximately 225 feet on the west side of Monterey Road just north of Curtner Avenue. In addition, the improvements would require the removal and relocation of utility poles and a bus duct-out along Monterey Road as well as the relocation of trash enclosures and parking at the existing commercial development. The extent of right-of-way acquisition and other infrastructure improvements make the implementation of the improvements infeasible. **(Significant Unavoidable Impact)**

Impact TRAN-3: The project would have a significant impact under background plus project conditions at the intersection of Almaden Expressway and Foxworthy Avenue. **(Significant Impact)**

The necessary improvement to mitigate the project impact at this intersection would consist of the addition of a second westbound left-turn lane. The improvement would require the acquisition of approximately 10 feet of right-of-way along approximately 100 feet of the north side of Foxworthy Avenue just east of Almaden Expressway. The improvements would also require removal of the island at the northeast corner of the intersection, removal of trees and parking within the adjacent shopping center on the north side of Foxworthy Avenue. The extent of right-of-way acquisition and other infrastructure improvements make the implementation of the improvements infeasible. **(Significant Unavoidable Impact)**

Impact TRAN-4: The project would have a significant impact under background plus project conditions at the intersection of Communications Hill Boulevard and Curtner Avenue. **(Significant Impact)**

MM TRAN-4.1: Communication Hill Boulevard/Curtner Avenue: The necessary improvement at this intersection would include the addition of a second 650-foot long westbound left-turn lane. The improvement would require median modifications, removal of the "pork chop" islands, restriping of lanes, and traffic signal modifications. Sufficient right-of-way is available for this mitigation measure. These improvements are included in the Curtner Avenue Corridor improvements described in the CHSPADP which is part of the proposed project.

Impact TRAN-5: The project would have a significant impact under background plus project conditions at the intersection of Snell Avenue and Capitol Expressway. **(Significant Impact)**

Snell Avenue/Capitol Expressway: The necessary improvement to mitigate the project impact at this intersection would consist of the addition of a third southbound left-turn lane. Approximately 10 feet of right-of-way along approximately 350 feet of the west side of Snell Avenue just north of Capitol Expressway is required. In addition, the removal of the corner islands along the west side of the intersection and removal and relocation of utility poles on the west side of Snell Avenue would be required. The extent of right-of-way acquisition required makes the implementation of this improvement infeasible. **(Significant Unavoidable Impact)**

Feasibility of Mitigation

The acquisition of the properties identified along Monterey Road, Foxworthy Avenue, and Snell Avenue would only be possible if multiple properties were to redevelop, thus allowing the opportunity for the City to purchase these properties. It could take years for these properties to redevelop, if they were to redevelop at all. Due to the extensive nature of the property acquisitions and utility relocations and the cost of these improvements, the City has determined that these improvements cannot be successfully accomplished within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors.

The City has determined that the improvements described above, which are required to reduce impacts to a less than significant level such that the intersections operate at acceptable levels of service, are infeasible as defined by CEQA. Therefore, in lieu of the identified physical mitigation measures, an Area Development Policy (CHSPADP) has been developed for the project**.** The CHSPADP is part of the proposed project and includes the construction of improvements to roadway facilities within the immediate project area to improve system-wide roadway capacity and reduce the identified impacts.

It is expected that alternative routes or modes of travel will be used by drivers when delays become unacceptable at the intersections identified to be impacted by the project. The CHSPADP would provide new and enhance existing non-auto travel mode facilities in furtherance of General Plan goals and policies. The CHSPADP components are described below. Implementation of the CHSPADP, which is part of the proposed project, would not reduce impacts at the above intersections to a less than significant level, and is therefore, not considered to be mitigation under CEQA.

Background Plus Project Freeway Segment Levels of Service

Background plus project conditions traffic volumes for the subject freeway segments were estimated with the use of the traffic model. Background plus project peak hour traffic volumes were estimated by adding forecasted traffic growth due to the proposed project to the Year 2012 CMP traffic volume data.

Table 4.2-8: Background Plus Project Freeway Levels of Service

Freeway Segment		Direction	Peak Hour	Existing Plus Project Trips				Project Trips			
				Mixed-Flow Lanes		HOV Lanes		Mixed-Flow Lanes		HOV Lanes	
				Capacity	LOS	Capacity	LOS	Volume	% Capacity	Volume	% Capacity
SR 87	SR 85 to Capitol Expressway	NB	AM	4,400	**F**	1,650	**F**	**216**	**4.9%**	**18**	**1.1%**
		NB	PM	4,400	D	1,650	A	68	1.5%	2	0.1%
SR 87	Curtner Ave.to Almaden Rd.	NB	AM	4,400	**F**	1,650	**F**	**237**	**5.4%**	**36**	**2.2%**
		NB	PM	4,400	E	1,650	B	362	8.2%	19	1.2%
SR 87	Almaden Rd. to Alma Ave.	NB	AM	4,400	**F**	1,650	D	**237**	**5.4%**	36	2.2%
		NB	PM	4,400	**F**	1,650	C	**362**	**8.2%**	19	1.2%
SR 87	Alma Ave. to I-280	NB	AM	4,400	**F**	1,650	D	**239**	**5.4%**	36	2.2%
		NB	PM	4,400	D	1,650	B	361	8.2%	19	1.2%
SR 87	Julian St. to I-280	SB	AM	4,400	C	1,650	A	192	4.4%	5	0.3%
		SB	PM	4,400	**F**	1,650	C	**108**	**2.5%**	16	1.0%
SR 87	I-280 to Alma Ave.	SB	AM	4,400	C	1,650	A	437	9.9%	5	0.3%
		SB	PM	4,400	**F**	1,650	C	**223**	**5.1%**	30	1.8%
SR 87	Alma Ave. to Almaden Rd.	SB	AM	4,400	C	1,650	A	435	9.9%	5	0.3%
		SB	PM	4,400	**F**	1,650	D	**181**	**4.1%**	30	1.8%
SR 87	Almaden Rd. to Curtner Ave.	SB	AM	4,400	C	1,650	A	435	9.9%	5	0.3%
		SB	PM	4,400	**F**	1,650	D	**181**	**4.1%**	30	1.8%
I-680	Capitol Expressway to King Rd.	SB	AM	10,120	**F**	--	--	**130**	**1.3%**	--	--
		SB	PM	10,120	D	--	--	58	0.6%	--	--
I-280	Bird Ave. to Meridian Ave.	SB	AM	9,200	**F**	--	--	**95**	**1.0%**	--	--
		SB	PM	9,200	C	--	--	141	1.5%	--	--

Note: Impacts are shown in **Bold**.

The results show that mixed-flow lanes on 31 of the 56 directional freeway segments analyzed will operate at an unacceptable LOS F during at least one peak hour, as shown in Table 12 of the TIA (Appendix B). In addition, the HOV lanes on eight of the segments also are projected to operate at LOS F conditions. Based on the CMP freeway segment criteria, the project will have a significant impact on mixed-flow lanes on 10 directional freeway segments and HOV lanes on two directional freeway segments during at least one peak hour, as shown in Table 4.2-8, above.

Impact TRAN-6: The proposed project would result in significant impacts to the following freeway segments:

- *SR 87 (NB):* SR 85 to Capitol Expressway (AM Peak Hour), Curtner to Almaden Road (AM Peak Hour), Almaden Road to Alma Avenue (AM and PM Peak Hour), Alma Avenue to I-280 (AM Peak Hour)
- *SR 87 (SB):* Julian Street to I-280 (PM Peak Hour), I-280 to Alma Avenue (PM Peak Hour), Alma Avenue to Almaden Road (PM Peak Hour), Almaden Road to Curtner (PM Peak Hour)
- *I-680 (SB):* Capitol Expressway to King Road (AM Peak Hour)
- *I-280 (WB):* Bird Avenue to Meridian Avenue (AM Peak Hour)

(Significant Impact)

As described above, **t**he proposed project would result in significant impacts on mixed-flow lanes on 10 direction freeway segments and HOV lanes on two directional freeway segments during at least one peak hour. Full mitigation of significant project impacts on freeway segments would require roadway widening to construct additional through lanes, thereby increasing freeway capacity. It is not feasible for an individual project to bear responsibility for implementing such extensive transportation system improvements due to constraints in acquisition and cost of right-of-way. While the project would contribute to voluntary programs developed by Caltrans to reduce overall freeway congestion as part of the CHSPADP, significant impacts on the directional freeway segments are considered significant and unavoidable. **(Significant Unavoidable Impact)**

4.2.2.5 *Intersection Operations Analysis (Vehicle Queues)*

The analysis of project intersection level of service was supplemented with an analysis of intersection operations for selected signalized intersections. The operations analysis is based on vehicle queuing for high-demand movements at intersections. It should be noted that the analysis provided below is for informational purposes only. Under CEQA, the City of San José analyses impacts to intersections based on the level of service thresholds of significance. There are no thresholds of significance related to vehicle queues at intersections, and, as a result, any potential queuing impacts resulting from the project would not be considered significant under CEQA.

The operations analysis indicated that the estimated maximum vehicle queues for four of the selected high-demand intersection turn-movements would exceed the existing vehicle storage capacity under project conditions. The following intersections would have inadequate queue storage capacity under project conditions.

Communications Hill Boulevard and Curtner Avenue

The existing queue storage capacity of 325 feet for the westbound left-turn lane on Curtner Avenue to southbound Communication Hill is shown to be adequate to serve the maximum vehicle queue under both existing and background conditions. Under background plus project conditions, the project traffic would extend the queue length to approximately 575 feet (or 19 additional vehicles). Therefore, the existing queue storage capacity for this movement is projected to be inadequate under project conditions.

The recommended improvements for the intersection of Communications Hill Boulevard and Curtner Avenue is to provide a second left-turn lane on the westbound approach to provide a total queue storage capacity of 650 feet. The improvement would require removal of the "pork chop" islands at the southern side of the intersection, relocation of the existing traffic signal, and restriping of the lanes.

Vistapark Drive and Capitol Expressway

The existing queue storage capacity of 325 feet per lane for the southbound left-turn lane on Vistapark Drive to westbound Capitol Expressway is shown to be adequate to serve the maximum vehicle queue under both existing and background conditions. Under project conditions, the project traffic would extend the queue length to approximately 350 feet (or one additional vehicle). Therefore, the existing queue storage capacity for this movement is projected to be inadequate under project conditions.

In addition, the existing queue storage capacity of 175 feet for the eastbound left-turn lane on Capitol Expressway to northbound Vistapark Drive is shown to be adequate to serve the maximum vehicle queue under both existing and background conditions. Under project conditions, the project traffic would extend the queue length to approximately 200 feet (or one additional vehicle). Therefore, the existing queue storage capacity for this movement is projected to be inadequate under project conditions.

The recommended improvements for the intersection of Vistapark Drive and Capitol Expressway is to extend the left-turn lanes on the southbound and eastbound approaches by 25 feet to accommodate the projected queues. These improvements would require removal and reconstruction of median islands along the north and west legs of the intersection and restriping of the lanes.

Snell Avenue and Capitol Expressway

The existing queue storage capacity of 325 feet for the southbound left-turn lane on Snell Avenue to westbound Capitol Expressway is shown to be inadequate to serve the maximum vehicle queue under both existing and background conditions. Under background plus project conditions, the project traffic would extend the queue length to approximately 675 feet (or 15 additional vehicles). Therefore, the existing queue storage capacity for this movement is projected to be inadequate under project conditions.

The recommended improvements for the intersection of Snell Avenue and Capitol Expressway is to provide a third left-turn lane on the southbound approach to provide a total queue storage capacity of 975 feet. The improvement would require removal of the "pork chop" islands at the northern and southern sides of the intersection, relocation of the existing traffic signal, and restriping of the lanes.

4.2.2.6 *Unsignalized Intersections Analysis*

Although the City of San José does not have a level of service standard for unsignalized intersections, the unsignalized study intersection of Old Hillsdale Avenue and Hillsdale Avenue was analyzed for operational purposes. The Old Hillsdale Avenue and Hillsdale Avenue intersection would provide primary access to the industrial portion of the project site.

Unsignalized intersections are analyzed on the basis of the *Peak-Hour Volume Signal Warrant (Warrant #3 – Part B)* described in the *California Manual on Uniform Traffic Control Devices (MUTCD), 2010 Edition*. This method makes no evaluation of intersection level of service, but simply provides an indication whether peak-hour traffic volumes are, or would be, sufficient to justify installation of a traffic signal.

Peak hour signal warrants were checked at the Old Hillsdale Avenue and Hillsdale Avenue intersection. The results indicate that the unsignalized study intersection of Old Hillsdale Avenue and Hillsdale Avenue is projected to have traffic volumes that meet the thresholds that warrant signalization under background plus project conditions.

4.2.2.7 *Freeway On-Ramp Analysis*

An analysis of the freeway on-ramps serving the project site was completed to identify potential project impacts on queue lengths and ramp operations. It should be noted that the analysis provided below is for informational purposes only. There are no thresholds of significance related to freeway on-ramp operations, and, as a result, any potential queuing impacts resulting from the project would not be considered significant under CEQA.

The project would be served by two freeway interchanges: SR 87 and Narvaez Avenue/Capitol Expressway and SR 87 and Curtner Avenue. As described under existing conditions, maximum observed queue lengths and their corresponding wait times were used as the basis for this analysis. A ratio between the background volumes using each of the freeway on-ramps and the project trips was used to estimate the number of vehicles that would be added to the background queue under project conditions. It should also be noted that these projections are based on the longest queues observed at the on-ramps during a one hour period, which represent a worst case scenario. The results of the ramp analysis under project conditions are summarized in Table 4.2-9, below.

Table 4.2-9: Freeway On-Ramp Analysis

Ramp	Peak Hour	Background			Background Plus Project		
		Volume	Queue Length (veh.)	Wait Time (min:sec)	Volume	Queue Length (veh.)	Wait Time (min:sec)
SR 87 On-Ramp @ NB Narvaez	AM	558	128	06:49	561	129	06:52
SR 87 On-Ramp @ SB Narvaez	AM	339	60	03:12	274	49	02:36
SR 87 On-Ramp @ WB Curtner	AM	302	76	13:18	527	121	06:27
SR 87 On-Ramp @ EB Curtner	AM	222	54	09:27	148	34	01:48

Notes:
[1] The reported northbound and southbound Narvaez queues at SR 87 includes 34 vehicles on the loop ramp (from the meter to the signal).
[2] Background and project conditions queue lengths were estimated based on the ratio between the existing volumes on the ramp and the estimated approved and project trips added to the ramp.
[3] The analysis assumes that the metering rate at the Curtner Avenue ramp will be adjusted to match that currently used at the Narvaez Avenue ramp.

SR 87 Northbound On-Ramp and Narvaez Avenue

The project is projected to add a total of three AM peak hour trips to the SR 87 northbound on-ramp from northbound Narvaez Avenue and result in the reduction of 65 AM peak hour trips from southbound Narvaez Avenue. The reduction of peak hour trips at the SR 87 northbound on-ramp from Narvaez Avenue is due to the redistribution of traffic created by the construction of the Communications Hill Boulevard bridge and connection to Curtner Avenue. A portion of the traffic that is currently using the SR 87 Narvaez ramp is expected to change travel patterns and instead utilize the SR 87 northbound on-ramp at Curtner Avenue. It is anticipated that once a connection from the project site to Curtner Avenue is built, the majority of project traffic bound for northbound SR 87 would use the freeway on-ramp at Curtner Avenue, since it provides for a shorter travel distance when compared to the SR 87 ramp at Narvaez Avenue.

Improvements are included as part of the proposed CHSPADP, as described in *Section 2.3*, at the SR 87 northbound on-ramp from Narvaez Avenue. However, only minimal improvements to operations are expected at SR 87 northbound on-ramp from Narvaez Avenue with the planned Communications Hill Boulevard connection and ramp improvements. Delays would continue to be experienced along the on-ramp, since the ramp's service rate is not being changed (the ramp meter rate is not changing and no additional lanes are being added to the on-ramp). In order to reduce delay time at the ramp, the meter would have to be adjusted to provide a higher service rate and traffic flow onto the freeway. However, increasing the service rate also could cause congestion along the freeway mainline. Ramp meter operations are State facilities controlled by Caltrans, not the City of San José.

SR 87 Northbound On-Ramp and Curtner Avenue

At the SR 87 northbound on-ramp at Curtner Avenue, the project is projected to add a total of 290 trips to the freeway on-ramp from westbound Curtner Avenue, increasing the projected queue length by approximately 61 vehicles. The addition of project trips to the Curtner Avenue on-ramp would cause the wait time for a vehicle at the end of the maximum queue on westbound Curtner Avenue to increase. The metering rate at the Curtner Avenue northbound on-ramp is currently three times longer than the rate at the Narvaez Avenue northbound on-ramp. The analysis of the freeway ramp assumes that the current metering rate at the SR 87 northbound on-ramp from Curtner Avenue would be increased to serve the increase in demand at the ramp and balance the usage of the Narvaez Avenue and Curtner Avenue ramps. The projected traffic growth and assignment of project traffic to each of the ramps serving SR 87 assumes that both ramps will provide an equivalent flow rate to northbound SR 87. In addition, improvements, as described below, will be necessary to accommodate the projected vehicular queues at the on-ramp.

To serve the projected vehicle queue length, an additional lane would need to be added to the SR 87 northbound on-ramp at Curtner Avenue for a total of two mixed-flow lanes and one HOV lane. This improvement is part of the CHSPADP as described in *Section 2.3*. The addition of a third lane to the on-ramp would provide an additional 700 feet of queue storage capacity from Curtner Avenue to the existing ramp meter location. Assuming as a worst case scenario that the projected queue length would remain as estimated with only two lanes on the on-ramp, the additional queue storage capacity required to serve the projected 61 vehicles being added to the queue by the project potentially could be provided along Curtner Avenue. By widening the westbound direction on Curtner Avenue from two to three lanes from Communications Hill Boulevard to the SR 87 northbound ramps, additional queue storage capacity would be provided to serve the projected westbound queue length under project conditions. **(Less Than Significant Impact)**

4.2.2.8 *Transit, Pedestrian, and Bicycle Facilities*

The project area is currently served by several bus routes and LRT service, although the project site itself is not served directly by transit. The nearest bus stops are located near the intersections of Communications Hill Boulevard/Curtner Avenue and Capitol Expressway/Vistapark Drive. The Capitol and Curtner LRT stations also located approximately one mile west and east of the project site.

The proposed project would result in an increase in demand for transit services. Existing pedestrian/bicycle links to existing bus and rail transit would require improvements to serve the future residents and workers on the project site. Implementation of the CHSPADP as previously summarized in *Section 2.3*, would enhance existing facilities as well as provide new non-motorized facilities that encourage the use of multi-modal travel options. Identified project impacts to the roadway system would be reduced because viable connections to surrounding pedestrian/bicycle and transit facilities would be provided, thus reducing automobile trips. Further, this project would include shuttle service to provide better access to nearby transit facilities. It would also provide for a balanced transportation system, consistent with the goals and policies of the General Plan. **(Less Than Significant Impact)**

4.2.2.9 *On-Site Traffic Operations*

An on-site operations analysis was completed to determine necessary intersection control and land configurations at each of the major on-site intersections, based on preliminary plans for the proposed residential portion of the site. Several new intersections would be created. For background plus project conditions, the following intersection controls, lane configurations, and turn restrictions are recommended:

1) Communications Hill Boulevard/Adeline Avenue: It is recommended that, based on projected traffic volumes and the alignment of Communications Hill Boulevard, turn movements to and from Adeline Avenue be restricted to right-turns only. Due to anticipated speeds and limited sight distance on Communications Hill Boulevard, this recommendation would improve safety conditions for automobiles entering and exiting Adeline Avenue.
2) Communications Hill Boulevard/Industrial Road: A peak hour signal warrant analysis indicated that this intersection is projected to have traffic volumes that meet the thresholds that warrant signalization.
3) Communications Hill Boulevard/St. Florian Way: A peak hour signal warrant analysis indicated that this intersection is projected to have traffic volumes that meet the thresholds that warrant signalization.
4) Communications Hill Boulevard/Main Street: While this intersection does not require signalization, it is recommended that turn-movements to and from Main Street be restricted to right-turns only due to limited sight distances and speeds expected on Communications Hill Boulevard. Prohibiting left-turn movements would result in increased left-turn demand at the Communications Hill Boulevard/Lina Street intersection.
5) Communications Hill Boulevard/Lina Street: Although the signal warrant threshold was not met at this intersection, it is recommended that the intersection be signalized due to the above recommendation to limit right-turns at Main Street.
6) Main Street/St. Florian Way: While the signal warrant was not met at this intersection, it is recommended that stop-control be implemented on all legs. **(Less Than Significant Impact)**

4.2.2.10 *Parking*

Based on City of San José parking code requirements, single-family residential development should provide two (2) covered parking spaces per unit. Multi-family residential development is required to provide parking based on number of bedrooms in each unit. Retail uses require one space per 400 square feet of space. Industrial park uses require 1 spaces per 350 square feet of development.

The residential development would require approximately 4,138 spaces while the retail uses would require approximately 169 spaces. As currently proposed, the project would provide approximately 4,307 spaces for the residential and 198 spaces for the retail development, respectively. In addition, approximately 1,400 on-street parking spaces would be available along new streets to be constructed as part of the project.

Although detailed plans are not yet prepared for the industrial development, it is assumed that it will provide up to 4,114 spaces depending upon the Transportation Demand Management (TDM)

measures that may be proposed to reduce the amount of parking, consistent with Municipal Code. Reductions may be allowed due to the site's proximity to transit, its location within an area subject to an Area Development Policy, or the provision of bicycle parking, to name a few. Therefore, the project would provide adequate parking to accommodate residents, workers, visitors, and retail demand. **(Less Than Significant Impact)**

4.2.2.11 *Consistency with Plans and Policies*

Santa Clara County Congestion Management Program

The Santa Clara County Valley Transportation Authority (VTA) oversees the Santa Clara County Congestion Management Program (CMP). The relevant state legislation requires that all urbanized counties in California prepare a CMP in order to obtain each county's share of the increased gas tax revenues. The CMP legislation requires that each CMP contain five mandatory elements: 1) a system definition and traffic level of service standard element; 2) a transit service and standards element; 3) a trip reduction and transportation demand management element; 4) a land use impact analysis element; and 5) a capital improvement element. The Santa Clara County CMP includes the five mandated elements and three additional elements, including a county-wide transportation model and database element, and annual monitoring and conformance element, and a deficiency plan element.

Mitigation of significant freeway impacts is beyond the scope of an individual project. However, the industrial portion of the project shall implement Transportation Demand Management (TDM) measures to encourage use automobile-alternative modes of transportation. In addition, implementation of the CHSPADP, which is part of the proposed project, would improve operations at the Narvaez and Curtner Avenue on-ramps, also improving freeway operations. The implementation of TDM measures would reduce the project's freeway impacts, but not to a less than significant level.

Consistency: The traffic analysis completed for the project was prepared in accordance with the standards of the CMP. As discussed in *Section 4.2 Transportation*, the project would not result in significant level of service impacts at any CMP intersections under background plus project conditions. The project would have a significant impact on mixed-flow lanes on 10 directional freeway segments and two HOV lanes during at least one peak hour. Implementation of TDM measures for the industrial park uses would reduce impacts to freeways, but not to a less than significant level.

Envision San José 2040 General Plan/CHSP

As previously described, the CHSP was incorporated into the 2040 General Plan and the development of 2,200 residential units, 65,700 square feet of commercial/retail/office, and 1.44 million square feet of industrial park uses were included in the transportation demand forecasting model and CUBE analysis completed for the General Plan PEIR. Amendments to the General Plan/Specific Plan are proposed to: 1) better reflect current General Plan land use designations; 2) utilize other potential shuttle route options; 3) remove the roadway extension of Pullman Way from

Communications Hill Boulevard to Hillcap Avenue; 4) allow for a limited number of garages to front on some streets; and 5) allow industrial park buildings to have heights up to four stories.
The only General Plan change that would affect transportation in the project area is the removal of the Pullman Way roadway extension. Therefore, the traffic model was utilized to assign project condition traffic volumes with and without the Pullman Way roadway extension. A comparison of intersection level of service results indicates there would be no significant benefit to providing the extension. However, operational issues such as lengthy queues at other primary access points to the general Communications Hill area would be partially alleviated with the extension.

The Pullman Way roadway extension would not significantly improve overall traffic conditions or circulation on the roadway system. Furthermore, construction of the Pullman Way extension would result in a circuitous travel route due to changes in grades that must be managed. Implementation of the CHSPADP, which is part of the proposed project, would provide additional connections and improvements that would be adequate to serve the project's additional traffic volumes.

Consistency: The proposed project is the construction of jobs and housing in an identified Growth Area of the City. Removing the Pullman Way roadway extension from the Specific Plan would not be inconsistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

San José Bike Plan 2020

The City's Bike Plan 2020, adopted in 2009, provides a foundation for enhancing the bikeways network and increasing the mode share of bicycle travelers. The Bike Plan lays out specific goals to improve bicycle access and connectivity in San José by the year 2020. These goals include completing 500 miles of bikeways; achieving a five percent bike mode share; reducing bike collision rates by 50 percent; adding 5,000 bicycle parking spaces; and achieving gold-level bicycle friendly community status. Planned bicycle facilities identified in the Bike Plan in the project area include bicycle lanes along Hillsdale Avenue and Snell Avenue.

Consistency: The project proposes development consistent with the General Plan and CHSP. The project would construct bicycle lanes and other trail connections as part of the CHSPADP to provide connections to existing and proposed bicycle trails in the project vicinity, as shown on Figure 2.3-1. For these reasons, the project is consistent with the General Plan/Specific Plan and Bike Plan. **(Less than Significant Impact)**

4.2.3 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating transportation impacts resulting from planned development within the City. Development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed in *Section 4.2.1.3*, resulting in less than significant transportation impacts.

4.2.4 Communications Hill Specific Plan Area Development Policy

The City's General Plan recognizes that in some areas, such as downtown or in other intense development areas, there may be counter-balancing or other economic benefits to the City that can

warrant deviations from strict compliance with the City's Traffic Level of Service Policy. In order to consider such deviations, the City's General Plan identifies that alternatives to the traditional LOS mitigation for traffic impacts can be accepted in the context of an Area Development Policy (ADP).

The City has determined based on the analysis of potential LOS traffic impacts caused by the build-out of the Communications Hill Specific Plan and an analysis of the potential benefits, relative to the cost of the improvements, that alternative traffic and transportation related improvements would provide a better overall benefit and value to the Communications Hill area. Such alternative improvements provide opportunities to better improve multi-modal transportation opportunities for pedestrians, bicycles and transit use (bus, Caltrain and Light Rail Transit) improvements. Improving multi-modal transportation opportunities is a key goal of the Envision San Jose General Plan.

The City of San Jose is proposing to adopt the Communications Hill Specific Plan Area Development Policy (CHSPADP) along with the proposed project. The CHSPADP will provide for the implementation of several improvements to the roadway system, transit system, and pedestrian and bicyclist facilities in the immediate area of the proposed project. The purpose of the CHSPADP is to establish a variance from the City's standard Level of Service Policy to allow for a balanced transportation system as identified by goals and policies of the City of San Jose Envision 2040 General Plan. The Envision 2040 General Plan allows for exceptions to the City's standard Level of Service Policy with the establishment of an ADP with the intent to meet City of San Jose Transportation Policies. In particular, the CHSPADP provides for improvement to the transportation system to meet the City of San Jose Transportation Policies that provide for the following:

- Encourage the use of non-automobile travel modes to reduce vehicle miles traveled (VMT)
- Consider the impact on the overall transportation system when evaluating the impacts of new developments.
- Increase substantially the proportion of travel modes other than single-occupant vehicles.

The proposed project would implement a series of off-site transportation network enhancements that are included in the CHSPADP, as described in Section 2.3. Analysis of environmental impacts associated with these off-site improvements in included in this SEIR.

4.2.4 Cumulative Transportation Impacts

The cumulative analysis, which is a long-range analysis was based on the traffic analysis contained in the Envision PEIR. This analysis did not address the level of service of intersections or freeway segments; rather, the Envision PEIR evaluated screenlines, mode split, vehicle miles travelled (VMT), transit priority corridors, and congestion in other jurisdictions to measure the performance of the circulation system and identify potential conflicts with adopted policies, plans, or programs such as the CMP.

The Envision PEIR determined that implementation of the General Plan, which includes the proposed development, would increase the percentage of alternative transportation modes for commute trips ("journey to work"), supporting the City's goals for decreasing the share of "drive alone" trips. Therefore, the 2040 General Plan would not result in a significant impact related to mode split. It was concluded, however, that growth allowed under the 2040 General Plan would result in a significant increase in traffic that could cause:

- increases in congestion on already congested roadways that cross most of the 27 screenlines evaluated in the Envision PEIR;[12]
- significant increase in VMT per service population over existing conditions;[13]
- significant impacts on 12 of 14 designated Transit Priority Corridors; and
- impacts to congested roadways in 13 of 14 neighboring cities and on County and Caltrans facilities.

Implementation of the General Plan policies and actions listed earlier in this section will serve to reduce these impacts, but not to less than significant levels. These impacts are cumulative in nature given that all development throughout the City would generate vehicle trips and contribute to increases in traffic congestion. The increase in VMT can be attributed in part to the shift in the jobs-housing balance in San José, which would require some housing for new employees to be located outside of the city, increasing commute distances.

The VMT increase is also a function of planned growth in areas with low or no access to transit. The model reflects a "worst-case" outcome because it does not account for many observed cultural and urban design factors that have been documented to influence the commute mode choices. Accordingly, the model does not accurately quantify the benefits that can be achieved from all policies and programs that would increase use of alternative transportation modes and reduce VMT per service population.

The proposed project would generate traffic that contributes to significant unavoidable impacts related to screenlines, VMT, and adjacent jurisdictions. Based on the results of the level of service analyses described above, the project would not cause a substantial change in traffic patterns in relation to planned growth. Project-related traffic would mainly be localized to the project area and would not substantially affect traffic in neighboring cities.

Furthermore, the project would support the General Plan policies for shifting the mode split and reducing vehicle travel. The CHSPADP, which is included as part of the project is intended to maximize the efficiency, safety, and connectivity of the circulation system, emphasizing increased access and mobility for alternative modes of transportation (i.e., pedestrian, bicycle, and transit). The CHSPADP would reduce VMT and traffic congestion.

Currently, the project area is well-served by a variety of transit services including the Capitol and Curtner Light Rail Stations and the Capitol Caltrain Station. With the proposed trail and bikeway improvements, the distances between the site and these facilities would be reduced and connections would be more convenient than the current linkages. Further, a shuttle service that connects the new development on the top of the hill to nearby transit facilities would encourage the use of transit.

[12] A screenline is a manmade (such as a freeway) or natural (such as a river) barrier to transportation that affects multiple roadways and create a significant constraint on roadway capacity. The volume and capacity across each screenline is the sum of the volumes and capacities of each congested roadway segment that crosses the screenline. If there is a significant increase in the aggregated volume-to-capacity (V/C) ratio of congested roadway links, there is virtually always a significant increase in the aggregated volume-to-capacity ratio of all links. This type of analysis captures regional travel characteristics at a citywide level.

13 The VMT analysis is based on VMT generated per service population (residents + employment), which is described as "land use-based VMT".

The intensification of housing and employment in the CHSP area, in accordance with the General Plan and CHSP, would increase the number of residents and employees within walking distance to transit services. Implementation of the CHSPADP would maximize opportunities for commuting by transit and minimize the need for commuting by car. Due to its location and high level of transit service, it can be argued that the project has a high potential to reduce automobile travel and increase transit use.

In addition, the project would encourage increased walking and biking through compact, mixed use development, which shortens the distance between origins (homes, offices, etc.) and destinations (restaurants, retail, etc.). Implementation of the proposed CHSPADP would make pedestrian and bicycling travel safer. New street connections and shorter blocks would be provided to make walking and biking more convenient. Adherence to the Design Guidelines and General Plan policies would create a vibrant and inviting streetscape, further encouraging walking and biking.

Future industrial development will be required to implement a transportation demand management (TDM) program to support alternative transportation modes and reduce. The development and implementation of a Transportation and Parking Management Plan for the industrial development will help to balance the supply and demand of parking and transportation resources to meet travel needs, while supporting goals for minimizing VMT. The use of Transportation Demand Measures currently available for densely developed infill sites near transit such as the Plan area would help reduce VMT by up to 35 percent.[14]

Overall, the proposed project would support the General Plan policies for shifting the mode split and reducing vehicle travel through improving access to transit, creating a pedestrian- and bicycle-friendly environment, and enhancing connectivity to transit, commercial areas, and residential neighborhoods. The project has a good potential to reduce VMT due to its location, mix of land uses, proposed improvements, and transit-oriented nature. The combination of the site's location and planned improvements to transit and the pedestrian/bicycle networks would result in a net benefit to the performance of the transportation system.

As previously described, the Envision PEIR determined that cumulative transportation impacts of implementation of the General Plan, of which the project is a part, would be significant and unavoidable. For the reasons described above, the project is essentially self-mitigating in terms of VMT and traffic congestion and would not make a substantial contribution to the cumulative impacts related to screenlines, VMT, and adjacent jurisdictions described in the General Plan PEIR. **(Less than Significant Cumulative Impact)**

4.2.5 Conclusion

Impact TRAN-1: The project would have a significant impact under existing plus project conditions at the intersections of Almaden Expressway and Foxworthy Avenue, Almaden Expressway and Blossom Hill Road, Communications Hill Boulevard and Curtner Avenue, Snell Avenue and Capitol Expressway, Meridian Avenue and Hamilton Avenue, Capitol Expressway and Quimby Road, Capitol Expressway and Aborn Road, Capitol Expressway and Silver

14 Envision PEIR.

Creek Road, and Meridian Avenue and Hillsdale Avenue. **(Significant Impact)**

Impact TRAN-2: The project would have a significant impact under background plus project conditions at the intersection of Monterey Road and Curtner Avenue. Mitigation measures to reduce these impacts are considered by the City to be infeasible. **(Significant Unavoidable Impact)**

Impact TRAN-3: The project would have a significant impact under background plus project conditions at the intersection of Almaden Expressway and Foxworthy Avenue. Mitigation measures to reduce these impacts are considered by the City to be infeasible. **(Significant Unavoidable Impact)**

Impact TRAN-4: The project would have a significant impact under background plus project conditions at the intersection of Communications Hill Boulevard and Curtner Avenue. The project shall implement MM Tran-4.1, which includes intersection improvements such as median modifications, removal of the "pork chop" islands, restriping of lanes, and traffic signal modifications, to reduce this impact to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact TRAN-5: The project would have a significant impact under background plus project conditions at the intersection of Snell Avenue and Capitol Expressway. Mitigation measures to reduce these impacts are considered by the City to be infeasible. **(Significant Unavoidable Impact)**

Impact TRAN-6: The proposed project would result in significant impacts to the following freeway segments:

- *SR 87 (NB):* SR 85 to Capitol Expressway (AM Peak Hour), Curtner to Almaden Road (AM Peak Hour), Almaden Road to Alma Avenue (AM and PM Peak Hour), Alma Avenue to I-280 (AM Peak Hour)
- *SR 87 (SB):* Julian Street to I-280 (PM Peak Hour), I-280 to Alma Avenue (PM Peak Hour), Alma Avenue to Almaden Road (PM Peak Hour), Almaden Road to Curtner (PM Peak Hour)
- *I-680 (SB):* Capitol Expressway to King Road (AM Peak Hour)
- *I-280 (WB):* Bird Avenue to Meridian Avenue (AM Peak Hour)

Mitigation measures to reduce these impacts are considered by the City to be infeasible. **(Significant Unavoidable Impact)**

The project would not result in other significant transportation impacts, such as changes in air traffic patterns, increases in hazards due to a design feature or incompatible uses, or inadequate emergency access. The project would not conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such

facilities. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.3 NOISE AND VIBRATION

The following discussion primarily based on an environmental noise assessment prepared by *Veneklasen Associates, Inc.* in January 2014 and the Envisions San José 2040 General Plan FEIR. A copy of the noise report is included in Appendix D of this EIR.

4.3.1 Background Information

4.3.1.1 *Noise Concepts and Measurements*

Several factors influence sound as it is perceived by the human ear, including the actual level of sound, the period of exposure to the sound, the frequencies involved, and the fluctuation in the noise level during exposure. Noise is measured on a "decibel" scale which serves as an index of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted units is known as the "A-weighted" decibel, or dBA. Further, sound is averaged over time and penalties are added to the average for noise that is generated during times that may be more disturbing to sensitive uses such as early morning, or late evening.

Since excessive noise levels can adversely affect human activities (such as conversation and sleeping) and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. The noise guidelines are almost always expressed using one of several noise averaging methods, such as L_{eq}, DNL, or CNEL.[15] Using one of these descriptors is a way for a location's overall noise exposure to be measured, realizing of course that there are specific moments when noise levels are higher (e.g., when a jet is taking off from the Airport or when a leaf blower is operating) and specific moments when noise levels are lower (e.g., during lulls in traffic flows on SR 87 or in the middle of the night).

4.3.1.2 *Groundborne Vibration*

Vibration is minute variation in pressure through structures and the earth, whereas, noise is minute variation in pressure through air. Some vibration effects can be caused by noise; e.g., the rattling of windows from truck pass-bys. This phenomenon is related to the coupling of the acoustic energy at frequencies that are close to the resonant frequency of the material being vibrated. Ground-borne vibration attenuates rapidly as distance from the source of the vibration increases. Vibration amplitude can be measured as peak particle velocity (PPV), the maximum instantaneous peak amplitude in inches per second, or root-mean-square (RMS) velocity in inches per second or as vibration level in decibels (VdB) referenced to 1 micro-inch per second. The ratio between the PPV and the maximum RMS amplitude is termed the "crest factor." According to the Federal Transit Administration (FTA), the PPV level for construction equipment is typically 1.7 to 6

[15] L_{eq} stands for the Noise Equivalent Level and is a measurement of the average energy level intensity of noise over a given period of time such as the noisiest hour. DNL stands for Day-Night Level and is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. CNEL stands for Community Noise Equivalent Level; it is similar to the DNL except that there is an additional five dB penalty applied to noise which occurs between 7:00 PM and 10:00 PM. As a general rule of thumb where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour L_{eq}.

times greater than the RMS vibration level. The FTA uses a crest factor of four for the conversion of PPV levels to RMS vibration levels. For the purposes of ground-borne vibration analysis of impacts to existing structures, vibration velocity is described in terms of PPV. For the analysis of the human response to vibration, VdB is utilized.

The vibration velocity threshold of perception for humans is approximately 65 VdB, and a vibration velocity of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels for many people. Most perceptible indoor vibration is caused by sources within buildings such as operation of mechanical equipment, movement of people, or the slamming of doors. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads.

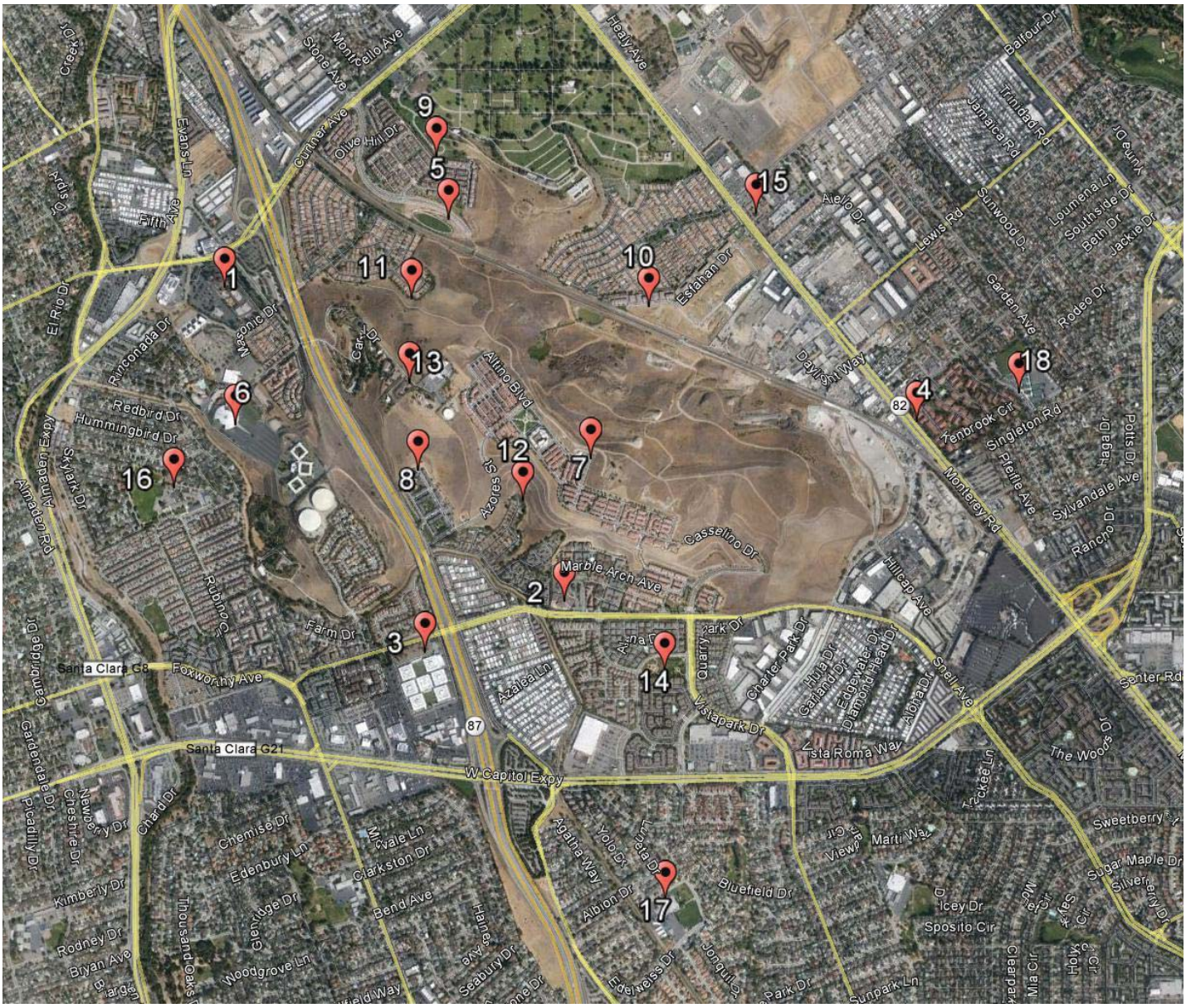
Common ground-induced vibrations related to roadway traffic and construction activities pose no threat to buildings or structures. If a roadway is smooth, the ground-borne vibration from traffic is barely perceptible. The range of interest is from approximately 50 VdB, which is the typically background vibration velocity, to 94 VdB. This 94 VdB vibration level corresponds to 0.2 PPV, which is the general threshold where minor damage can occur in non-engineered timber and masonry buildings. Additional information on the fundamentals of noise and vibration are included in Appendix D.

4.3.2 Existing Setting

The proposed project site is generally bounded by the Caltrain/Union Pacific railroad tracks on the north, Old Hillsdale Avenue to the east, the Tuscany Hills development to the south, and the Millpond and Dairy Hill neighborhoods to the west. The Oak Hill Cemetery is located adjacent to the northern boundary of the site. Land uses to the north, south, and west of the site are mainly residential, with some commercial/industrial use to the east. Traffic from Highway 87, Monterey Road, Curtner Avenue, and Capitol Expressway is the primary source of noise in the general area of the site. Other major noise sources contributing to ambient noise levels in the project area include aircraft overflights associated with the Mineta San José International Airport, although the site is not located within the Airport Influence Area (AIA) for the Mineta San José International Airport and is not subject to noise and land use compatibility policies in the Airport's Comprehensive Land Use Plan (CLUP).[16]

To establish existing ambient noise levels in areas surrounding the site, a field monitoring study was conducted at 18 locations within the project area. Long-term noise measurements were performed in and around the site to document ambient conditions. Long-term noise measurements were performed at 18 locations as shown on Figure 4.3-1. The measurements occurred at these locations throughout the period of August 12 to August 15, 2013. Noise readings were measured over one-minute intervals with "A" frequency fast time weighting. The resulting one-minute Leq noise levels were energy-averaged to determine both the hourly Leq noise levels and the overall average Leq noise level for the referenced time period.

[16] Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan, Norman Y. Mineta San Jose International Airport*. 2010.



Number	Location Name	Location Description
1	Cathedral of Faith	2315 Canoas Garden Ave
2	Hillside Evangelical	545 Hillsdale Ave
3	Metropolitan Educational Center	60 Hillsdale Ave
4	Kenwood Residences	Monterey & Southside Dr.
5	Kurte Park	Communications Hill Blvd
6	Church on the Hill	500 Sands Dr.
7	Tuscany Hills Residences	2933 Saint Florian Way
8	Helzer Residences	101 Nagel Way
9	Oak Hill Memorial Park	300 Curtner Ave

Number	Location Name	Location Description
10	Esfahan Drive Residences	Esfahan Ct.
11	Millpond Community	335 Millpond Dr.
12	Mountain Springs	336 Mountain Springs Dr.
13	Carol Residences	Carol Dr. near tower
14	Waterford Park	Vistapark & Sandpebble
15	Palm Tree Inn Motel	2724 Monterey Hwy.
16	Canoas Elementary School	880 Wren Dr
17	Carson Elementary School	4245 Meg Dr
18	Captain Jason Dahl School	3200 Water St

NOISE MEASUREMENT LOCATIONS FIGURE 4.3-1

Table 4.3-1 provides the noise level data associated with each monitoring period for each location. As shown, noise levels ranged from 53.5 dBA CNEL at the Mountain Springs (2) measurement location to 76.6 dBA CNEL at the Kenwood Residences (4) location. The high noise level measured at the Kenwood Residences location was due to the high volume of traffic along Monterey road. An additional measurement was performed 65 feet from the railroad tracks to determine the maximum noise level (Lmax) of passing trains. Nine passing trains were measured and the average Lmax measured 85.3 dBA.

Table 4.3-1: Existing Weekday Ambient Noise Levels

Location	Noise Sources	Noise Levels - CNEL	Noise Levels – Leq Range (dBA)
1) Cathedral of Faith	Traffic (Hwy 87, Curtner)	67	55 – 68
2) Hillside Evangelical	Traffic (Hillsdale)	65	49 – 64
3) Metropolitan Educational	Traffic (Hwy 87, Hillsdale)	60	46 – 58
4) Kenwood Residences	Rail, Traffic (Monterey,	77	61 – 77
5) Kurte Park	Rail, Traffic (Curtner)	61	41 – 57
6) Church on the Hill	Traffic (Hwy 87)	58	44 – 57
7) Tuscany Hills Residences	Rail, Traffic (Hwy 87)	54	38 – 52
8) Helzer Residences	Traffic (Hwy 87)	58	45 – 56
9) Oak Hill Memorial Park	Traffic (Curtner, Monterey)	61	49 – 63
10) Esfahan Drive Residences	Rail	63	35 – 58
11) Millpond Community	Rail, Traffic (Hwy 87, Curtner)	54	40 – 52
12) Mountain Springs	Traffic (Hwy 87)	54	42 – 51
13) Carol Residences	Traffic (Hwy 87)	61	48 – 58
14) Waterford Park	Traffic (Vistapark)	60	45 – 58
15) Palm Tree Inn Motel	Traffic (Monterey)	64	49 – 66
16) Canoas Elementary School	Traffic (Local)	59	45 – 58
17) Carson Elementary School	Traffic (Local)	59	46 – 65
18) Captain Jason Dahl School	Traffic (Local)	59	46 – 57

Notes:
CNEL (Community Noise Equivalent Level) is the average sound level over a 24 hour period, with a penalty of 5 dB added for the evening hours or 7 PM to 10 PM, and a penalty of 10 dB added for the nighttime hours of 10 PM to 7 AM.
Leq (energy-equivalent sound) describes noise in terms of an average level over the course of an hour.

4.3.2.1 *Existing Vibration Environment*

Vibration measurements were performed on August 12 and August 13, 2013 at 65 feet from the railroad tracks. Rail vehicles utilizing the adjacent railway and vehicular traffic are the sources of ground-borne vibration in the project vicinity. The rail vibrations measured between 72.9 and 83.6 VdB at a distance of 65 feet from the railway. The existing vehicular traffic vibration levels within the project vicinity are negligible, except for trucks driving over potholes and bumps within 25 feet of existing structures where the vibration may be perceived and may be annoying.

4.3.2.2 *Noise Sensitive Land Uses*

Residential development is sensitive to community noise both outdoors and indoors, particularly during the nighttime. Hotels, hospitals, schools, libraries, museums, meeting halls, and churches are also considered to be noise-sensitive. Commercial and industrial development is less sensitive to community noise because these uses are primarily indoors and noise impacts can be more easily mitigated with building design and construction.

Existing noise-sensitive land uses in the Plan area include single-family and multi-family residential developments, particularly in the Tuscany Hills, Dairy Hill, Millpond, Lancaster Gate, and Goble Lane neighborhoods. Several of these residential developments are located adjacent to existing hard rail and light rail lines and busy roadways and freeways. There are no known daycare centers, hospitals, or senior care facilities within or adjacent to the project boundary.

4.3.3 Regulatory Framework

4.3.3.1 *Federal Transit Administration*

The Federal Transit Administration (FTA) has established impact criteria for ground-borne noise and vibration for rail transit and railroads, summarized in Table 4.3-3 below. Frequent events are defined as more than 70 events of the same source per day, while infrequent events occur fewer than 70 times per day. Ground-borne noise criteria are lower than for airborne noise to account for the annoying low-frequency character of ground-borne noise.

Table 4.3-2:
FTA Ground-Borne Noise and Vibration Criteria By Land Use Category

	Ground-Borne Noise		Ground-Borne Vibration	
Land Use Category	**Frequent Events**	**Infrequent Events**	**Frequent Events**	**Infrequent Events**
Buildings where low ambient vibration is essential for operation	NA	NA	65 VdB	65 VdB
Residences and buildings where people normally sleep.	35 dBA	43 dBA	72 VdB	80 VdB
Institutional land uses with primarily daytime use.	40 dBA	48 dBA	75 VdB	83 VdB

4.3.3.2 *City of San José Policies*

Municipal Code

The Municipal Code restricts construction hours within 500 feet of a residential unit to the hours of 7:00 a.m. to 7:00 p.m. Monday through Friday, unless otherwise expressly allowed in a Development Permit or other planning approval.[17]

The Zoning Ordinance limits noise levels at any property line of residential, commercial, or industrial properties, as shown in Table 4.3-3. The Zoning Ordinance also limits noise emitted by stand-by/backup and emergency generators to 55 decibels at the property line of residential properties. The testing of generators is limited to 7 a.m. to 7 p.m., Monday through Friday.

Table 4.3-3:
City of San José Zoning Ordinance Noise Standards

Land Use Types	Maximum Noise Level in Decibels at Property Line
Residential, open space, industrial or commercial uses adjacent to a property used or zoned for residential purposes	55
Open space, commercial, or industrial use adjacent to a property used or zoned for commercial purposes or other non-residential uses	60
Industrial use adjacent to a property used or zoned for industrial or use other than commercial or residential purposes	70

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating noise and vibration impacts resulting from planned development within the City. All future development addressed by this EIR for the project site will be subject to the noise and vibration policies listed in the City's 2040 General Plan, including the following listed below. The project's consistency with these policies is discussed in *Section 4.3.2.5 Consistency with Relevant Plans and Policies.*

LAND USE COMPATIBILITY

Policy EC-1.1: Locate new development in areas where noise levels are appropriate for the proposed uses. Consider federal, state and City noise standards and guidelines as a part of new development review. Applicable standards and guidelines for land uses in San José include:

Interior Noise Levels

- The City's standard for interior noise levels in residences, hotels, motels, residential care facilities, and hospitals is 45 dBA DNL. Include appropriate site and building design, building construction and noise

[17] The Municipal Code does not establish quantitative noise limits for demolition or construction activities occurring in the City.

attenuation techniques in new development to meet this standard. For sites with exterior noise levels of 60 dBA DNL or more, an acoustical analysis following protocols in the City-adopted California Building Code is required to demonstrate that development projects can meet this standard. The acoustical analysis shall base required noise attenuation techniques on expected General Plan traffic volumes to ensure land use compatibility and General Plan consistency over the life of this plan.

Exterior Noise Levels

- The City's acceptable exterior noise level objective is 60 dBA DNL or less for residential uses and 70 dBA DNL or less for office and commercial uses (Table EC-1). The acceptable exterior noise level objective is established for the City, except in the environs of the San José International Airport, the Downtown Core Area, and along major roadways. For the remaining areas of the City, the following standards apply:
    - For new multi-family residential projects and for the residential component of mixed-use development, use a standard of 60 dBA DNL in usable outdoor activity areas, excluding balconies and residential stoops and porches facing existing roadways. There will be common use areas available to all residents that meet the 60 dBA exterior standard. Use noise attenuation techniques such as shielding by buildings and structures for outdoor common use areas. On sites subject to aircraft overflights or adjacent elevated roadways, use noise attenuation techniques to reduce noise levels from sources other than aircraft and elevated roadway segments.
    - For single-family residential uses, use a standard of 60 dBA DNL for exterior noise in private usable outdoor activity areas, such as back yards.

  Table EC-1 establishes that residential uses are considered "normally acceptable" where exterior noise exposures are 60 dBA NDL or less. Where the exterior noise exposure is between 60 dBA and 75 dBA DNL, residential uses are considered "conditionally acceptable" such that the "specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design." Residential uses are considered "unacceptable" in noise environments exceeding 75 dBA DNL because mitigation is usually not feasible to comply with noise element policies.

Policy EC-1.2: Minimize the noise impacts of new development on land uses sensitive to increased noise levels (Categories 1, 2, 3 and 6) by limiting noise generation and by requiring use of noise attenuation measures such as acoustical enclosures and sound barriers, where feasible. The City considers significant noise impacts to occur if a project would:

- Cause the DNL at noise sensitive receptors to increase by five dBA DNL or more where the noise levels would remain "Normally Acceptable"; or
- Cause the DNL at noise sensitive receptors to increase by three dBA DNL or more where noise levels would equal or exceed the "Normally Acceptable" level.

Policy EC-1.3: Mitigate noise generation of new nonresidential land uses to 55 dBA DNL at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.

Policy EC-1.6: Regulate the effects of operational noise from existing and new industrial and commercial development on adjacent uses through noise standards in the City's Municipal Code.

Policy EC-1.7: Require construction operations within San José to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would:

- Involve substantial noise generating activities (such as building demolition, grading, excavation, pile

driving, use of impact equipment, or building framing) continuing for more than 12 months.

For such large or complex projects, a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.

Policy EC-2.1: Near light and heavy rail lines or other sources of ground-borne vibration, minimize vibration impacts on people, residences and businesses through the use of setbacks and/or structural design features that reduce vibration to levels at or below the guidelines of the Federal Transit Administration. Require new development within 100 feet of rail lines to demonstrate prior to project approval that vibration experienced by residents and vibration sensitive uses would not exceed these guidelines.

Policy EC-2.3: Require new development to minimize vibration impacts to adjacent uses during demolition and construction. For sensitive historic structures, a vibration limit of 0.08 in/sec PPV (peak particle velocity) will be used to minimize the potential for cosmetic damage to a building. A vibration limit of 0.20 in/sec PPV will be used to minimize the potential for cosmetic damage at buildings of normal conventional construction.

Table 4.3-4
General Plan Land Use Compatibility Guidelines (GP Table EC-1)

Land Use Category	Exterior DNL Value in Decibels					
	55	60	65	70	75	80
1. Residential, Hotels and Motels, Hospitals and Residential Care						
2. Outdoor Sports and Recreation, Neighborhood Parks and Playgrounds						
3. Schools, Libraries, Museums, Meeting Halls, and Churches						
4. Office Buildings, Business Commercial, and Professional Offices						
5. Sports Arena, Outdoor Spectator Sports						
6. Public and Quasi-Public Auditoriums, Concert Halls, and Amphitheaters						

Normally Acceptable:
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Conditionally Acceptable:
Specified land use may be permitted only after detailed analysis of the noise reduction requirements and noise mitigation features included in the design.

Unacceptable:
New construction or development should generally not be undertaken because mitigation is usually not feasible to comply with noise element policies. Development will only be considered when technically feasible mitigation is identified that is also compatible with relevant design guidelines.

4.3.3.3 *California Green Building Standards*

The Green Building Standards of the State of California Code of Regulations (Title 24, Part 11, CALGreen Code) establishes mandatory exterior sound transmission control standards for new non-residential buildings including an interior noise standard of 50 dBA L_{eq}. Refer to Appendix D for more information about the CALGreen Code.

4.3.2 Noise and Vibration Impacts

4.3.2.1 *Thresholds of Significance*

For the purposes of this SEIR, a noise impact is considered significant if the project would result in:

- Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels;
- A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project;
- A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels; or
- 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 project is not located within an airport land use plan, within two miles of a public airport or public use airport, or private airstrip. Therefore, the last two bulleted thresholds listed above are not applicable to this project and are not discussed further.

The following criteria based on the standard identified in the CALGreen Code, Municipal Code, and General Plan were used to evaluate the significance of environmental noise and vibration resulting from the project:

- A significant noise impact would be identified if the project would expose persons to or generate noise levels that would exceed applicable noise standards. For residential noise and land use compatibility, exterior noise levels must be maintained at or below 60 dBA DNL and interior noise levels must be maintained at or below 45 dBA DNL. New non-residential buildings must be designed to meet the mandatory exterior sound transmission control standards identified in the CALGreen Code. Noise levels resulting from the operation of the project must be maintained at or below 55 dBA DNL at the property line when located adjacent to existing or planned noise sensitive residential and public/quasi-public land uses.

- A significant impact would be identified if the construction of the project would expose persons to excessive vibration levels. Groundborne vibration levels exceeding 0.5 in/sec PPV (peak particle velocity) would have the potential to result in cosmetic damage to buildings located on parcels adjoining the project site.

- A significant impact would be identified if traffic generated by the project would substantially increase noise levels at sensitive receptors in the vicinity. A substantial increase would occur if : a) the noise level increase is five dBA DNL or greater, with a future noise level of less than 60 dBA DNL, or b) the noise level increase is three dBA DNL or greater, with a future noise level of 60 dBA DNL or greater.

- A significant impact would be identified if the project would expose residential development to instantaneous noise levels resulting from railway operations that exceed 50 dBA maximum noise level (Lmax) in bedrooms and 55 dBA Lmax in other rooms.

The following discussion distinguishes between the noise impacts to the project from the surrounding environment and noise impacts from the project upon the surrounding environment.

4.3.2.2 Long-Term Noise Impacts

Impacts to the Project

Future Noise Levels

The existing noise levels on the site measured as high as 63 dBA DNL along the railway near the Esfahan Drive residences location and 62 dBA DNL at the Carol Drive residences location. Residential land uses are proposed in these areas where the noise exposure exceeds the City's goal of 60 dBA DNL. As a result, residences in these areas would be exposed to noise exterior and interior noise levels above the City's standards of 60 dBA DNL and 45 dBA DNL, respectively.

Impact NOI-1: Proposed residences would be exposed to exterior noise levels greater than 60 DNL and interior noise levels greater than 45 dBA DNL, which exceed the standards set forth in the 2040 Envision San José General Plan. **(Significant Impact)**

Mitigation Measures:

MM NOI-1.1: Site specific noise analyses shall be conducted for future residences to be located along the railway near Esfahan Drive and near the Carol Drive residences to verify consistency with City noise standards. The study will identify site specific mechanisms to reduce interior noise to levels considered acceptable in the City's General Plan and Zoning Ordinance, such as forced air mechanical ventilation systems, window rating standards, and fences and/or noise barriers.

Railway Noise

The maximum instantaneous noise levels of trains measured 60 feet from the railway averaged 85.3 dBA. Adjusting this measured value to determine the noise exposure at the closest proposed structure at 200 feet from the railway yielded a noise level of 75 dBA. Standard exterior construction will provide 25 dB of noise attenuation of the exterior noise level, providing an interior noise level of 50 dBA DNL, complying with the City's interior noise goal for all rooms for exposure to railway noise. **(Less Than Significant Impact)**

Groundborne Vibration

The maximum train vibration measured 83.6 VdB at 60 feet from the railway. With the nearest residential structure proposed 200 feet from the railway, the estimated vibration level at the nearest structure would be 69 VdB. This is below the significance criteria of 72 VdB as stated in the FTA guidelines.

Industrial park uses may also be sensitive to groundborne vibration due to the use of calibrated instruments and machinery. The specific locations of the proposed industrial park uses have not yet been determined. Setbacks and/or structural design features that reduce vibration levels may be required depending on the ultimate uses of the site and building locations, as described in General Plan Policy EC-2.1. Implementation of this policy would reduce impacts to a less than significant level. **(Less Than Significant Impact)**

Impacts from the Project

Traffic-Generated Noise

Vehicle trips generated by the project would add traffic to existing intersections, thereby increasing the noise levels in the area surrounding those intersections. Noise levels at the intersection of Hillsdale Avenue and Snell Avenue are predicted to increase two dBA DNL due to project-generated traffic, which is less than the significance threshold of three dBA for land uses with "Normally Unacceptable" noise levels. This intersection represents the highest noise increase at intersections affected by project traffic. **(Less Than Significant Impact)**

Operational Noise

The project includes a proposed retail element that would be located adjacent to residential uses. Although the nature of the retail/commercial/office uses are unknown at this time, it is possible that the retail element of the project could result in noise levels greater than 55 dBA DNL at the nearest property line adjacent to residential uses, which would exceed the City's standard.

Although the specific uses in the industrial park portion of the site are yet to be determined, these future uses would be located adjacent to the northernmost residential development proposed on the site, albeit at a substantially lower elevation. It is possible that the industrial park uses could result in

noise levels greater than 55 dBA DNL at the nearest property line adjacent to residential uses, which would exceed the City's standard.

Impact NOI-2: The proposed retail and industrial park uses on the site could generate noise in excess of 55 dBA DNL at the nearest property line adjacent to proposed residential uses. **(Significant Impact)**

Mitigation Measures:

MM NOI-2.1: Future retail and industrial park uses on the project site will be required to maintain a noise level of 55 dBA at property lines located adjacent to sensitive receptors. At the time the plans for future retail and industrial park uses are finalized, the project applicant shall submit an acoustical study demonstrating compliance with the City's requirements.

4.3.2.2 Short-Term Noise Impacts

Construction Noise

Noise impacts resulting from construction depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise sensitive receptors. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), when construction occurs in areas immediately adjoining noise-sensitive land uses, or when construction durations last over extended periods of time.

Major noise-generating construction activities associated with the proposed project would include site grading and excavation, installation of utilities, the construction of building foundations, cores, and shells, paving, and landscaping. The highest noise levels would be generated during the construction of building or bridge foundations when impact pile driving is required to support the structure. Site grading and excavation activities would also generate high noise levels as these phases often require the simultaneous use of multiple pieces of heavy equipment such as dozers, excavators, scrapers, and loaders. Lower noise levels result from building construction activities when these activities move indoors and less heavy equipment is required to complete the tasks.

Construction equipment would typically include, but would not be limited to, earth-moving equipment and trucks, pile driving rigs, mobile cranes, compressors, pumps, generators, paving equipment, and pneumatic, hydraulic, and electric tools. The typical range of hourly average noise levels generated by different phases of construction measured at a distance of 50 feet from a busy construction site are shown in Table 4.3-3. Typical hourly average construction-generated noise levels are approximately 77 to 89 dBA L_{eq} measured at a distance of 50 feet from the site during busy construction periods. Large pieces of earth-moving equipment, such as graders, scrapers, and dozers, generate maximum noise levels of 85 to 90 dBA L_{max} at a distance of 50 feet. During each stage of construction, there would be a different mix of equipment operating and noise levels would vary based on the amount of equipment on site and the location of the activity. Construction noise levels

drop off at a rate of approximately six dBA per doubling of distance between the noise source and receptor. Intervening structures or terrain would result in lower noise levels at distant receivers.

Table 4.3-3:
Typical Ranges of Noise Levels at 50 Feet from Construction Sites (dBA L_{eq})

Activity	Domestic Housing		Office Building, Hotel, Hospital, School, Public Works		Industrial Parking Garage, Religious, Amusement & Recreations, Store, Service Station		Public Works Roads & Highways, Sewers, and Trenches	
	I	II	I	II	I	II	I	II
Ground Clearing	83	83	84	84	84	83	84	84
Excavation	88	75	89	79	89	71	88	78
Foundations	81	81	78	78	77	77	88	88
Erection	81	65	87	75	84	72	79	78
Finishing	88	72	89	75	89	74	84	84

Notes:
I - All pertinent equipment present at site.
II - Minimum required equipment present at site.
Source: United States Environmental Protection Agency, 1973, Legal Compilation on Noise, Vol. 1, p. 2-104.

Long-Term Construction Noise

As described previously, construction of the project is expected to take 12-15 years to complete. During that time, construction activities would occur in different locations on the site for varying lengths of time. Construction activities, taken as a whole, would increase long-term average noise levels in the project area over the entire construction period. However, because construction activities would not occur directly adjacent to any one existing residential development for the entire construction period, long-term increases in the average noise levels at these residences would not be substantial. For example, the Tuscany Hills development would experience an increase in average noise levels from 54 dBA CNEL to 55 dBA CNEL over the 12-15 year period.

Short-Term Construction Noise

When individual construction activities occur adjacent to the site boundaries in the vicinity of existing residences, those residences would experience acute short-term increases in noise levels. The Tuscany Hills, Esfahan Drive, Millpond, Carol Drive, and Dairy Hill developments would experience short-term construction noise levels above the existing noise levels in the area when construction activities occur directly adjacent to residences.

As shown in Table 4.3-4, these noise levels could reach as high as 77 dBA Leq. Additionally, existing residences in the vicinity of the off-site roadway improvements proposed by the project (*refer to Section 2.3 Area Development Policy/Off-Site Improvements*) would experience increased noise levels from construction activities.

Table 4.3-4:
Short-Term Construction Noise Levels

Location	Future Noise Levels from Project Construction Activities (dBA Leq)[1]	Existing Noise Levels (dBA CNEL)[2]	Lowest Measured Existing Hourly Leq During Construction Hours of 7:00 AM to 7:00 PM (dBA Leq)[1]
Kurte Park (adjacent to Dairy Hill)	67	61	50
Tuscany Hills Residences	77	54	49
Esfahan Drive Residences	64	63	53
Millpond Community	77	54	48
Carol Residences	77	61	55

Notes:

[1] L_{eq} stands for the Noise Equivalent Level and is a measurement of the average energy level intensity of noise over a given period of time such as the noisiest hour.

[2] CNEL stands for Community Noise Equivalent Level and is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM and five dB penalty applied to noise which occurs between 7:00 PM and 10:00 PM.

According to General Plan Policy EC-1.7, the City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.

As described previously, construction of the proposed project, including the off-site roadway improvements, is expected to occur over a 12-15 year period, and would involve substantial noise generating activities. Because construction would occur within 500 feet of existing residential uses, and could occur for more than 12 months in any given location, the project would result in a significant impact related to short-term construction noise. Additionally, as the first phases of the residential portion of the project are constructed and subsequently occupied, future residences would be located within 500 feet of construction activities related to buildout of the remainder of the site and would be exposed to substantial construction noise.

Impact NOI-3: Construction activities associated with the proposed project would expose adjacent residential uses to substantial construction noise. **(Significant Impact)**

Mitigation Measures:

MM NOI-3.1: The project shall implement the following measures to reduce construction noise impacts to a less than significant level:

- Limit construction activity to 7:00 am to 7:00 pm on weekdays, 9:00 am to 5:00 pm on Saturdays, and no construction activity on Sundays or holidays.
- Schedule highest noise-generating activity and construction activity along the site boundaries near Kurte Park, Tuscany Hills Residences, Esfahan Drive Residences, Millpond Community, and Carol Residences between 9:00 am and 3:00 pm wherever feasible.
- Install temporary construction noise barriers at residential property lines to reduce noise at locations closest to residences.
- Equip all internal combustion engine-driven equipment with original factory (or equivalent) intake and exhaust mufflers which are maintained in good condition.
- Prohibit and post signs prohibiting unnecessary idling of internal combustion engines.
- Locate all stationary noise-generating equipment such as air compressors and portable generators as far as practicable from noise-sensitive land uses.
- Locate staging areas and construction material areas as far as practicable from noise-sensitive land uses.
- If impact pile-driving is proposed, temporary noise control blanket barriers shall shroud pile drivers or be erected in a manner to shield adjacent land uses. Foundation pile holes shall be pre-drilled to minimize the number of impacts required to seat the piles. All adjacent land uses shall be notified of any pile-driving schedule in writing.
- Utilize "quiet" air compressors and other stationary equipment where feasible and available.
- Designate a noise disturbance coordinator who would respond to neighborhood complaints about construction noise by determining the cause of the noise complaints and require implementation of reasonable measures to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site.

Construction Vibration

A review of the proposed construction equipment and the FTA vibration source levels indicates that at the proposed minimum distance between the construction equipment and the sensitive receptors of 60 feet, vibration levels would be less than the FTA construction vibration impact criteria of 0.20 in/sec PPV for building damage. It is not known if any pile driving would be required for construction of the Communications Hill Boulevard Bridge over the railroad tracks or for any off-site

improvements. Implementation of the mitigation measures described below would reduce these impacts to a less than significant level. **(Less Than Significant Impact)**

4.3.2.5 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described below, the project's noise impacts would be mitigated to a less than significant level. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.3.3 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating noise and vibration impacts resulting from planned development within the City. Future development allowed by the proposed GPA shall be in conformance with adopted City plans and policies, including those listed in *Section 4.3.1.2,* resulting in less than significant noise and vibration impacts.

4.3.4 Cumulative Noise Impacts

Given the project's noise impacts and the nature of the cumulative projects, the following discussion focuses on cumulative transportation noise impacts and potential impacts to the project from High Speed Rail.

4.3.4.1 *Cumulative Traffic Noise Impacts*

The project would result in a significant cumulative traffic noise impact if existing sensitive receptors would be exposed to cumulative traffic noise level increases greater than three dBA DNL above existing traffic noise levels and if the project would make a cumulatively considerable contribution to the overall traffic noise level increase. A cumulatively considerable contribution is defined as an increase of one dBA DNL or more attributable solely to the project.

Cumulative traffic noise levels are calculated to increase along roadways serving the project site due to cumulative growth forecast in local General Plans. As described above, the project would result in an increase of two dBA DNL at the intersection of Capitol Expressway and Snell Avenue, which is less than the three dBA DNL increase threshold.

4.3.4.2 *High Speed Rail*

The following discussion is based upon the *High-Speed Train Sound Fact Sheet* prepared by the California High-Speed Rail Authority (CHSRA) in 2010 and the *Bay Area to Central Valley HST Final Program EIR/EIR* prepared by the CHSRA and Federal Rail Administration (FRA) in 2008.

One of the proposed alignments for future High Speed Rail (HSR) service utilizes the UPRR corridor adjacent to the eastern boundary of the project site. The precise alignment has not been determined. The type of noise generated by HSR depends on the speed at which the train is travelling, since noise levels increase as speed increases, particularly in the range of 60 to 150 mph. In developed urban areas, trains are expected to operate at speeds of approximately 125 mph or less. High speed trains generate significantly less noise than commuter and freight trains at similar speeds. This is primarily because of the use of electric power, higher quality track interface, and smaller, lighter, more aerodynamic trains.[18]

In addition to train speed, the distance between the tracks and the receptor, the topography and type of ground surface, and the presence of buildings or sound barriers also influence the noise level perceived at any given location near the HSR track. At a distance of 100 feet, HSR trains travelling at 100 mph would generate a noise level of approximately 80 dBA L_{max}. Every doubling of distance from the HSR train to the receptor would reduce the noise level by approximately three dBA to 4.5 dBA, depending on the ground conditions.[19]

Using the daily average descriptor, the FRA estimates that a HSR train operating at ground level and travelling 90 mph would generate noise levels of approximately 70 dBA DNL at a distance of 50 feet and 60 dBA DNL at a distance of 250 feet.[20] HSR trains operating on aerial structures would generate noise levels one to two dBA higher than trains at ground level due to the loss of sound absorption by the ground and the extra sound radiation from the bridge structure.[21]
The program-level EIRs prepared for the HSR system rated the San Francisco to San José and San José to Gilroy segments as having a medium level of potential noise impacts, based on the number and type of sensitive noise receptors within established screening distances that could be exposed to noise levels exceeding FRA criteria.[22]

[18] CHSRA. *High-Speed Train Sound Fact Sheet*. 2010.
[19] Soft, grassy ground coverage would attenuate more noise than hard concrete or asphalt surfaces. **Source:** CHSRA. *High-Speed Train Sound Fact Sheet*. 2010.
[20] The noise level is based on 258 trains operating during the hours of 7:00 AM to 10:00 PM and 14 trains during the nighttime hours (between 10:00 PM and 12:00 AM and between 5:00 AM and 7:00 AM). **Source:** CHSRA. *High-Speed Train Sound Fact Sheet*. 2010.
[21] CHSRA. *High-Speed Train Sound Fact Sheet*. 2010.
[22] The screening distances are dependent on train speed (greater or less than 125 mph), existing ambient noise environment (noisy or quiet), and location of the train alignment (within an existing rail or highway corridor or on a new alignment). For example, when the train would travel at less than 125 mph through urban/noisy suburban environments, a screening distance of 375 feet was applied from the centerline of the track to determine the residential population, acres of parkland and number of schools and hospitals that would be exposed to HSR noise. **Source:** CHSRA and FRA. *Bay Area to Central Valley High-Speed Train Program EIR/EIS*. 2008.

It is not possible at this time to quantify HSR impacts to future development on the project site or determine the cumulative increase in ambient noise levels at specific location. Therefore, the remainder of this cumulative analysis *qualitatively* addresses the potential for HSR operations to result in noise impacts at land uses within the project site, based on existing information.

The noise environment on the site is currently dominated by freeway and traffic noise, with intermittent single-event noises such as aircraft over-flights. The HSR trains would be heard as a short-duration, single-event sound. The maximum noise from HSR pass-bys would be similar to or less than existing single-event sounds occurring in the area such as train pass-bys. The projected noise level from HSR operations (60-70 dBA DNL) is consistent with existing noise sources such as traffic and is within the range of ambient noise levels in the project area. As an additional source of single-event noise, the HSR will incrementally increase ambient noise levels in the vicinity of the tracks, although it is currently unknown if the permanent increase would be substantial at nearby properties.

For these reasons, the operation of the HSR system in the project area is not expected to expose future residential uses to noise or vibration levels in excess of City of San José standards, although supplemental analysis to be completed by the CHSRA will be required to verify this conclusion. **(Less Than Significant Cumulative Impact)**

4.3.5 Conclusion

Impact NOI-1: The project shall implement the identified mitigation MM NOI-1.1, which requires site specific noise assessments that identify noise reduction mechanisms, to reduce exterior and interior noise levels at future residences on the site to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact NOI-2: The project shall implement the identified mitigation MM NOI-2.1, which requires the project applicant shall submit an acoustical study demonstrating compliance with the City's requirements at the time the plans for future retail and industrial park uses are finalized, to ensure future retail and industrial park uses on the site result in less than significant noise levels at property boundaries adjacent to residential uses. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact NOI-3: The project shall implement the identified mitigation MM NOI-3.1, which includes a list of noise reduction measures,) to reduce construction noise impacts to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

As described above, the project would not result in other significant noise impacts, such as exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels, or impacts related to airport land use plans and private airstrips. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.4 AIR QUALITY

The following discussion is based on an air quality assessment prepared by *Illingworth & Rodkin, Inc.* in January 2014. A copy of this report is included in Appendix E.

4.4.1 Existing Setting

4.4.1.1 *Regulatory Framework*

The federal Clean Air Act governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the federal level, the United States Environmental Protection Agency (USEPA) administers the federal Clean Air Act. The California Clean Air Act is administered by the California Air Resources Board (CARB) at the state level and by the Air Quality Management Districts at the regional and local levels. BAAQMD regulates air quality at the regional level, which includes the nine-county Bay Area.

United States Environmental Protection Agency

The USEPA is responsible for enforcing the federal Clean Air Act and establishing the National Ambient Air Quality Standards (NAAQS). NAAQS are required under the 1977 Clean Air Act and subsequent amendments. The USEPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside state waters (e.g., beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by CARB.

California Air Resources Board

In California, CARB which is part of the California Environmental Protection Agency (CalEPA), is responsible for meeting the state requirements of the federal Clean Air Act, administering the California Clean Air Act, and establishing the California Ambient Air Quality Standards (CAAQS). The California Clean Air Act requires all air districts in the state to endeavor to achieve and maintain CAAQS. CARB regulates mobile air pollution sources, such as motor vehicles. The agency is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. CARB has established passenger vehicle fuel specifications and oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level. CARB also conducts or supports research into the effects of air pollution on the public and develops innovative approaches to reducing air pollutant emissions.

Bay Area Air Quality Management District

The Bay Area Air Quality Management District (BAAQMD) is the regional agency tasked with managing air quality in the region. BAAQMD is primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Air quality

standards are set by the federal government (the 1970 Clean Air Act and its subsequent amendments) and the state (California Clean Air Act of 1988 and its subsequent amendments). Regional air quality management districts such as BAAQMD must prepare air quality plans specifying how state standards would be met. BAAQMD's most recently adopted Clean Air Plan (CAP) is the 2010 Clean Air Plan (2010 CAP). The 2010 CAP provides an updated comprehensive plan to improve Bay Area air quality and protect public health, taking into account future growth projections to 2035. BAAQMD has published CEQA Air Quality Guidelines that are used in this assessment to evaluate air quality impacts of projects.

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating air quality impacts resulting from planned development within the City. All future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed below.

FACILITATE TRANSIT USE
Policy TR-3.3: As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute toward transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities.
Policy TR-3.4: Maintain and improve access to transit stops and stations for mobility challenged population groups such as youth, the disabled, and seniors.
GOODS MOVEMENT POLICIES [COMMUNITY RISK]
Policy TR-6.3: Encourage through truck traffic to use freeways, highways, and County Expressways and encourage trucks having an origin or destination in San José to use primary truck routes designated in this General Plan.
Policy TR-6.4: Plan industrial and commercial development so that truck access through residential areas is avoided. Minimize truck travel on streets designated in this General Plan as Residential Streets.
VOLUNTARY EMPLOYER TRIP REDUCTION
Policy TR-7.1: Require large employers to develop TDM programs to reduce the vehicle trips generated by their employees.
CEQA REVIEW AND REDUCE HEALTH RISK IN IMPACTED COMMUNITIES
Policy MS-11.1: Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution such as freeways and industrial uses. Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.
Policy MS-11.2: For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.

Policy MS-11.3: Review projects generating significant heavy duty truck traffic to designate truck routes that minimize exposure of sensitive receptors to TACs and particulate matter.

Policy MS-11.7: Consult with BAAQMD to identify stationary and mobile TAC sources and deter-mine the need for and requirements of a health risk assessment for proposed developments.

Policy MS-11.8: For new projects that generate truck traffic, require signage which reminds drivers that the State truck idling law limits truck idling to five minutes.

CONSTRUCTION AIR EMISSION MINIMIZATION

Policy MS-13.1: Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

Policy MS-13.2: Construction and/or demolition projects that have the potential to disturb asbestos (from soil or building material) shall comply with all the requirements of the California Air Resources Board's air toxic control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.

Policy MS-13.3: Require subdivision designs and site planning to minimize grading and use landform grading in hillside areas.

AIR POLLUTANT EMISSION REDUCTION POLICIES

Policy MS-10.1: Assess projected air emissions from new development in conformance with the Bay Area Air Quality Management District (BAAQMD) CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emission reduction measures.

Policy MS-10.5: In order to reduce vehicle miles traveled and traffic congestion, require new development within 2,000 feet of an existing or planned transit station to encourage the use of public transit and minimize the dependence on the automobile through the application of site design guidelines and transit incentives.

Policy TR-1.4: Through the entitlement process for new development, fund needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling, walking and transit facilities. Encourage investments that reduce vehicle travel demand.

Policy TR-2.8: Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements.

Policy TR-3.3: As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute toward transit ridership. In addition, require that new development is designed to accommodate and to provide direct access to transit facilities.

Policy TR-5.5: Require that new development, which includes new public or private streets, connect these streets with the existing public street network and prohibit the gating of private streets with the intention of restricting public access. Furthermore, where possible, require that the street network within a given project consists of integrated short blocks to facilitate bicycle and pedestrian travel and access.

Policy TR-6.4: Plan industrial and commercial development so that truck access through residential areas is avoided. Minimize truck travel on streets designated in the Envision General Plan as Residential Streets.

Policy TR-7.1: Require large employers to develop and maintain TDM programs to reduce the vehicle trips generated by their employees.

Policy TR-7.3: Work together with large employers to develop a system for tracking Transportation Demand Management (TDM) programs implemented by employers to allow ongoing assessment of results.

4.4.1.2 *Background Information*

Regional and Local Criteria Air Pollutants

The project site is located in the northern portion of Santa Clara County, which is in the San Francisco Bay Area Air Basin. Ambient air quality standards have been established at both the state and federal level. The Bay Area meets all ambient air quality standards with the exception of ground-level ozone, respirable particulate matter (PM_{10}), and fine particulate matter ($PM_{2.5}$). These criteria air pollutants are discussed in more detail below.

High ozone levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_X). These precursor pollutants react under certain meteorological conditions to form high ozone levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempt to reduce ozone levels. High ozone levels aggravate respiratory and cardiovascular diseases, reduce lung function, and increase coughing and chest discomfort.

Particulate matter is another problematic air pollutant of the Bay Area. Particulate matter is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM_{10}) and fine particulate matter where particles have a diameter of 2.5 micrometers or less ($PM_{2.5}$). Elevated concentrations of PM_{10} and $PM_{2.5}$ are the result of both region-wide (or cumulative) emissions and localized emissions. High particulate matter levels aggravate respiratory and cardiovascular diseases, reduce lung function, increase mortality (e.g., lung cancer), and result in reduced lung function growth in children.

Local Community Risk/Toxic Air Contaminants and Fine Particulate Matter

Toxic air contaminants (TAC) are a broad class of compounds known to cause morbidity or mortality (usually because they cause cancer) and include, but are not limited to, the criteria air pollutants listed above. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter near a freeway). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state, and federal level.

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs (based on the Bay Area average). According to CARB, diesel exhaust is a complex mixture of gases, vapors and fine particles. CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of diesel particulate matter (DPM). Refer to Appendix E for more information regarding the regulatory programs in place to reduce DPM emissions.

Fine Particulate Matter ($PM_{2.5}$) is a complex mixture of substances that includes elements such as carbon and metals; compounds such as nitrates, organics, and sulfates; and complex mixtures such as diesel exhaust and wood smoke. Long-term and short-term exposure to $PM_{2.5}$ can cause a wide range of health effects.

4.4.1.3 *Existing Conditions*

National and State Air Quality Standards

The ambient air quality in a given area depends on the quantities of pollutants emitted within the area, transport of pollutants to and from surrounding areas, local and regional meteorological conditions, as well as the surrounding topography of the air basin. Air quality is described by the concentration of various pollutants in the atmosphere. Units of concentration are generally expressed in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$).

As required by the Federal Clean Air Act, National Ambient Air Quality Standards (NAAQS) have been established for six major air pollutants: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter, including PM_{10} and $PM_{2.5}$, sulfur oxides, and lead. Pursuant to the California Clean Air Act, the State of California has established the California Ambient Air Quality Standards (CAAQS). Both State and Federal standards are summarized in Table 4.4-1. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare. CAAQS are generally the same or more stringent than NAAQS.

Table 4.4-1:
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards[a]	
			Primary[b,c]	Secondary[b,d]
Ozone (O_3)	8-hour	0.07 ppm	0.075 ppm	Same as primary
	1-hour	0.09 ppm	---[e]	Same as primary
Carbon Monoxide (CO)	8-hour	9.0 ppm	9 ppm	---
	1-hour	20 ppm	35 ppm	---
Nitrogen Dioxide (NO_2)	Annual	0.030 ppm	0.053 ppm	Same as primary
	1-hour	0.18 ppm	0.100 ppm[f]	---
Sulfur Dioxide (SO_2)	Annual	---	---[g]	---
	24-hour	0.04 ppm	---[g]	---
	3-hour	---	---	0.5 ppm
	1-hour	0.25 ppm	0.075 ppm[g]	---
PM_{10}	Annual	20 $\mu g/m^3$	---	Same as primary
	24-hour	50 $\mu g/m^3$	150 $\mu g/m^3$	Same as primary
$PM_{2.5}$	Annual	12 $\mu g/m^3$	15 $\mu g/m^3$	---
	24-hour	---	35 $\mu g/m^3$	---
Lead	Calendar quarter	---	1.5 $\mu g/m^3$	Same as primary
	30-day average	1.5 $\mu g/m^3$	---	

Notes: ppm = parts per million, µg/m3 = micrograms per cubic meter.
[a] California standards for ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are not to be exceeded. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year.

Table 4.4-1:
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards	National Standards[a]	
			Primary[b,c]	Secondary[b,d]

[b] Concentrations are expressed first in units in which they were promulgated.
[c] Primary Standards: the levels of air quality necessary, with an adequate margin of safety to protect the public health. Each state mush attain the primary standards no later than three years after that state's implementation plan is approved by the EPA.
[d] Secondary Standards: the levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
[e] The national 1-hour ozone standard was revoked by USEPA on June 15, 2005. A new 8-hour standards was established in May 2008.
[f] The form of the 1-hour NO2 standard is the three year average of the 98th percentile of the daily maximum 1-hour average concentration.
[g] The annual PM_{10} standard was revoked by USEPA on September 21, 2006 and a new $PM_{2.5}$ 24-hour standard was established.

Air Quality Monitoring Data

The significance of a pollutant concentration is determined by comparing the concentration to an appropriate ambient air quality standard. The standards represent the allowable pollutant concentrations designed to ensure that the public health and welfare are protected, while including a reasonable margin of safety to protect the more sensitive individuals in the population. The San Francisco Bay Area is considered to be one of the cleanest metropolitan areas in the country with respect to air quality. BAAQMD monitors air quality conditions at more than 28 locations throughout the Bay Area. There is a monitoring station in San Jose. Summarized air pollutant data for this station are provided in Table 4.4-2. This table shows the highest air pollutant concentrations measured at the station over the five year period from 2008 through 2012.

Table 4.4-2:
Highest Measured Air Pollutant Concentrations in San José

Pollutant	Average Time	Measured Air Pollutant Levels By Year				
		2008	2009	2010	2011	2012
Ozone (O_3)	1-Hour	**0.118 ppm**	0.088 ppm	**0.126 ppm**	**0.098 ppm**	**0.101 ppm**
	8-Hour	**0.080 ppm**	0.069 ppm	**0.086 ppm**	0.0967 ppm	0.062 ppm
Carbon Monoxide (CO)	8-Hour	2.5 ppm	2.5 ppm	2.2 ppm	2.2 ppm	1.9 ppm
Nitrogen Dioxide (NO_2)	1-Hour	0.080 ppm	0.069 ppm	0.064 ppm	0.061 ppm	0.067 ppm
	Annual	0.017 ppm	0.015 ppm	0.014 ppm	0.015 ppm	0.013 ppm
Respirable Particulate Matter (PM_{10})	24-Hour	**57.3 µg/m^3**	43.3 µg/m^3	46.8 µg/m^3	44.3 µg/m^3	**60 µg/m^3**
	Annual	**23.4 µg/m^3**	20.3 µg/m^3	19.5 µg/m^3	19.2 µg/m^3	18.8 µg/m^3
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	**41.9 µg/m^3**	35.0 µg/m^3	**41.5 µg/m^3**	**50.5 µg/m^3**	**38.4 µg/m^3**
	Annual	11.5 µg/m^3	10.1 µg/m^3	9.0 µg/m^3	9.9 µg/m^3	9.1 µg/m^3

Notes: ppm = parts per million, µg/m^3 = micrograms per cubic meter. Values in **bold** exceed ambient air quality standard.
Source: BAAQMD Air Pollution Summaries for 2008 through 2012. Available at: http://www.baaqmd.gov/Divisions/Communications-and-Outreach/Air-Quality-in-the-Bay-Area/Air-Quality-Summaries.aspx.

During the past three years, ozone concentrations in San José exceeded federal standards on zero to three days and state standards on one to three days annually. PM_{10} concentrations measured in San José exceed state standards about zero to one measurement day per year, while $PM_{2.5}$ concentrations exceed federal standards on two to three measurement days annually. Note that PM_{10} and $PM_{2.5}$ are measured every sixth day, so PM_{10} levels are estimated to exceed the standard on zero to six days and $PM_{2.5}$ levels exceeded standards on 12-18 days annually. Ambient air quality standards for other air pollutants are not exceeded in San José.

Attainment Status

Areas with air quality that exceed adopted air quality standards are designated as "nonattainment" areas for the relevant air pollutants. Nonattainment areas are sometimes further classified by degree (marginal, moderate, serious, severe, and extreme for ozone, and moderate and serious for carbon monoxide and PM_{10}) or status ("nonattainment-transitional"). Areas that comply with air quality standards are designated as "attainment" areas for the relevant air pollutants. "Unclassified" areas are those with insufficient air quality monitoring data to support a designation of attainment or nonattainment, but are generally presumed to comply with the ambient air quality standard. State Implementation Plans must be prepared by states for areas designated as federal nonattainment areas to demonstrate how the area will come into attainment of the exceeded federal ambient air quality standard.

The Bay Area as a whole is considered by USEPA as nonattainment for the ozone and $PM_{2.5}$ NAAQS. The area is nonattainment or unclassified for all other pollutants under the NAAQS, including carbon monoxide and PM_{10}. At the state level, the region is designated as nonattainment for ozone, PM_{10} and $PM_{2.5}$. The region is attainment for all other pollutants regulated under the CAAQS.

Sensitive Receptors

There are groups of people more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 14, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, elementary schools, and parks. The closest sensitive receptors to the project site are residences located adjacent to the southern and northwestern site boundaries. The project also would construct residences that would be considered sensitive receptors.

4.4.2 Air Quality Impacts

4.4.2.1 *Thresholds of Significance*

For the purposes of this SEIR, an air quality impact is considered significant if the project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; or
- Create objectionable odors affecting a substantial number of people.

BAAQMD provides guidance in assessing impacts to lead agencies in the Bay Area. In May 2011, BAAQMD adopted new CEQA Air Quality Guidelines that included thresholds of significance to assist in the review of projects under CEQA. These thresholds were designed to establish the level at which BAAQMD believed air pollution emissions would cause significant environmental impacts under CEQA and were posted on BAAQMD's website and included in the Air District's updated CEQA Guidelines. At a plan-level, the project would have a less than significant impact from criteria air pollutants if the project is consistent with current air quality plan control measures *and* the projected vehicle miles traveled (VMT) or vehicle trip increase is less than or equal to projected population increase. The project-level significance thresholds identified by BAAQMD and used in this analysis are summarized in Table 4.4-3.[23]

4.4.2.2 *Consistency with the 2010 Clean Air Plan*

The most recent clean air plan is the Bay Area 2010 Clean Air Plan (2010 CAP) that was adopted by BAAQMD in September 2010. This plan addresses air quality impacts with respect to obtaining ambient air quality standards for non-attainment pollutants (i.e., ozone and particulate matter or PM_{10} and $PM_{2.5}$), reducing exposure of sensitive receptors to toxic air contaminants (TACs), and reducing greenhouse gas (GHG) emissions such that the region can meet AB 32 goals of reducing emissions to 1990 levels by 2020.

[23] As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the Lead Agency and must be based to the extent possible on scientific and factual data. The City of San José and other Lead Agencies in the San Francisco Bay Area Air Basin often utilize the thresholds and methodology for assessing air emissions and/or health effects adopted by BAAQMD based upon the scientific and other factual data prepared by BAAQMD in developing those thresholds.

In December 2010, the California Building Industry Association (BIA) filed a lawsuit in Alameda County Superior Court challenging toxic air contaminant (TAC) and PM2.5 thresholds adopted by BAAQMD in its CEQA Air Quality Guidelines (*California Building Industry Association v. Bay Area Air Quality Management District*, Alameda County Superior Court Case No. RG10548693). One of the identified concerns is inhibiting infill and smart growth in the urbanized Bay Area. On March 5, 2012, the Alameda County Superior Court issued a judgment that BAAQMD had failed to comply with CEQA when it adopted its thresholds. The Court issued a writ of mandate ordering the District to set aside the thresholds and cease disseminating them until the District fully complies with CEQA. The BAAQMD appealed this ruling, and the Appellate Court overturned that decision finding that adopting the thresholds did not amount to a project under CEQA (*California Building Industry Association v. Bay Area Air Quality Management District*, First Appellate District, A135335 & A136212, August 13, 2013).

In April 2012, BAAQMD revised their website in conformance with the court order, no longer recommending use of the 2010 thresholds in determining a project's significant air quality impacts. Based on the Appellate ruling, however, the BAAQMD may reinstate these thresholds or adopt new ones, once the ruling becomes final. The City has carefully considered the thresholds prepared by BAAQMD and the recent court ruling, and regards the thresholds to be based on the best information available for the San Francisco Bay Area Air Basin and conservative in terms of the assessment of health effects associated with TACs and $PM_{2.5}$. Therefore, the analysis in this SEIR is based upon the methodologies and thresholds in the BAAQMD CEQA Air Quality Guidelines.

Consistency with Applicable Control Measures

Determining consistency with the 2010 CAP involves assessing whether applicable control measures contained in the 2010 CAP are implemented. Implementation of control measures are intended to improve air quality and protect public health. The 2010 CAP includes about 55 control measures that are intended to improve air quality and protect public health. The control measures are organized into five categories: Stationary and Area Source Control Measures, Mobile Source Measures, Transportation Control Measures (TCMs), Land Use and Local Impact Measures, and Energy and Climate Measures.

Table 4.4-3:
BAAQMD Project-Level Significance Thresholds

Pollutant	**Construction Threshold**	**Operational Threshold**	
	Average Daily Emissions (lbs)	**Average Daily Emissions** (lbs)	**Annual Average Emissions** (tons)
Criteria Air Pollutants			
Reactive Organic Gases (ROG)	54	54	10
Nitrogen Oxides (NO_X)	54	54	10
PM_{10} Exhaust	82	82	15
$PM_{2.5}$ Exhaust	54	54	10
Carbon Monoxide (CO)	NA	9.01 ppm (8-hour average) or 20.0 ppm (1-hour average)	
Fugitive Dust – PM_{10} and $PM_{2.5}$	Construction Best Management Practices	NA	
Health Risks and Hazards for New Sensitive Receptors (from single sources within 1,000 foot zone of influence) **and New Sources of Emissions**			
Excess Cancer Risk	10 per one million	10 per one million	
Chronic or Acute Hazard Index	1.0	1.0	
Incremental annual average $PM_{2.5}$	0.3 µg/m^3	0.3 µg/m^3	
Health Risks and Hazards for Sensitive Receptors (cumulative from all sources within 1,000 foot zone of influence) **and Cumulative Thresholds for New Sources**			
Excess Cancer Risk	100 per one million		
Chronic Hazard Index	10.0		
Annual Average $PM_{2.5}$	0.8 µg/m^3		
Odors			
Complaints	5 confirmed complaints per year averaged over 3 years		

Note: ppm = parts per million, µg/m^3 = micrograms per cubic meter, NA = not applicable

In developing the control strategy, BAAQMD identified the full range of tools and resources available, both regulatory and non-regulatory, to develop each measure. Implementation of each control measure will rely on some combination of the following:

- Adoption and enforcement of rules to reduce emissions from stationary sources, area sources, and indirect sources;
- Revisions to the BAAQMD's permitting requirements for stationary sources;
- Enforcement of CARB rules to reduce emissions from heavy-duty diesel engines;
- Allocation of grants and other funding by the Air District and/or partner agencies;

- Promotion of best policies and practices that can be implemented by local agencies through guidance documents, model ordinances, etc.;
- Partnerships with local governments, other public agencies, the business community, non-profits, etc.;
- Public outreach and education;
- Enhanced air quality monitoring;
- Development of land use guidance and CEQA guidelines, and Air District review and comment on Bay Area projects pursuant to CEQA; and
- Leadership and advocacy.

This approach relies upon lead agencies to assist in implementing some of the control measures. A key tool for local agency implementation is the development of land use policies and implementing measures that address new development or redevelopment in local communities. The recently adopted Envision San José 2040 General Plan was found to be consistent with the 2010 CAP. Applicable General Plan air quality policies applicable to this project are listed previously in *Section 4.4.1.1*.

The General Plan policies related to assessing project air quality impacts as they related to CEQA requirements are fulfilled in this analysis (refer to discussions below).

4.4.2.3 *Criteria Air Pollutant Emissions*

As discussed previously, the Bay Area is considered a non-attainment area for ground-level ozone and fine particulate matter ($PM_{2.5}$) under both the federal Clean Air Act and the California Clean Air Act. The area is also considered non-attainment for respirable particulates or particulate matter with a diameter of less than 10 micrometers (PM_{10}) under the California Clean Air Act, but not the federal act.

As part of an effort to attain and maintain ambient air quality standards for ozone, PM_{10} and $PM_{2.5}$, BAAQMD has established thresholds of significance for air pollutants. These thresholds (refer to Table 4.4-3) are for ozone precursor pollutants (ROG and NO_X), PM_{10} and $PM_{2.5}$ and apply to both construction period and operational period impacts.

Construction-Related Emissions

Construction Fugitive Dust

During grading and construction activities, dust would be generated. Most of the dust would result during grading activities. The amount of dust generated would be highly variable and is dependent on the size of the area disturbed at any given time, amount of activity, soil conditions, and meteorological conditions. Typical winds during late spring through summer are from the north or northwest. Nearby receptors could be adversely affected by dust generated during construction activities. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if the best management practices listed below are employed to reduce these emissions. **(Less Than Significant Impact)**

Standard Project Conditions: As a standard project condition, the project shall be required to implement the following dust and exhaust control measures recommended by BAAQMD to reduce construction dust impacts associated with grading and new construction to a less than significant level:

- All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- All vehicle speeds on unpaved roads shall be limited to 15 mph.
- All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]). Clear signage shall be provided for construction workers at all access points.
- All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

Construction Exhaust Emissions

For the purposes of the air quality analysis, construction of the project is anticipated to begin in 2015 and last until approximately 2027. A mass grading phase for the entire project site was modeled as occurring during the first two years of construction. Construction of the project is proposed to occur in four discrete phase areas (1, 2, 3, and 4) and all four phase areas were modeled separately, for activities occurring after mass grading, based on information supplied by the project applicant. This included anticipated sub-phasing durations and construction equipment pieces proposed for use.

Sub-phases included trenching, concrete curbs, gutters and sidewalks, building – foundation (including the podium and Village Center), building interior/exterior, architectural coating, paving, and landscaping. In addition, construction of the Communications Hill Boulevard vehicle bridge was modeled separately. Construction of the industrial area and mines remediation were modeled separately as occurring during Phase 3. Finally, the off-site traffic mitigation improvements for the Narvaez Avenue/Capitol Expressway improvement area, Curtner Corridor improvement area, and the off-site pedestrian trails and bridge were modeled separately as occurring during Phases 1, 2 and 4, respectively.

Construction of the school was not included in modeling, as it is not currently being analyzed at the project level; however, the mass grading analysis includes the school site. Subsequent environmental

review will be required to assess project air quality impacts associated with construction of the school buildings and playfield.

The CalEEMod default was used for the number of vendor trips during construction Phases 1 through 4 (32 daily roundtrips), which is based on the project size. It is anticipated that 20 haul trucks would be needed daily during the mass grading phase, as well as during bridge construction. A total of 250 haul truck trips would be needed for the mines remediation. For the building construction sub-phase of the industrial area, 229 daily vendor trips were assumed, based on CalEEMod defaults for the proposed land use square footage. CalEEMod input and output worksheets are included in Appendix E, along with the anticipated phasing duration and equipment list provided by the project applicant.

Table 4.4-4 shows emissions in tons per year over the course of the entire construction period. Average daily emissions were computed by dividing the total construction period emissions by the number of anticipated construction days and are displayed at the bottom of Table 4.4-4. Much of the emissions were anticipated to occur over about 3,380 work days during the approximately 13-year construction period, based on an average of 260 workdays per year. As shown in Table 4.4-4, construction exhaust emissions would exceed BAAQMD thresholds for average daily NOx emissions.

Impact AIR-1: Construction of the proposed project would result in significant emissions of NOx during construction. **(Significant Impact)**

Table 4.4-4:
Construction Emissions

Description	ROG	NO_X	PM_{10} Exhaust	$PM_{2.5}$ Exhaust
2015– Mass Grading (tons)	1.66	20.99	0.86	0.79
2015 – Phase 1 (tons)	2.33	23.85	1.31	1.21
2016 – Mass Grading (tons)	1.61	20.16	0.83	0.76
2016 – Phase 1 (tons)	3.13	31.69	1.71	1.57
2016 – Off-Site Imprv. Phase 1 (tons)	0.07	0.80	0.04	0.04
2017 – Phase 1 (tons)	3.12	31.55	1.71	1.58
2017 – Off-Site Imprv. Phase 1 (tons)	0.13	1.27	0.08	0.07
2018 – Phase 1 (tons)	6.66	25.43	1.33	1.22
2018 – Off-Site Imprv. Phase 1 (tons)	0.06	0.57	0.03	0.03
2019 – Phase 2 (tons)	2.42	24.29	1.26	1.16
2019 – Off-Site Imprv. Phase 2 (tons)	0.05	0.58	0.03	0.02
2020 – Phase 2 (tons)	2.15	21.39	1.08	1.00
2020 – Off-Site Imprv. Phase 2 (tons)	0.09	0.92	0.05	0.05
2021 – Phase 2 (tons)	6.16	19.53	0.97	0.90
2021 – Off-Site Imprv. Phase 2 (tons)	0.05	0.44	0.02	0.02
2022 – Phase 3 (tons)	1.70	16.10	0.78	0.72
2022 – Bridge Construction (tons)	0.59	6.12	0.27	0.25
2022 – Industrial Phase 3 (tons)	0.33	2.53	0.12	0.11
2022 – Slurry Mines Phase 3 (tons)	<0.01	0.05	<0.01	<0.01
2023 – Phase 3 (tons)	1.38	12.69	0.60	0.55
2023 – Industrial Phase 3 (tons)	7.63	2.38	0.11	0.10

Table 4.4-4: Construction Emissions				
Description	**ROG**	**NO_X**	**PM_{10} Exhaust**	**$PM_{2.5}$ Exhaust**
2024 – Phase 3 (tons)	5.66	13.79	0.65	0.60
2025 – Phase 4 (tons)	1.22	10.65	0.48	0.44
2025 – Off-Site Imprv. Phase 4 (tons)	0.13	1.22	0.06	0.05
2026 – Phase 4 (tons)	1.39	12.23	0.56	0.52
2026 – Off-Site Imprv. Phase 4 (tons)	0.12	1.11	0.05	0.05
2027 – Phase 4 (tons)	5.35	10.68	0.48	0.45
2027 – Off-Site Imprv. Phase 4 (tons)	<0.01	0.08	<0.01	<0.01
Total Construction Period (tons)	55.21	313.09	15.49	14.28
Average Daily Emissions (pounds per day)*	32.7	**185.3**	9.2	8.4
BAAQMD Thresholds (pounds per day)	*54*	*54*	*82*	*54*
Exceed Threshold?	No	***Yes***	No	No
Note: *Assumes 3,380 total construction workdays (average of 260 workdays per year for 13 years)				

Mitigation Measures:

MM AIR-1.1: Consistent with guidance from the BAAQMD, the following additional actions shall be required of construction contracts and specifications for the project:

- Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 2 minutes. Clear signage shall be provided for construction workers at all access points;

- The project shall develop a plan, which will be implemented and adhered to during construction activities, demonstrating that the off-road equipment (more than 50 horsepower) to be used in the construction project (i.e., owned, leased, and subcontractor vehicles) would achieve a project wide fleet-average of at least 70 percent NO_X reduction compared to unmitigated emissions. Acceptable options for reducing emissions include the use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, add-on devices such as particulate filters, and/or other options as such become available. Specifically, all diesel-powered off-road equipment larger than 50 horsepower and operating on the site for more than two days continuously shall meet U.S. EPA particulate matter emissions standards for Tier 4 engines or equivalent;

- All construction equipment, diesel trucks, and generators shall be equipped with Best Available Control Technology for emission reductions of NO_X;

- All contractors shall use equipment that meets ARB's most recent certification standard for off-road heavy duty diesel engines; and

- Minimize the number of hours that equipment will operate, including the use of idling restrictions.

Operational-Related Emissions

The CalEEMod model along with the project vehicle trip generation rates were used to predict operational period air pollutant emissions associated with operation of a fully developed site under the proposed project. Model inputs and assumptions, including year of analysis, land use descriptions and assumptions, trip generation rates, travel distances, and area sources, are described in Appendix E.

Summaries of the project's predicted average daily operational emissions and annual operational emissions are provided in Table 4.4-5 and 4.4-6, respectively. As shown in these tables, the project's average daily and annual emissions of ROG, NO_X, and PM_{10} associated with project operation would exceed the BAAQMD significance thresholds.

Table 4.4-5: Daily Project Operational Pollution Emissions

	ROG	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
	(pounds/day)			
Proposed Project Emissions	**157.2**	**124.4**	**139.5**	40.2
BAAQMD Daily Emission Thresholds of Significance	*54*	*54*	*82*	*54*
Exceed Threshold?	***Yes***	***Yes***	***Yes***	*No*

Table 4.4-6: Annual Project Operational Air Pollutant Emissions

	ROG	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
	(pounds/day)			
Proposed Project Emissions	**28.69**	**22.71**	**25.46**	7.33
BAAQMD Daily Emission Thresholds of Significance	*10*	*10*	*15*	*10*
Exceed Threshold?	***Yes***	***Yes***	***Yes***	*No*

ROG emissions from the project are mostly attributable to evaporative emissions. About 51 percent of ROG emissions are associated with consumer products that would mostly be used by project residences. These include solvents, hairsprays, charcoal fluid, etc. The formulation of many of these products is regulated by U.S. EPA, CARB, and/or BAAQMD. The use of architectural coatings (e.g., paints) by project users to repaint surfaces results in about eight percent of the project ROG emissions. These coatings are also regulated by BAAQMD. Together, these sources of mostly regulated emissions represent about 59 percent of the total project operational ROG emissions. About 37 percent of the emissions would be attributable to motor vehicle use.

Approximately 85 percent of NO_X emissions and 99 percent of PM_{10} emissions are from motor vehicle travel associated with the project.

Impact AIR-2: The project would result in significant emissions of ROG, NOx, and PM_{10} during project operation. **(Significant Impact)**

Mitigation Measures:

MM AIR-2.1: The project shall develop and implement a transportation demand management (TDM) Program, consistent with City requirements. At a minimum, the TDM program shall include the following measures:

- Consider providing transit stops on site, such as at convenient locations on Communications Hill Boulevard with pedestrian access no more than 0.25 mile from the project center. Also consider the posting of transit information at high pedestrian traffic areas on-site. Any resulting plans to modify transit stops would have to be made in accordance with the City and VTA;

- Bicycle amenities should be provided for the project. This would include secure bicycle parking for employees and multi-family residents along with the proposed bike lane connections;

- Provide on-site shower and locker room facilities for employee use to the extent feasible;

- Consider providing pedestrian signage and signalization. Enhanced pedestrian crossings at strategic areas with countdown signals should be considered;

- Encourage employers at the project site to purchase Eco Passes from VTA to provide transit incentives for employees. In addition, project site employers should be required to promote transit use by providing transit information and incentives to employees; and

- The applicant and City shall explore opportunities to implement a "car share program" and measures that would reduce vehicle travel by reducing parking availability (such as an employee parking cash out program).

MM AIR-2.2: A future heavy-duty truck route to the industrial portion of the site shall be designated, so as to minimize long-term disturbance and exposure of TAC pollutants to project residences and sensitive receptors.

4.4.2.4 *Local Air Quality Impacts*

Carbon Monoxide Emissions

Carbon monoxide emissions from traffic generated by the project would be the pollutant of greatest concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that carbon monoxide levels have been at healthy levels (i.e., below State and federal standards) in the Bay Area since the early 1990s. As a result, the region has been designated as attainment for the standard. There is an ambient air quality monitoring station in San José that measures carbon monoxide concentrations. The highest measured level over any 8-hour averaging period during the last five years is 2.5 parts per million (ppm), compared to the ambient air quality standard of 9.0 ppm. The project would generate traffic that could affect these levels.

CO hot spot modeling was performed using the California Line Source Dispersion Model (CALINE4 version 2.1) with weighted vehicle emissions factors from EMFAC2011. The intersection of Capitol Expressway and Quimby Road, which is projected to have the highest traffic volume in the study area, was modeled. Twelve receptors were modeled at the intersection at seven meter distances from roadway segments. Ambient background CO concentrations reported by the CARB were added to the model output results to obtain the predicted build-out CO concentrations at the modeled receptors. The State and federal ambient air quality standard for 8-hour CO is 9.0 ppm. The results of the modeling the highest volume intersection in the study area would have 8-hour CO levels of 2.9 ppm, which would be well below the established standard for CO. As a result, the project would not result in significant carbon monoxide emissions. **(Less Than Significant Impact)**

Toxic Air Contaminant and Fine Particulate Matter Health Risks

Construction-Related Health Risks

Construction of the project would expose sensitive receptors in the project area to diesel particulate matter (DPM) from construction related activities. Sensitive receptors in the project area include existing nearby off-site residences, off-site residents near the construction truck travel routes, and, since the project will be constructed in phases over a number of years, new on-site residences whose construction has been completed that would be potentially occupied while construction is continuing in other areas of the project site. The closest existing residences to the project site are located adjacent to the southern and northwestern boundaries of the project site. It was assumed for modeling purposes that new residences would be occupied shortly after construction of each respective phase is completed.

A health risk assessment of the project construction activities was conducted that evaluated potential health effects at nearby sensitive receptors from construction emissions of DPM and $PM_{2.5}$. A dispersion model was used to predict concentrations resulting from project construction so that lifetime cancer risks could be predicted.

Construction period emissions were computed using CalEEMod and with the EMFAC2011 model for off-site truck emissions (e.g., haul trucks and vendor trucks), along with the expected schedule for construction of the different project phases and projected construction activities, as discussed

previously. The number and types of construction equipment and diesel vehicles, along with the anticipated length of their use for different phases of construction, were developed based on type of construction for each phase and the construction activity schedule. Construction of the project is expected to occur in four phase areas (1, 2, 3, and 4) starting in 2015 with completion in 2027. In addition, off-site traffic mitigation improvements for the Narvaez Avenue/Capitol Expressway improvement area, Curtner Corridor improvement area, and the off-site pedestrian trails and bridge would be required. The CalEEMod model provided total annual $PM_{2.5}$ exhaust emissions (assumed to be diesel particulate matter) for each construction phase of the project for the off road construction equipment used for construction of the project and for the exhaust emissions from on-road vehicles (haul trucks, vendor trucks, and worker vehicles). The on-road emissions are a result of on-road haul truck travel during grading activities and vendor deliveries during construction.

The U.S. EPA AERMOD dispersion model was used to predict concentrations of DPM and $PM_{2.5}$ at existing off-site sensitive receptors in the vicinity of the project construction site and within the new residential areas of the project. The AERMOD model predicts pollutant concentrations at receptors located in areas of flat or complex terrain from a variety of emission source types including point, area, volume, and line sources.

Table 4.4-7 summarizes cancer risk, hazards and annual $PM_{2.5}$ concentrations at both the maximally affected on- and off-site residences.

Table 4.4-7:
Construction Health Risk to Existing and Future Residences

Receptor Location*	**Child Cancer Risk** (per million)	**Adult Cancer Risk** (per million)	**Hazard Index** (HI)	**$PM_{2.5}$ Concentration** ($\mu g/m^3$)
Off-Site – adjacent to southern boundary	**161.7**	**13.3**	0.14	**0.71**
On-Site – new residences in Phase 1 area	**104.8**	6.7	0.09	**0.54**
On-Site – new residences in Phase 2 area	**44.0**	2.9	0.05	0.25
On-Site – new residences in Phase 3 area	**31.9**	2.0	0.03	0.18
Along North Truck Route and Curtner Avenue Construction Area	5.1	0.3	0.01	0.05
Along South Truck Route and Narvaez Avenue Construction Area	6.2	0.6	0.01	0.09
BAAQMD Thresholds of Significance	*10.0*	*10.0*	*1.0*	*0.3*
Exceed Threshold?	***Yes***	***Yes***	*No*	***Yes***

Increased cancer risks were calculated using maximum modeled annual average DPM concentrations and BAAQMD recommended risk assessment methods that include both child exposures (third trimester through two years of age) and adult exposures. Infant and child exposures were assumed to occur at residences throughout the entire construction period.

Results of this assessment indicate that the maximum off-site (adjacent to the southern boundary) residential child cancer risk is 161.7 in one million and a residential adult cancer risk of 13.3 in one million. The maximum on-site child cancer risk from construction is 104.8 in one million and a

residential adult cancer risk of 6.7 in one million. The maximum off-site cancer risks from truck travel and off-site road improvement construction are 6.2 in one million for a child exposure and 0.6 for an adult exposure. These maximum on-site and off-site cancer risks from on-site construction activities would exceed the BAAQMD significance threshold of 10 excess cancer cases in one million and be considered significant. Maximum cancer risks to residents near the north and south truck routes and associated road improvement construction areas along Curtner and Narvaez Avenues would be below the BAAAQMD significance threshold and would be considered less than significant. The location of the receptors with the maximum on-site and off-site increased cancer risks are identified in Appendix E. Cancer risks at other residential receptors would be lower than the maximum cancer risks identified above.

Potential non-cancer health effects due to chronic exposure to DPM were also evaluated. The chronic inhalation reference exposure level (REL) for DPM is 5 $\mu g/m^3$. The maximum predicted annual DPM concentrations of 0.14 $\mu g/m^3$ and 0.09 $\mu g/m^3$ for off-site and on-site receptors, respectively, are lower than the REL. The maximum Hazard Index (HI) for off-site or on-site receptors, which is the ratio of the annual DPM concentration to the REL, is 0.03. This HI is much lower than the BAAQMD significance criterion of a HI greater than 1.0.

The modeled maximum annual $PM_{2.5}$ concentrations (which include fugitive dust emissions) would be 0.71 $\mu g/m^3$ and 0.54 $\mu g/m^3$ for off-site and on-site receptors, respectively, which are above the threshold of 0.3 $\mu g/m^3$ used to judge the significance of impacts for $PM_{2.5}$. The exposure of sensitive receptors to annual $PM_{2.5}$ concentrations above 0.3 $\mu g/m^3$ represents a significant impact. The maximum $PM_{2.5}$ concentrations from off-site truck travel and off-site road improvement construction would be less than the $PM_{2.5}$ significance level.

Impact AIR-3: The project would result in significant health risks related to emissions of toxic air contaminants (TACs) and fine particulate matter during construction. **(Significant Impact)**

Mitigation Measures:

Implementation of MM AIR-1.1 and MM AIR-2.1 would reduce child and adult cancer risks from TAC exposure to a less than significant level.

Off-Site and On-Site Sources of TAC Emissions During Project Operation

BAAQMD has published specific thresholds for analyzing the impact of health risk on nearby sensitive receptors, which are used in this assessment. Implementation of the project would locate new residences near State Route 87 (SR 87), nearby rail activity, and several stationary sources (e.g., backup diesel generators at nearby facilities and a concrete plant) that emit TACs. The BAAQMD Guidelines include thresholds to evaluate single source and cumulative source impacts of TACs and $PM_{2.5}$ on proposed sensitive receptors. Annual concentrations of DPM, $PM_{2.5}$, and total organic compounds were obtained and used to predict cancer and non-cancer health risks, in accordance with BAAQMD recommended methodology. In addition, the proposed school could be exposed to substantial pollutant concentrations if it is ultimately developed. TAC impacts to the proposed site during project operation are discussed below.

Roadway TAC Emissions

SR 87 is the primary source of roadway TAC and $PM_{2.5}$ emissions. BAAQMD provides screening tools that indicate predicted community risk impacts that roadways pose. At a distance of approximately 750 feet east of SR 87, estimated cancer risk at the proposed project site would be 8.4 in one million, which is below the BAAQMD community risk significance threshold of 10 in one million. A $PM_{2.5}$ concentration of 0.09 $\mu g/m^3$ and a Hazard Index of 0.01 associated with this source would be well below the BAAQMD community risk significance thresholds.

Caltrain & Union Pacific Railroad TAC Emissions

A Caltrain/Union Pacific Railroad rail line is adjacent to, and runs parallel to, the northern project site boundary. Some of the new residences in the Phase 3 project area would be as close as 130 feet from the railroad tracks. This rail line is used by trains for both passenger and freight service. Due to the proximity of the rail line to new project residences, potential health risks to future residents from diesel particulate matter emissions from diesel locomotive engines were evaluated.

Future project residences potentially affected by train emissions would be those constructed in the northern portion of the project site during Phase 3 and 4. These residences are not likely to be occupied until 2022 or later. As such, this evaluation conservatively assumed that all residents in these areas would be affected by train emissions starting in 2022.

Based on the current Caltrain schedule, along this portion of the rail line Caltrain operates three trains per weekday between Gilroy and San José; Amtrak has one passenger train daily; and there are between four to six freight trains that also use this rail line on a daily basis.[24] For this analysis it was assumed that 14 diesel trains would pass by the project site daily.

DPM and $PM_{2.5}$ emissions from trains passing by the project were calculated using EPA emission factors for locomotives[25] and information from Caltrain.[26] Each passenger and freight train was assumed to use one locomotive. Although the freight trains may have more than one locomotive, it was assumed that only one locomotive would be powering the trains along this portion of the rail line. Emissions from the freight trains were calculated assuming they would use locomotives with 4,300 hp engines and would be traveling at about 30 mph with the engines operating at about 70 percent load. Freight train emissions were calculated for years 2020 and 2025.

Trains for the Caltrain system are planned to be electrified in the near future. This would eliminate DPM emissions from these trains. There would still be several diesel powered locomotives in the Caltrain system that would be used for trains traveling to and from Gilroy during the weekdays (three northbound and three southbound) since the electrification of Caltrain will not extend all the way to Gilroy. For this evaluation it was assumed that all of the trains passing the site would use diesel locomotives.

[24] *Bay Area Regional Rail Plan, Technical Memorandum 4a, Conditions, Configuration & Traffic on Existing System*, Metropolitan Transportation Commission, November 15, 2006.
[25] *Emission Factors for Locomotives*, USEPA 2009 (EPA-420-F-09-025)
[26] Personal communication with Mr. Stephen Coleman, Manager, Rail Equipment, Caltrain. March 9, 2011.

Modeling of locomotive emissions was conducted using the EPA's AERMOD dispersion model and the same meteorological data from the San José Airport that was used for the project construction modeling.

Using the maximum modeled annual average DPM concentration, the maximum individual cancer risk at the project site was computed using the most recent methods recommended by BAAQMD.[27] The factors used to compute cancer risk are highly dependent on modeled concentrations, exposure period or duration, and the type of receptor. The exposure level is determined by the modeled concentration; however, it has to be averaged over a representative exposure period. The averaging period is dependent on many factors, but mostly the type of sensitive receptor that would reside at a site. This assessment conservatively assumed long-term residential exposures. BAAQMD has developed exposure assumptions for typical types of sensitive receptors. These include nearly continuous exposures of 70 years for residences. It should be noted that the cancer risk calculations for 70-year residential exposures reflect use of BAAQMD's most recent cancer risk calculation method, adopted in January 2010. This method applies BAAQMD recommended Age Sensitivity Factors to the cancer risks for residential exposures, accounting for age sensitivity to toxic air contaminants. Age-sensitivity factors reflect the greater sensitivity of infants and children to cancer causing TACs.

The maximum increased cancer risk was computed as 5.0 in one million. This was modeled at a receptor in the northeast portion of the of the Phase 3 residential area closest to railroad lines. The location of maximum cancer risk is shown in Appendix E. Cancer risks at other residential areas within the project site would also be lower than the maximum cancer risk of 10 in one million. Under the BAAQMD CEQA Air Quality Guidelines, an incremental risk of greater than 10 cases per million from a single source at the Maximally Exposed Individual (MEI) would be a significant impact.

The air quality assessment predicted a maximum annual DPM exposure much lower than the 5 $\mu g/m^3$ REL for DPM. Thus, the HI would be much lower than significance criterion of a HI greater than 1.0. The maximum $PM_{2.5}$ concentration at the MEI location was 0.0093 $\mu g/m^3$. This concentration is well below the BAAQMD $PM_{2.5}$ threshold of greater than 0.3 $\mu g/m^3$.

Stationary Sources

Permitted stationary sources of air pollution near the project site were identified using BAAQMD's *Stationary Source Risk & Hazard Analysis Tool*. This mapping tool uses Google Earth to identify the location of stationary sources and their estimated risk impacts. This tool identified five sources that could affect the project site:

- Plant 15330, a San José Water Company generator located at 487 Batista Drive, is about 500 feet southwest of the closest residential component of the project. According to BAAQMD, the screening risk threshold is 17.0 per million. This risk was adjusted[28] to account for the 500-foot or greater setback. As a result, this facility would result in an excess cancer risk of 2.0 per million.

[27] BAAQMD, *Air Toxics NSR Program Health Risk Screening Analysis (HSRA) Guidelines*, January 2010.

[28] At BAAQMD's direction, risk from the San José Water Company generator was adjusted for distance based on BAAQMD distance adjustment factors.

- Plant 18120, a San José Fire Department generator located at 2933 Saint Florian Way, is about 360 feet southeast of the closest residential component of the project. According to BAAQMD, the screening risk level is 73.6 per million. A prior evaluation of potential cancer risks from this source was conducted and identified that the maximum residential cancer risk from the emergency generator would be 3.7 in one million at a distance of about 220 feet south-southwest of the fire station (opposite direction from project residences).[29] The cancer risk of 3.7 in one million does not account for the age sensitivity for child exposures. Accounting for the age sensitivity of children using the BAAQMD cancer risk adjustment factor of 1.7 gives a maximum cancer risk of 6.2 in one million.

- Plant 9910, Concrete ReadyMix, Inc., located at 111 Hillsdale Avenue is located adjacent to the eastern project boundary and the industrial/office park area of the project. It is about 650 feet from the Phase 2 project boundary and about 1,000 feet from future project residences in the Phase 2 area. According to BAAQMD, the screening risk level is 1.96 per million and the $PM_{2.5}$ concentration is 33.0 µg/m3. Dispersion modeling of this facility was conducted using the AERMOD model and BAAQMD provided emissions data for PM to calculate maximum $PM_{2.5}$ concentrations at the nearest future residents of the project in the Phase 2 area. Emission sources at the facility include fugitive sources (stockpiles, grizzlys, hoppers, conveyors, stackers) and baghouses for the cement and batching silos. Since specific source information was not provided by BAAQMD, all emission sources were modeled using volume sources. Two volume sources were used to represent the fugitive sources and one volume source was used to represent the silo baghouse emissions. Although $PM_{2.5}$ represents only a small fraction of PM_{10} emissions (about 15%), the BAAQMD PM emissions (assumed to be PM10) were used to provide a conservative estimate of potential $PM_{2.5}$ impacts from the concrete plant. The results of the modeling show that the maximum annual $PM_{2.5}$ concentration in the Phase 2 residential area would be 0.06 µg/m3. This concentration is well below the significance threshold of 0.3 µg/m3. For related correspondence with BAAQMD, District-provided stationary source information, and health risk computations, please see Appendix E.

- Plant 1262, Azevedo Quarry, located at 55 Hillsdale Avenue, is currently decommissioned, but an aggregate recycling facility will operate until 2023. The site will be completely decommissioned by the time that residences are living within close proximity of the old facility.

- Plant 12286, Granite Rock Company, located at 100 Granite Rock Way, is located over 1,000 feet from future project residences and, therefore, was not evaluated.

[29] Illingworth & Rodkin, Inc. 2006. *San Jose Fire Department No. 33, Air Quality and Health Risk Assessment for Installation of a 150-kW Emergency Standby Generator*.

Table 4.4-8:
Health Risks to Future Residences from TAC Emission Sources

Emission Source	**Maximum Cancer Risk** (per million)	**Maximum Index** (HI)	**Maximum Annual $PM_{2.5}$ Concentration** ($\mu g/m^3$)
Highway 87	8.4	0.01	0.09
Caltrain and Union Pacific Railroad	5.0	<0.01	0.01
Plant No. 15330 – San José Water Company generator	2.0	<0.01	<0.01
Plant No. 18120 – San José Fire Department generator	6.2	0.03	0.02
Plant No. 9910 – Concrete ReadyMix, Inc.	2.0	<0.01	0.06
Maximum Single Source	8.4	0.03	0.09
BAAQMD Threshold of Significance – Single Source	*10*	*1.0*	*0.3*
Exceed Threshold?	*No*	*No*	*No*
Cumulative Risk From Sources	23.6	<0.07	<0.19
BAAQMD Threshold of Significance – Cumulative Sources	*100*	*10.0*	*0.8*
Exceed Threshold?	*No*	*No*	*No*

The project would not result in significant health risks to existing nearby residences or future residences on-site. **(Less Than Significant Impact)**

Impacts to Proposed School

Due to a lack of project information, it is not possible at this time to analyze the potential TAC impacts to the proposed school. If, and when, the proposed school is analyzed at the project level, a subsequent analysis of potential health risk impacts should be conducted.

Impacts from Future Industrial Uses

The Specific Plan EIR requires the planning and regulation of future industrial activities to minimize adverse impacts on nearby land uses. At this time, there is not enough information to assess specific proposed industrial uses at the project-level. A subsequent analysis of potential health risk impacts should be conducted when specific industrial park uses are determined.

Odor

The project site is not currently affected by existing odor sources that would cause odor complaints. The project would generate localized emissions of diesel exhaust during equipment operation and truck activity. These emissions may be noticeable from time to time by adjacent receptors. However, they would be temporary and localized and are not likely to adversely affect people off site to the extent that they would result in confirmed odor complaints. The project would not result in significant odor impacts. **(Less Than Significant Impact)**

4.4.2.5 *Consistency with Plans and Policies*

2010 Clean Air Plan

The City of San José is within the San Francisco Bay Area Air Quality Management District (BAAQMD). BAAQMD is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Air quality standards are set by the federal government (the 1970 Clean Air Act and its subsequent amendments) and the state (California Clean Air Act of 1988 and its subsequent amendments). Regional air quality management districts such as BAAQMD must prepare air quality plans specifying how state standards would be met. BAAQMD's most recently adopted Clean Air Plan (CAP) is the *2010 Clean Air Plan* (2010 CAP). The 2010 CAP provides an updated comprehensive plan to improve Bay Area air quality and protect public health, taking into account future growth projections to 2035.

Consistency: The project would be consistent with the 2010 CAP by not increasing VMT more than was assumed in the General Plan and by being consistent with applicable control measures.

Envision San José 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described below, the project includes mitigation measures to reduce air quality impacts as much as feasibly possible, in order to be consistent with General Plan policies. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.4.3 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating air quality and vibration impacts resulting from planned development within the City. Future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed in *Section 4.4.1.1*, resulting in less than significant air quality impacts.

4.4.4 Cumulative Air Quality

Criteria Air Pollutant Emissions

Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. As discussed in *Section 4.4*, the proposed project would result in significant emissions of ROG and NO_X. Therefore, the project would have a cumulatively considerable contribution to regional ROG and NO_X impacts.

Impact C-AIR-1: The project's emissions of ROG, NO_X, and PM_{10} are considered cumulatively considerable. **(Significant Cumulative Impact)**

Cumulative TAC Emissions

The nearest off-site sensitive receptors are affected by several sources of TACs, including future sources from project construction and operation (if the project is approved). New TAC emissions from future industrial uses on the site shall require refined analysis of the potential health risks at the project-level once project-specific information becomes available. This analysis would identify the level of exposure and identify the measures to reduce exposures to a less than significant level. Mitigation measures which comply with adopted standards of BAAQMD for control of TACs for sensitive receptors shall be identified to reduce these risks to acceptable levels. Such measures could include site design, use of appropriate filtration in ventilation systems, vegetative barriers, or a combination of measures.

4.4.4.1 *Mitigation and/or Avoidance Measures for Cumulative Impacts*

No additional measures are available or proposed to reduce the project's operational ROG, NO_X, and PM_{10} emissions.

4.4.5 Conclusion

Impact AIR-1: With the implementation of the MM AIR-1.1, which includes limitations on the use of construction equipment, and standard project conditions recommended by BAAQMD, emissions of NOx during construction would be reduced to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact AIR-2: Operation of the project would result in significant ROG, NO_X, and PM_{10} emissions. Implementation of MM's AIR-2.1 and 2.2, which require a Transportation Demand Management program and establish a heavy truck route, would reduce emissions, but not to a less than significant level. This same impact was identified previously in the certified 2011 Envision San José 2040 General Plan Final EIR (SCH#2009072096). **(Significant and Unavoidable Impact)**

Impact AIR-3: Implementation of MM AIR-1.1 and MM AIR-2.1 would reduce child and adult cancer risks from TAC exposure to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact C-AIR-1: The project's emissions of ROG, NO_X, and PM_{10} are considered cumulatively considerable. The implementation of a TDM program (see MM AIR-2.1) would reduce the project's emissions, but not to a less than significant level. This same impact was identified previously in the certified 2011 Envision San José 2040 General Plan Final EIR (SCH#2009072096). **(Significant and Unavoidable Cumulative Impact)**

As described above, the project would not result in other significant air quality impacts, such as exposing sensitive receptors to substantial pollutant concentrations. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.5 CULTURAL RESOURCES

This section is based primarily upon an Archaeological Evaluation Report prepared by Basin Research Associates, Inc. in June 2013 (refer to Appendix F). Prehistoric and historic site records searches for the proposed project site were completed by the California Historical Resources Information System, Northwest Information Center, Sonoma State University in 2007 and 2013 (file numbers 06-1663 and 12-1274).

4.5.1 Existing Setting

4.5.1.2 *Prehistoric Resources*

The project site is located in the Communications Hill area of San Jose which would have provided a favorable environment for Native American occupation and hunting and collecting activities during the prehistoric period. Prehistoric site types in the general area include villages and campsites, manufacturing areas, quarries, milling areas, burial sites, and rock art sites. Information gained from prehistoric sites in the area has helped refine interpretations of Native American history in Central California.

One prehistoric archaeological site, CA-SCL-606, and one isolated prehistoric resource, CA-SCL-ISO-5, have been recorded within the project area. Additionally, two possible aboriginal quarries have been identified near the northern boundary of the project site. The project also includes off-site improvements on Narvaez Avenue at the on- and off-ramps to SR 87, south of the project site. A recorded prehistoric site, CA-SCL-68, is located within the area proposed for these ramp and street improvements. This site has been determined to be eligible for the National Register of Historic Places.

CA-SCL-606

CA-SCL-606 was first recorded during a 1986 field inventory of the project site and was described as a prehistoric chipping station. The site was relocated during a 2007 project field review despite being obscured by dense poison oak and tall grass.

To determine the presence or absence of significant prehistoric materials at CA-SCL-606, an intensive surface inventory and shovel tests were completed. Only five percent of the surface was observable due to dense grass cover. Two to three meter spaced transects oriented north to south were utilized during the field inventory. Franciscan chert, chalcedony, quartz, and serpentine rock were observed on the surface, but none of the materials were culturally modified.

A total of ten shovel test units (STU) and five shovel scrape units (SSU) were conducted on site. The surface vegetation was removed prior to excavation. The STUs were approximately 22-25 centimeters long, 20-30 centimeters wide, and 20-46 centimeters deep. The SSUs were shallower, removing only the uppermost 5-10 centimeters of soil. Both the STUs and SSUs yielded sparse Franciscan chert, chalcedony, quartz and serpentine rock fragments.

The shovel test program confirmed CA-SCL-606 had no significant depth. Based on the absence of lithic waste products in both the shovel tests and surface inventory, it has been determined that

chipped stone tool maintenance and/or manufacture did not take place on site. The data collected during these investigations suggests the site was ephemeral or used infrequently and transported to another location for further processing after collection. For these reasons, CA-SCL-606 does not appear eligible for the CRHR under any of the criteria and is not considered a historic resource under CEQA.

CA-SCL-ISO-5

CA-SCL-ISO-5 is an isolated prehistoric chipped stone tool and was first recorded during a 1986 field inventory of the project site. The tool is described as "temporally non-diagnostic" and its discovery location was investigated further during the 2007 project field review. No additional cultural resources were found.

Aboriginal Quarries

Two possible aboriginal quarries have been identified near the northern project boundary. These exposed rock outcroppings are located approximately 460 feet northwest of CA-SCL-606 and 870 northeast of CA-SCL-606 respectively, and appear to have been used as sources of stone for chipped stone tools during the prehistoric period. During the 2007 field review, no lithic debitage was observed at one outcrop and only minimal angular waste was found at the other. The majority of the area had recently been impacted during construction.

The two possible sites do not show unequivocal prehistoric use and are not eligible for the CRHR under any of the criteria and are not considered historic resources under CEQA.

CA-SCL-68

This resource was first recorded in 1973 and is now believed to be located mainly under the Guadalupe Parkway (SR 87) and bisected by Capitol Expressway. Surface surveys characterized the site as a scattered distribution of chert tools and debitage, groundstone implements, fire-cracked rock and fire-affected clay, and occasional human bone fragments. The site has been interpreted as a seasonal encampment occupied intermittently from 1600 B.C. to approximately 300-700 A.D.

The site has been investigated many times over the years, beginning in 1974 and as recently as 2009. In 1985, as part of the cultural resources investigation for the construction of SR 87, approximately 51 Native American burials and a variety of artifacts were exposed near the Narvaez Avenue/Capitol Expressway intersection and the Narvaez off-ramp of SR 87. Similar materials and additional burials were found in 1996 in the same general area. Construction monitoring in 2009 for the VTA's SR 87 landscaping project at Capitol Expressway did not expose any prehistoric or historic cultural materials. This site is eligible for the National Register.

4.5.1.3 *Historic Resources*

The Historic Period is generally regarded to have begun with the arrival of the first Spanish explorers in the 1760's and 1770's. The project site was first recorded as being part of Pueblo San Jose de Guadalupe which was established in 1777. Pueblo and Rancho lands in California were subdivided due to population growth into the mid-nineteenth century. The project site was not suitable for

grazing cattle which was the major economic pursuit of the era and remained relatively undeveloped during this time. It had many different owners during the American Period, as described in the cultural resources report (Appendix F).

Significant use and development of the project area began with the discovery of mercury (cinnabar) in the San Juan Bautista Hills in 1847. Mining operations began shortly thereafter and continued through 1874. Production peaked in 1871 with the mine producing between 30 and 40 flasks of mercury per month. For comparison, the New Almaden Mines produced nearly 4,000 flasks per month during the same period, so mining operations at the project site were always a minor part of mercury production in the area.

The mines operated only intermittently from 1874 to 1918. The mines were evaluated periodically after 1918, but never again produced enough quality ore to justify mining operations. The mines were regarded as being a nuisance after that time, being explored by children and teenagers in the 1950's and 1960's. Quarry operations began nearby in the 1950's and the operators filled in the entrances over time. Only one entrance remained in 1986, but it was filled in by 1987. A field review of the area in that year found evidence of mine-associated earth movement, but no traces of the entrances or mining equipment were observed.

Various owners of the project site and area are described in Appendix F. During a 1987 field review of the project site, historic debris was observed in a grove of spring and pepper trees. The debris consisted of unmarked wire-cut bricks, two inch iron pipe, and broken boards. The age of the trees suggested the debris was associated with ranching activities around the turn of the twentieth century. During the 2007 field review, one tree was located near a large metal water tank and no associated historic artifacts or modern debris were observed.

American Dairy Company Farm

A portion of the American Diary Company Farm formerly extended into the project site. The farm, formerly located at 396 Curtner Avenue, consisted of 11 buildings scattered over an irregularly shaped 60.6-acre parcel. The farm was evaluated in 1998 and found to be ineligible for listing on both the CRHR and San Jose Historic Resources Inventory. The former site is now within a residential development and no longer extant.

No other significant historic era dwellings, structures, or archaeological sites have been recorded, reported, or identified in or adjacent to the project site.

4.5.2 Regulatory Framework

4.5.2.1 *National Register of Historic Places*

The National Register is a comprehensive inventory of known historic resources throughout the United States. The National Register is administered by the National Park Service and includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Historic places are nominated to the National Register by the State Historic Preservation Officer (SHPO) of the state in

which the property is located. Any person or agency can propose a nomination (e.g., property owner, local government, citizens), but a nomination must be processed through SHPO.
There are four basic criteria under which a structure, site, building, district, or object can be considered eligible for listing in the National Register. These criteria are:

- Criterion A (Event): Buildings that are associated with events that have made a significant contribution to the broad patterns of our history.
- Criterion B (Person): Buildings that are associated with the lives of persons significant in our past.
- Criterion C (Design/Construction): Buildings that embody the distinctive characteristics of a type, period or method of construction, or that represent the work of a master.
- Criterion D (Information Potential): Buildings that have yielded, or may be likely to yield, information important in prehistory or history.

For a property to qualify for listing in the National Register, it must also retain "historic integrity of those features necessary to convey its significance." To determine if a property retains the physical characteristics corresponding to its historic context, seven aspects of historic integrity are evaluated. The aspects of historic integrity include: location, design, setting, materials, workmanship, feeling, and association between the property and an important historic event or person.

4.5.2.2 *California Register of Historic Resources*

The California Register is an inventory of significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the California Register through a number of methods. As mentioned above, resources determined eligible for the National Register are automatically listed on the California Register. State Historical Landmarks are also automatically listed in the California Register. Properties can also be nominated to the California Register by local governments, private organizations, or citizens. The evaluative criteria used for determining eligibility for the California Register are closely based on those developed by the National Park Service for the National Register of Historic Places. The California Register criteria include the following:

- Criterion 1 (Events): Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- Criterion 2 (Persons): Resources that are associated with the lives of persons important to local, California, or national history.
- Criterion 3 (Architecture): Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.
- Criterion 4 (Information Potential): Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation.

As with the National Register, a resource is eligible for listing in the California Register if it meets any one of the criteria of significance and sufficiently retains historic integrity. A resource that has

lost its historic character or appearance may still have sufficient integrity for the California Register if it maintains the potential to yield significant scientific or historical information or specific data.

4.5.2.3 *Secretary of the Interior's Standards for the Treatment of Historic Properties*

The 1995 U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties outlines specific standards and guidelines for the preservation, rehabilitation, restoration, and reconstruction of historic properties. Each set of standards provides specific recommendations for the proper treatment of specific building materials, as well as parts of building construction. The California Environmental Quality Act (CEQA) references these standards relative to consideration of the significance of project impacts, or lack thereof, on historic resources.

4.5.2.4 *Native American Burials*

California law protects Native American burials, skeletal remains, and associated grave materials and provides for the sensitive treatment and disposition of those remains (Section 7050.5(b) of the California Health and Safety code). CEQA Guidelines section 15064.5(e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner or medical examiner be contacted to assess the remains. If the county coroner or medical examiner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours. The property owner is required to consult with the appropriate Native Americans identified by the NAHC as a "most likely descendant" to develop an agreement for the treatment and disposition of the remains.

4.5.2.5 *City of San José Policies*

Historic Preservation Ordinance

The City of San José Historic Preservation Ordinance (Chapter 13.48 of the Municipal Code) is designed to identify, protect, and encourage the preservation of significant resources and foster civic pride in the City's cultural resources. The Historic Preservation Ordinance requires the City to establish a Historic Landmarks Commission, maintain a Historic Resources Inventory (HRI), preserve historic properties using a Landmark Designation process, require Historic Preservation Permits for alterations of properties designated as a Landmark or within a City historic district, and provide financial incentives through a Mills Act Historical Property Contract.

City Council's Development Policy on the Preservation of Historic Landmarks

The City Council's Development Policy on the Preservation of Historic Landmarks (as amended May 23, 2006) calls for preservation of candidate or designated landmark structures, sites, or districts wherever possible. The City also has various historic design guidelines that suggest various methods for the restoration or rehabilitation of older/historic structures and establish a general framework for the evaluation of applications involving historic preservation issues. The City offers a number of historic preservation incentives, including use of the State Historic Building Code, Mills Act/Historical Property Contract, and various tax credits.

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of reducing or avoiding impacts related to cultural resources. Those policies that apply most to the proposed project are listed below.

ARCHAEOLOGY AND PALEONTOLOGY
Policy ER-10.1: For proposed development sites that have been identified as archaeologically or paleontologically sensitive, require investigation during the planning process in order to determine whether potentially significant archeological or paleontological information may be affected by the project and then require, if needed, that appropriate mitigation measures be incorporated into the project design.
Policy ER-10.2: Recognizing that Native American human remains may be encountered at unexpected locations, impose a requirement on all development permits and tentative subdivision maps that upon their discovery during construction, development activity will cease until professional archaeological examination confirms whether the burial is human. If the remains are determined to be Native American, applicable state laws shall be enforced.
Policy ER-10.3: Ensure that City, State, and Federal historic preservation laws, regulations, and codes are enforced, including laws related to archaeological and paleontological resources, to ensure the adequate protection of historic and pre-historic resources.

4.5.2 Cultural Resources Impacts

4.5.2.1 *Thresholds of Significance*

For the purposes of this SEIR, a cultural resources impact is considered to be significant if the project would:

- Cause a substantial adverse change in the significance of historical resources as defined in §15064.5;
- Cause a substantial adverse change in the significance of archaeological resources pursuant to §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

4.5.2.2 *Impacts to Prehistoric and Historic Archaeological Resources*

One recorded prehistoric archaeological site (CA-SCL-606) and two possible aboriginal quarries have been identified within the project boundaries. A thorough field review conducted in 2007 relocated these resources but did not locate any additional cultural resources. The field review also searched the area the isolated chipped stone tool (CA-SCL-ISO-5) had been located, but did not find any additional resources. Subsurface testing of CA-SCL-606 conducted in 2008 confirmed the resource had no significant depth and contained little evidence to indicate tool manufacture or maintenance. The recorded site information at the NWIC was updated in 2013 to include the results of the subsurface testing completed in 2008.

The off-site improvements included in the project at the Narvaez Avenue on- and off-ramps of SR 87 may impact CA-SCL-68 during construction. This resource is eligible for listing on the National Register of Historic Places and the California Register of Historic Resources. Although portions of the resource are located under construction fill ranging from 15-25 feet deep, a review of the preliminary plans for the proposed improvements suggest that a maximum of two feet of fill (and possibly less) may be present within the proposed right-of-way. Cultural materials could be found at these depths.

Neither CA-SCL-606, CA-SCL-ISO-5, nor the two possible aboriginal quarry sites are eligible for the CRHR or City listing under any of the criteria and are not considered historical resources under CEQA. However, there is always a potential to encounter subsurface archaeological resources during construction. CA-SCL-68, a unique archaeological resource, could be impacted by off-site project improvements. For these reasons, the project could potentially affect known and as yet unknown prehistoric archaeological resources.

Impact CUL-1: Previously unknown and known archaeological resources could be exposed during ground disturbing construction operations associated with residential and industrial park development, including on- and off-site roadway, utility, and/or drainage improvements. Construction operations in areas of native soil could result in the inadvertent exposure of buried prehistoric or historic archaeological materials that could be eligible for inclusion on the CRHR and/or meet the definition of a unique archeological resource as defined in Section 21083.2 of the Public Resources Code. **(Significant Impact)**

Impact CUL-2: Native American remains could be exposed during ground disturbing construction operations associated with residential and industrial park development, including on- and off-site roadway, utility, and/or drainage improvements. Construction operations could result in the inadvertent exposure of prehistoric or protohistoric Native American human remains. **(Significant Impact)**

4.5.2.3 *Impacts to Historic Resources*

There are no historic structures located on the project site. One historic landscape feature, a single Spring and Pepper tree dating back to the turn of the twentieth century is present on site, but the debris scatter reported in 1987 is no longer present and was likely removed during property cleanup in the last ten years.

For the purposes of CEQA, there are no historical resources within the proposed project eligible for the CRHR. There are no structures on the project site currently subject to the City's Historic Preservation ordinance. The proposed project could potentially affect as yet unknown subsurface historic resources.

Impact CUL-3: Subsurface historical resources could be exposed during ground disturbing construction operations associated with roadway, utility, and/or drainage improvements and/or residential development. Construction operations could result in the inadvertent exposure of historical resources that could be eligible for inclusion on the CRHR. **(Significant Impact)**

Mitigation Measures:

MM CUL-1.1: The project proponent shall have a qualified archaeologist present to monitor subsurface construction excavation activities into native soils in the vicinity of CA-SCL-68, near Narvaez Avenue. The frequency and duration of the monitoring shall be at the discretion of the archaeologist and dependent on his/her subsurface observations during construction operations.

MM CUL-1.2: Construction personnel involved in all site clearing and subsequent grading and trenching associated with the proposed project shall be warned that there is a potential for the discovery of archaeological and paleontological materials. Indicators of archaeological site deposits include, but are not limited to, the following: darker than surrounding soils, evidence of fire (ash, fire altered rock and earth, carbon flecks), concentrations of stone, bone and shellfish, artifacts of these materials and burials, either animal or human. Potential fossil types that may be encountered will be discussed.

MM CUL-1.3: In the event any unanticipated prehistoric or significant historic era cultural materials are exposed during construction, all grading and/or excavation operations within 50 feet of the find shall be halted, the Director of PBCE shall be notified, and a qualified professional archaeologist shall examine the find and make appropriate recommendations regarding the significance of the find and the appropriate mitigation. The recommendation shall be implemented and could include collection, recordation, and analysis of any significant cultural materials.

MM CUL-1.4: In the event that human remains are found, all project-related construction shall cease within a 50-foot radius of the find in order to proceed with the testing and mitigation measures required. Pursuant to Section 7050.5 of the Health and Safety Code and Section 5097.94 of the Public Resources Code of the State of California:

- In the event of the discovery of human remains during construction, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are Native American. If the Coroner determines that the remains are not subject to his authority, he shall notify the Native American Heritage Commission who shall

attempt to identify descendants of the deceased Native American. If no satisfactory agreement can be reached as to the disposition of the remains pursuant to this State law, then the landowner shall re-inter the human remains and items associated with Native American burials on the property in a location not subject to further subsurface disturbance.

MM CUL-1.5: If cultural resources or remains are discovered during any construction associated with the project, a final report shall be submitted to the Director of PBCE. This report shall contain a description of the mitigation program that was implemented and its results, including a description of the monitoring and testing program, a list of the resources found, a summary of the resources analysis methodology and conclusion, and a description of the disposition/curation of the resources. The report shall verify completion of the mitigation program to the satisfaction of the Director of PBCE.

4.5.2.3 *Paleontological Impacts*

Future development allowed under the proposed project has a low potential to impact undiscovered paleontological resources, based on the age and type of surface soils. It is possible, however, that deeper soils may contain older Pleistocene sediments, which have a higher sensitivity for paleontological materials. Activities that involve substantial excavation (such as construction of below-ground parking garages) would have a higher potential for encountering paleontological deposits. Therefore, construction activities may result in the accidental destruction or disturbance of paleontological sites.

Impact CUL-4: Although not anticipated, construction activities associated with the proposed project could result in a significant impact to paleontological resources, if encountered. **(Significant Impact)**

Mitigation Measures:

MM CUL-4.1: If paleontological resources are discovered during construction, all work on the site will stop immediately until a qualified professional paleontologist can assess the nature and importance of the find and recommend appropriate treatment. Treatment may include preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The City will be responsible for ensuring that the recommendations of the paleontological monitor regarding treatment and reporting are implemented.

4.5.2.4 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described below, the project's cultural resources impacts would be mitigated to a less than significant level. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.5.3 Program-Level Mitigation Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating cultural resources impacts resulting from planned development within the City. Future development allowed by the proposed project shall be in conformance with adopted City plans and policies.

4.5.5 Cumulative Impacts

The project's cultural resources impacts are specific to the project site and would not result in cumulative impacts with other projects. For this reason, cumulative cultural resources impacts are less than significant. **(Less Than Significant Cumulative Impact)**

4.5.6 Conclusion

Impact CUL-1: The proposed project, in conformance with applicable General Plan policies and with the implementation of mitigation measures MM CUL-1.1through 1.4, which require the presence of a qualified archaeologist during excavation activities and outline steps to be taken should cultural materials be discovered, would not result in significant impacts to previously unknown subsurface prehistoric archaeological resources if encountered during ground disturbing activities. **(Less than Significant Impact with Mitigation Incorporated)**

Impact CUL-2: The proposed project, in conformance with applicable General Plan policies and with the implementation of mitigation measures MM CUL-1.1 through 1.5 would not result in significant impacts to Native American remains if encountered during ground disturbing activities. **(Less than Significant Impact with Mitigation Incorporated)**

Impact CUL-3: The proposed project, in conformance with applicable General Plan policies and with the implementation of mitigation measures MM CUL-1.2 &1.3, would not result in significant impacts to subsurface historic resources if encountered during ground disturbing activities. **(Less than Significant Impact with Mitigation Incorporated)**

Impact CUL-4: Although not anticipated, construction activities associated with the proposed project could result in a significant impact to paleontological resources, if encountered. Conformance with General Plan policies and mitigation measures 1.2 and 4.1, which include steps to be taken should paleontological resources be found during construction, would reduce impacts to a less than significant level. **(Less than Significant Impact with Mitigation Incorporated)**

The proposed project would not result in other significant cultural resources impacts, such as impacts to historical resources. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.6 HAZARDS AND HAZARDOUS MATERIALS

The discussion in this section is based upon a Phase I Environmental Site Assessment and a Phase II Environmental Sampling Report completed by *McCloskey Consultants, Inc.* in May 2012 and April 2013, respectively, along with an NOA Mitigation Letter completed by *McCloskey Consultants, Inc.* in June 2013. These reports are included as Appendices G-1, G-2, and G-3 to this SEIR.

4.6.1 Existing Setting

The 331.6-acre project site is located on the northeast portion of Communications Hill - an elongated bedrock ridge that rises out of the southern portion of the Santa Clara Valley to a maximum elevation of approximately 430 feet above mean sea level. Serpentinite and serpentinized basaltic bedrock is present over large areas of the site. This type of rock contains naturally-occurring asbestos (NOA). Asbestos fibers are believed to be a health hazard when inhaled or ingested in large amounts typically in an occupational setting. The safe level of exposure to small amounts has not been established by medical researchers or toxicologists.

A relatively small (approximately six-acre) underground cinnabar mine, known as the Hillsdale Mine, remains on a portion of the site. The Hillsdale Mine was operational starting as early as the 1850's, supplying the gold fields of Northern California with mercury during the gold rush. Sporadic small-scale cinnabar mining appears to have continued into the 1940's.

Beginning in 1973, rock quarrying operations occurred over a large portion of the site, which altered and lowered the natural topography of the site. Reclamation of the quarry area began in 1992-93 and continued to late 2009. Quarry reclamation activities included capping of exposed bedrock with one to two feet of imported undocumented fill soils. A concrete and asphalt recycling facility currently operates on the northern portion of the site. The facility no longer recycles asphalt and the asphalt has been removed from the site; however, several stockpiles of mixed recycled concrete and imported soil remain. Additional recent stockpiles in the 55-acre industrial park area of the site also remain. This material appears to be composed only of recycled concrete.

The project includes off-site improvements at the SR 87 freeway interchanges at Narvaez Avenue and Curtner Avenue, along Curtner Avenue, bike lanes, and an overcrossing of the Caltrain Tracks. These areas are currently developed with streets, with the exception of a trail/bike lane alignment to be completed at the base of the western side of Communications Hill, on the east side of SR 87, generally between Mill Pond Drive and Carol Drive. These improvements are shown on Figure 2.0-3.

4.6.2 Regulatory Framework

Hazardous materials encompass a wide range of substances, some of which are naturally-occurring and some of which are man-made. Examples include pesticides, herbicides, petroleum products, metals (e.g., lead, mercury, arsenic), asbestos, and chemical compounds used in manufacturing and industrial processes. Due to the fact that hazardous substances have properties that are toxic to humans and/or the ecosystem, there are multiple regulatory programs designed to minimize the chance for unintended releases and/or exposures to occur. Other programs establish remediation requirements where soils and/or groundwater contamination has occurred. The net result of

regulatory control programs and institutional controls is reduced likelihood of chemical releases and reduced likelihood of off-site migration of hazardous materials in the event of a release.

The U.S. Environmental Protection Agency (US EPA) is the federal administering agency for hazardous waste regulations. State agencies include the California Environmental Protection agency (Cal EPA), Department of Toxic Substances Control (DTSC), State Water Resources Control Board (SWRCB), and the California Air Resources Board (CARB). Regional agencies include the San Francisco Bay Regional Water Quality Control Board (RWQCB) and the Bay Area Air Quality Management District (BAAQMD). Local agencies including the San José Fire Department (SJFD) and the Santa Clara County Department of Environmental Health (SCCDEH) have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program. The Santa Clara Valley Water District (SCVWD) monitors groundwater quality and supports groundwater clean-up efforts.

Existing federal, state, and local regulations that reduce or avoid impacts associated with hazards and hazardous materials include:

- Federal Comprehensive Environmental Response and Liability Act (CERCLA, "Superfund")
- Federal Resource Conservation and Recovery Act (RCRA)
- Federal Hazardous Materials Transportation Act (HMTA)
- Natural Gas Pipeline Safety Act of 1968 (CFR, Title 49)
- Federal Aviation Administration (FAA) Regulations (Title 14 of the Code of Federal Aviation Regulations, Federal Aviation Regulations Part 77)
- Federal Process Safety Management of Highly Hazardous Chemicals (CFR, Title 29)
- State Aeronautics Act (California Public Utilities Code, Sections 21658 and 21659)
- Cal/OSHA Worker Health and Safety Regulations (California Code of Regulations, Title 8)
- California Pipeline Safety Regulations (California Government Code, Section 51010-51019.1)
- California Health and Safety Code and CUPA Program
- California Accidental Release Prevention (CalARP) Program
- California Fire Code
- California's Porter-Cologne Water Quality Control Act
- CEQA Requirements for Hazardous Materials Users within One-Fourth of a Mile of School (Section 21151.4 of the Public Resources Code)
- City of San José Hazardous Materials Release Response Plans and Inventory
- City of San José Hazardous Materials Storage Ordinance and Toxic Gas Ordinance
- City of San José Building and Fire Codes
- City of San José Municipal Code (Chapters 6.14, 17.12, 17.88, and 20.80).

4.6.2.1 *Government Code §65962.5 (Cortese List)*

Section 65962.5 of the Government Code requires Cal EPA to develop and update (at least annually) a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by the State, local agencies, and developers to comply with CEQA requirements. The Cortese List

includes hazardous substance release sites identified by the DTSC, SWRCB, and the Department of Resources Recycling and Recovery (CalRecycle).[30]

4.6.2.2 *Airport Land Use Commission (ALUC) Comprehensive Land Use Plan (CLUP)*

In accordance with the California State Aeronautics Act, the Santa Clara County Airport Land Use Commission (ALUC) adopted a Comprehensive Land Use Plan (CLUP) for the Mineta San José International Airport. The CLUP establishes provisions for the regulation of land use, safety, and noise within the airport's Airport Influence Area (AIA) to minimize the public's exposure to safety hazards and excessive noise. All areas within the AIA should be regarded as potentially subject to aircraft over-flights and are subject to land use compatibility policies in the CLUP.[31] The CLUP also establishes a Height Restriction Area, based on the FAA Part 77 imaginary surfaces and safety zones with appropriate land use types and density limitations for each zone.

The ALUC determined that the City of San José 2040 General Plan is consistent with the CLUP. Any proposed amendments to the General Plan, zoning, or adopted Specific Plans must be submitted for review by the ALUC to determine whether it is consistent or inconsistent with the CLUP.[32] The ALUC also encourages the City to submit referrals for certain proposed projects in the AIA such as residential development, major infrastructure, schools, and outdoor theaters. Local agencies may overrule an ALUC finding of inconsistency if they hold a public hearing, make specific findings that the action proposed is consistent with the purposes of the ALUC statute, and approve the proposed action through a two-thirds vote of the local agency's governing body.

The project site is not located in the AIA (also referred to as ALUC referral area).

4.6.2.2 *ABAG Hazard Mitigation Plan*

The City of San José has joined with 60 jurisdictions in the San Francisco Bay Area and participated in the development of a multi-jurisdictional hazard plan by ABAG. The hazard mitigation plan, *Taming Natural Disasters*, includes mitigation activities and strategies for dealing with hazards that are likely to impact the Bay Area, including flooding, landslides, wildfires, drought, and earthquake-related hazards (i.e., faulting, shaking, earthquake-induced landslides, liquefaction, and tsunamis). All of the hazards, except for tsunamis, could impact San José. These hazard mitigation planning efforts are intended to reduce risks to people and property in San José.

4.6.2.3 *City of San José Policies*

The San José Municipal Code contains several regulations regarding hazardous materials and hazardous wastes, including requirements for automobile dismantlers, hazardous materials storage permits, and zoning regulations prohibit land uses requiring a hazardous materials storage permit on residential parcels.

[30] CalRecycle was formally called the California Integrated Waste Management Board (CIWMB).
[31] Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan, Norman Y. Mineta San José International Airport*. 2010.
[32] A determination by the FAA that a project does not constitute a hazard to air navigation does not limit the ALUC from determining that a project may be inconsistent under the policies of the CLUP.

To address potential hazards to daycare facilities, churches, schools and other sensitive developments in or near areas where hazardous materials are used or stored, the City of San José has developed the following guidance documents that are used during the development review and approval process:

- Draft Guidelines for the Placement of Daycare Facilities, Churches and Schools in or adjacent to Industrial Zones
- Draft Guideline for Preparation of Risk Assessments
- Development Guideline for Land in Proximity to High Pressure Natural Gas Pipelines

The City of San José controls land uses or types of business (such as hazardous materials storage or hazardous waste facilities) through the Conditional Use Permit process. These permits are approved by the Planning Commission and may be appealed to the City Council. As part of the Conditional Use Permit process, the San José Environmental Services Department (ESD) may be requested to review site-specific environmental documentation. When contamination is present on a site, the city reports this information to the appropriate agencies that regulate the cleanup of toxic contamination.

4.6.2.4 *Envision San José 2040 General Plan*

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating hazards and hazardous materials impacts resulting from planned development within the City. All future development addressed by this SEIR for the project site will be subject to the hazards and hazardous materials policies listed in the City's 2040 General Plan, including the following listed below.

HAZARDOUS MATERIALS
Policy EC-6.4: Require all proposals for new or expanded facilities that handle hazardous materials that could impact sensitive uses off-site to include adequate mitigation to reduce identified hazardous materials impacts to less than significant levels.
Policy EC-6.6: Address through environmental review all proposals for new residential, park and recreation, school, day care, hospital church or other uses that would place a sensitive population in close proximity to sites on which hazardous materials are or are likely to be located, the likelihood of an accidental release, the risks posed to human health and for sensitive populations, and mitigation measures, if needed, to protect human health.
Policy EC-6.7: Land uses and development that use hazardous materials that could impact existing residences, schools, day care facilities, community or recreation centers, senior residences, or other sensitive receptors if accidentally released shall not be approved without the incorporation of adequate mitigation or separation buffers between uses.
Policy EC-6.12: Regulate new development on or in proximity to high pressure natural gas pipelines to promote public safety and reduce risks from land use incompatibility.
ENVIRONMENTAL CONTAMINATION
Policy EC-7.1: For development and redevelopment projects, require evaluation of the proposed site's historical and present uses to determine if any potential environmental conditions exist that could adversely impact the community or environment.
Policy EC-7.2: Identify existing soil, soil vapor, groundwater and indoor air contamination and mitigation for identified human health and environmental hazards to future users and provide as part of the environmental review process for all development and redevelopment projects. Mitigation measures for soil, soil vapor and groundwater contamination shall be designed to avoid adverse human health or

environmental risk, in conformance with regional, state and federal laws, regulations, guidelines and standards.
Policy EC-7.4: On redevelopment sites, determine the presence of hazardous building materials during the environmental review process or prior to project approval. Mitigation and remediation of hazardous building materials, such as lead-paint and asbestos-containing materials, shall be implemented in accordance with state and federal laws and regulations.
Policy EC-7.5: On development and redevelopment sites, require all sources of imported fill to have adequate documentation that it is clean and free of contamination and/or acceptable for the proposed land use considering appropriate environmental screening levels for contaminants. Disposal of groundwater from excavations on construction sites shall comply with local, regional, and state requirements.
WILDLAND AND URBAN FIRE HAZARDS
Policy EC-8.1: Minimize development in very high fire hazard zone areas. Plan and construct permitted development so as to reduce exposure to fire hazards and to facilitate fire suppression efforts in the event of a wildfire.
Policy EC-8.2: Avoid actions which increase fire risk, such as increasing public access roads in very high fire hazard areas, because of the great environmental damage and economic loss associated with a large wildfire.
Policy EC-8.3: For development proposed on parcels located within a very high fire hazard severity zone or wildland-urban interface area, continue to implement requirements for building materials and assemblies to provide a reasonable level of exterior wildfire exposure protection in accordance with City-adopted requirements in the California Building Code.
Policy EC-8.4: Require use of defensible space vegetation management best practices to protect structures at and near the urban/wildland interface.
HILLSIDE DEVELOPMENT HAZARD AVOIDANCE
Policy LU-18.1: Allow development in hillside areas only if potential danger to the health, safety, and welfare of the residents, due to landslides, fire, or other environmental hazards, can be mitigated to an acceptable level as defined in State and City ordinances and policies. Demonstrate that all new development will not result in significantly increased risks associated with natural hazards.

4.6.3 Potential On-Site Sources of Contamination

4.6.3.1 *Naturally Occurring Asbestos (NOA)*

Serpentinite bedrock containing chrysotile NOA is present over large areas of the site. In 2009, five bedrock outcrop samples were collected from locations distributed throughout the site and analyzed for NOA. NOA was detected in all five of the bedrock samples. Levels as high as 20 to 30 percent were detected in four of the samples. The concentrations in all of these samples exceed the Bay Area Air Quality Management District (BAAQMD) limit of 0.25 percent. The concentrations also exceed the DTSC Schools Division criteria of 0.01 percent.

Three additional soil samples were collected from different depths to determine the NOA concentrations at depth in fill and deep colluvium in the northern portion of the site, west of the existing Quarry Pond. Laboratory analyses of two of the samples, which consisted of deeper, buried colluvium soils in the area near the quarry pond and near the northeast property line detected NOA concentrations of only 0.002 and 0.003 percent. These concentrations are less than the BAAQMD and DTSC Schools Division thresholds. These soils are therefore suitable for capping of NOA in the bedrock at the site for any of the planned redevelopment areas. These soils are largely covered by fill soils that contained higher concentrations of NOA which would have to be removed if the deeper

soils are to be reused for cover material. The third sample was taken from an area southeast of the quarry pond, which consisted of fill material at a depth of roughly 7.5 feet. This sample contained 11.25 percent NOA, which exceeds both the BAAQMD and DTSC Schools Divisions criteria. Soil from this area is not suitable for use as capping material.

4.6.3.2 *Mercury in Bedrock*

Portions of the site historically used for mercury mining are underlain by cinnabar, a naturally occurring rock containing mercury. Extensive sampling and testing of ore vein rock was performed to evaluate mercury concentrations. The testing results show that mercury concentrations exceed the California Human Health Screening Levels (CHHSLs) for residential use of 18 milligrams per kilogram (mg/kg) at only three locations and none of the locations exceed the CHHSL for commercial and industrial uses. The hazardous waste threshold of 20 mg/kg was exceeded at two locations in the mine area and at one location in the extreme northwest corner of the site.

4.6.3.3 *Methyl Mercury in Quarry Pond*

A man-made pond associated with the former quarry is located on the northern portion of the site. Water samples collected from the quarry pond identified methyl mercury concentrations that exceed the Regional Water Quality Control Board (RWQCB) environmental screening levels (ESLs) for surface water for estuary habitats. Methyl mercury is soluble and is produced in water by sulfate reducing bacteria under low-oxygen conditions when elemental mercury is present in sufficient concentrations. The quarry pond is therefore capable of generating methyl mercury which likely occurs at depth in the pond during the summer months when algae depletes the deep portion of the pond of oxygen. This allows anaerobic conditions to develop, resulting in the production of methyl mercury.

4.6.3.4 *Mercury and Nickel in Ore Processing Area*

A former ore crusher and furnace was located near the former main mine portal. A number of borings were completed in this area after elevated mercury and nickel concentrations were identified in initial sampling. The detected mercury contamination exceeded the CHHSLs for residential uses, but not commercial/industrial standards. The nickel concentrations were elevated but did not exceed either standard for direct exposure. Solubility testing showed that nickel from one sample exceeded the hazardous waste concentrations.

4.6.3.5 *Stockpiles in Former Quarry Area*

Six stockpiles are located in the lower quarry area and are composed of mixed aggregate and soils. A total of 19 composite samples were collected from the six stockpiles. No pesticides, petroleum range hydrocarbons, or semi-volatile organic compounds were detected during the sampling that exceeded the regulatory thresholds. Mercury was detected in only one discrete stockpile sample that exceeded the regulatory guidelines for residential use (18 mg/kg) and the total threshold limit concentration (TTLC) for hazardous waste (20 mg/kg).

4.6.3.6 *Petroleum Hydrocarbons in Fill Soils*

Sampling was performed of fill soils in the lower, eastern area of the site. Borehole drilling identified thin lenses (six and 12 inches) of black, petroleum hydrocarbon material three to six feet below the surface in two areas. Comprehensive laboratory testing of this material identified only motor oil contamination. The concentrations exceeded the RWQCB thresholds for gross contamination for soils less than three meters deep, but not the updated direct exposure threshold for construction workers.

4.6.3.7 *Quarry Reclamation Fill*

During the reclamation of the former Azevedo Quarry, Raisch Products Company placed generally two to three feet of imported soil to cap over exposed bedrock prior to hydroseeding. No documentation of the sources of the import soil is available and no testing for the presence of contamination appears to have been performed. Reclamation was accomplished by spreading serpentine-based topsoil over the quarried areas and subsequent seeding with "locally favorable" native grasses and forbs. The use of the serpentine-based topsoil in the reclamation process increases the likelihood of NOA-containing soils being used to cap the bedrock.

Twenty potholes were completed in the areas where capping of exposed bedrock with soil was performed. No pesticides, petroleum range hydrocarbons, or semi-volatile organic compounds were detected during the sampling that exceeded the regulatory thresholds. Lead was detected at only one cap sampling location (80 mg/kg) that equals the regulatory standards for residential use.

4.6.3.8 *Spring Water*

Two springs are located on the site. One of the springs emanates from the former main haul line portal for the mine and the other is in an area north of the mine and drains to the quarry pond. Water from the springs, quarry pond, and inside the mine was sampled. The sampling results were compared to the very restrictive RWQCB ESLs for surface water for estuary habitats because this water may be captured by sub drains installed for the future development and eventually be discharged to Coyote Creek and the San Francisco Bay. The only constituents identified at potentially elevated concentrations in the samples collected were arsenic, thallium, and nickel. These metals are most likely naturally occurring and related to the hydrothermally altered and/or ultramafic rocks on the site.

4.6.3.9 *Hazardous Materials Use and Underground Storage Tanks (USTs)*

Diesel and petroleum-based lubricants previously were used on the Azevedo Quarry/Raisch Products portion of the site. Although the majority of the hazardous materials use/storage appeared to be located on the portion of the quarry located on the northern portion of the site, a small diesel aboveground storage tank (AST) with an associated generator powering a water pump was located adjacent to the quarry pond through at least 2007, with some discolored soil noted beneath the generator. In addition, oil was noted as coating some of the old quarry machinery. Given the small quantity of fuels and lubricants likely adjacent to the quarry pond, it is unlikely that a significant release has occurred.

Two 15,000-gallon diesel USTs, as well as a diesel AST, historically were present on the AT&T microwave tower portion of the site. The USTs were removed in 1989 and 1990, and impacted soil was detected beneath one of the tanks. Following removal of 25 cubic yards of visibly-impacted soil from beneath the UST, 11 parts per billion (ppb) ethylbenzene and 13 ppb xylenes were determined to remain in place. Sampling of native soil beneath the UST revealed the presence of 49 ppm total petroleum hydrocarbons as diesel (TPHd). Based on the analytical data, the Santa Clara Valley Water District (SCVWD) concluded groundwater was not threatened by the release and case closure was granted in April 1991. Following removal of the 15,000-gallon USTs, one 5,000-gallon diesel UST was installed into one of the excavations as a replacement. The 5,000-gallon UST reportedly was removed in 2003, along with the AST, but documentation of removal activities was not located. Based on an interview conducted with the previous owner of the tower facility, soil samples collected following removal of the 5,000-gallon UST did not reveal the presence of petroleum hydrocarbons.

A review of regulatory agency documents revealed the presence of three former USTs used as water tanks at the Azevedo Quarry facility. An additional tank, possibly one of the former USTs, was observed on a hillside on the northern portion of the site. No sampling is recommended as the locations of the other former water-containing USTs are unknown.

4.6.4 Other Hazards

A search of environmental databases did not reveal the presence of nearby properties that would be likely to have contamination that would impact the site. Areas in which off-site improvements would occur are not anticipated to contain hazardous materials as they are primarily existing roadways and the Caltrain tracks. The trail/bike lane alignment to be completed at the base of the western side of Communications Hill, on the east side of SR 87, generally between Mill Pond Drive and Carol Drive has never been developed and is not located on serpentine soils.

The project site is not located within an airport land use plan, two miles of a public or public use airport, or private airstrip. The project would not physically interfere with an adopted emergency response plan or evacuation plan.

Although the project site currently is not located within one-quarter mile of an existing or proposed school, the Specific Plan includes an elementary school that would be located on the site.

4.6.4.1 *Wildfires*

According to the wildfire threat hazard map published by the Association of Bay Area Governments (ABAG), portions of the site are considered to have a high threat of fire. Additionally, the site is considered a community at risk according to ABAG's wildland-urban interface fire threat map.[33] Small wildfires have occurred over the years on various undeveloped areas of the site.

[33] Association of Bay Area Governments (ABAG). Wildfire Maps and Information. Available at: http://quake.abag.ca.gov/wildfires/. Accessed September 9, 2013.

4.6.4.2 *Electromagentic Fields (EMF)*

The Santa Clara County Communication Center is located on the southwestern portion of Communications Hill and provides a 360-degree radius for radio wave and microwave transmissions. Eleven microwave transmitters are maintained at the Center by the County, the City of San José, the Federal Aviation Administration (FAA), and San José Waterworks. AT&T formerly operated five microwave paths from the communication tower on the central portion of the site.

Electromagnetic radiation (EMR), including microwaves and radio waves, is a form of energy that travels through space at the speed of light. EMR consists of two components; an electric field and a magnetic field. The frequency of the EMR determines the energy of the radiation. The major sources of EMR in the environment include radio and television broadcasting, radar units for aviation and marine navigation, satellite communication, mobile telephones, and microwave ovens.

The electromagnetic spectrum includes all of the various forms of EMR, ranging from extremely low frequency radiation (i.e., alternating current electricity) to X-rays and gamma rays, which have very high frequencies. Radio wave and microwave radiation are classified in the "radiofrequency" portion of the electromagnetic spectrum. Radio waves occupy the lower part of the radio frequency portion of the electromagnetic spectrum. Microwaves have a higher frequency than normal radio waves.

Some studies have found an association between exposure to electric and magnetic fields and health problems. In recent years there has been considerable controversy regarding the potential health effects resulting from long-term exposure to electromagnetic fields (EMFs). While EMFs occur naturally and are present in everything from visible light to radio waves to X-rays, attention has focused on whether exposure to EMFs is hazardous. The strength of an EMF is dependent upon the amount of current; the more power being consumed, the stronger the EMF. The electric field strength component of EMF falls off dramatically with distance and can be shielded by trees or structures. The magnetic field component of EMF is produced as a result of the movement (current) of electricity through a conductor. As with electric fields, magnetic field strength decreases dramatically with distance from the source; however, the magnetic field component passes through most materials, so magnetic fields cannot be effectively shielded by normal building materials.

Hundreds of laboratory and epidemiological studies have been conducted on the relationship between EMF exposure and health effects. Scientists to date have found no threshold value, dose response, or causative relationship that demonstrates evidence of any adverse physical effect from EMF. Because magnetic fields cannot be effectively shielded, most health-related research has focused on the potential hazards associated with the magnetic field component of EMFs.

The City of San José does not have any setback requirements in place related to EMF. The only statewide mandate of any kind that has been established is the State of California School Siting Rules. The policy requires that schools be sited a minimum of: (a) 100 feet from the right-of-way edge of a 100/115 kV line; (b) 150 feet from the right-of-way edge of a 220/230 kV line; and (c) 250 feet from the edge of the easement of any 345 kV and higher voltage transmission line.

4.6.3 Hazards and Hazardous Materials Impacts

4.6.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a hazards and hazardous materials impact is significant if implementation of the project would:

- Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials;
- 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;
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school;
- Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment;
- For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area;
- For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area;
- Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; or
- 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.

4.6.3.2 *Impacts to the Project*

Naturally Occurring Asbestos (NOA)

As described previously, serpentinite bedrock containing chrysotile asbestos (NOA) is present over large areas of the site, including the future school site. Levels as high as 20 to 30 percent were detected in four samples taken from the site, which exceeds the Bay Area Air Quality Management District (BAAQMD) limit of 0.25 percent and the DTSC Schools Division criteria of 0.01 percent. When NOA is disturbed in connection with grading and construction, asbestos-containing dust can be generated. Exposure to asbestos can result in health ailments such as lung cancer, mesothelioma (cancer of the linings of the lungs and abdomen), and asbestosis (scarring of lung tissues that results in constricted breathing).

Impact HAZ-1: Grading and construction activities on the project site could result in the generation of asbestos-containing dust. **(Significant Impact)**

Mitigation Measures:

MM HAZ-1.1: The project applicant shall prepare an Asbestos Dust Mitigation Plan and submit the plan to BAAQMD for review and approval prior to grading activities. The plan must describe dust control measures during grading as well as long term dust control measures. The plan shall include, at a minimum, the following measures:

- Track-out prevention and control measures;
- Active stockpiles shall be adequately wetted or covered with tarps;
- Control for disturbed surface areas and storage piles that remain inactive for more than seven days;
- Control for traffic on unpaved roads, parking lots, and staging areas;
- Control for earthmoving activities; and,
- Control for off-site transport.

MM HAZ-1.2: Disturbed surfaces with NOA exceeding the BAAQMD threshold concentration of 0.25 percent shall be stabilized using one or more of the following methods:

- Establishment of a vegetative cover;
- Placement of at least three inches of non-asbestos-containing material;
- Paving;
- Any other measure deemed sufficient to prevent wind speeds of 10 miles per hour or greater from causing visible dust emission.

Contaminated Soils

The project site has been extensively tested for contaminated soils over many years as described below. Testing of areas where off-site improvements proposed as part of the CHSPADP was not completed; however, there are no known areas of concern where these improvements would be located. The majority of the ground disturbance associated with the off-site improvements would occur on and adjacent to existing roadways in the project area. If it is determined at the time of implementation of the CHSPADP that soil sampling is necessary, it will be implemented according to all local, state, and federal requirements.

Mercury in Bedrock and Soils

Extensive sampling and testing of ore vein rock on the site was performed to evaluate mercury concentrations. The testing results show that mercury concentrations exceed the CHHSLs for residential use of 18 milligrams per kilogram (mg/kg) at three locations, and none of the locations exceed the CHHSL for commercial and industrial uses. The hazardous waste threshold of 20 mg/kg was exceeded at two locations in the mine area, and at one location in the extreme northwest corner of the site. Additionally, samples taken from the area of the former mine operations detected mercury at levels exceeding the CHHHSLs for residential use.

Nickel in Soils

Soil samples taken from the area of the former mine operations detected nickel at levels exceeding hazardous waste thresholds.

Stockpiles in Former Quarry Area

Samples were collected from six stockpiles located in the lower quarry area that are composed of mixed aggregate and soils. Mercury was detected in one stockpile sample that exceeded thresholds for residential use and hazardous waste.

Petroleum Hydrocarbons in Fill Soils

Sampling of fill soils in the lower, eastern area of the site identified motor oil contamination with concentrations exceeding the RWQCB thresholds for gross contamination for soils less than three meters deep, but not the updated direct exposure threshold for construction workers.

Quarry Reclamation Fill

Sampling was completed at 20 locations within the areas where exposed bedrock was capped with soil on the former quarry site. Lead was detected at one sampling location (80 mg/kg) that equals the regulatory standards for residential use.

Impact HAZ-2: Soils containing mercury, nickel, motor oil, and lead in excess of established thresholds are present on the project site. Hazardous materials may also be present in areas in which off-site improvements may be constructed. **(Significant Impact)**

Mitigation Measures:

MM HAZ-2.1: Prior to issuance of a PD Permit, a soil management plan (SMP) shall be developed that identifies management practices for characterizing the impacted soil that may be encountered during site development activities. If, after characterizing the impacted soil, concentrations of chemicals are found above residential CHHSLs or other clean up level approved by a regulatory oversight agency, remedial measures are required. Possible remedial measures include: 1) excavation and off-site disposal of the impacted soil at a permitted facility; 2) use of engineering and administrative controls such as consolidation and capping of the soil on-site and land use covenants restricting certain activities/uses; and 3) a combination of the above. The project shall obtain regulatory agency oversight and approval of the remedial measure(s) prior to site development.

The SMP shall include the following elements:

- procedures for transporting and disposing the waste material generated during removal activities,
- procedures for stockpiling soil on-site,
- provisions for collecting additional soil samples in previously inaccessible areas to confirm the extent of soil contamination, following demolition activities,
- confirmation soil sampling to verify achievement of remediation goals,
- procedures to ensure that fill and cap materials are verified as clean,
- truck routes, and/or staging and loading procedures and record keeping requirements.

Contaminated Water

Methyl Mercury in Quarry Pond

Water samples collected from the quarry pond identified methyl mercury concentrations that exceed the RWQCB ESLs for surface water screening levels for estuary habitats. Removal of the quarry pond and the discharging of its contents could result in the release of elevated concentrations of methyl mercury.

Impact HAZ-3: Removal of the quarry pond could result in the release of elevated levels of methyl mercury. **(Significant Impact)**

Spring Water

Sampling of water from the two naturally occurring springs on the site identified elevated concentrations of arsenic, thallium, and nickel.

Impact HAZ-4: Sampling of water from the two naturally occurring springs on the site identified elevated concentrations of arsenic, thallium, and nickel. **(Significant Impact)**

Mitigation Measures:

MM HAZ-3.1: To avoid the spread of harmful levels of contamination, the discharge of any water from dewatering activities will be required to comply with NPDES permit requirements, which may involve installation of a treatment system(s) at the dewatering location.

Other Hazards

Wildfires

As described previously, the project site is located in an area with a high threat of wildfire. The 2007 California Building Code requires that any new buildings proposed in State Responsibility Areas, Local Agency Very-High Fire Hazard Severity Zone, or Wildland-Urban Interface Area (as designated by the enforcing agency) be constructed to meet the Wildland-Urban Interface Fire Area Building Standards. The California Building Code establishes minimum standards for materials and material assemblies in order to provide a reasonable level of exterior wildfire exposure protection for buildings in wildland-urban interface areas.[34] Adherence to these standards would reduce wildfire impacts to a less than significant level. **(Less than Significant Impact)**

Electric Power Lines and EMF

The proposed project would include the relocation of an existing overhead 60kV transmission line and associated 50-foot wide PG&E easement. The overhead line enters the site at the eastern boundary and extends southwest to the top of Communications Hill at the former AT&T communications tower. The line then continues down to the previously developed southern and western side of Communications Hill (Tuscany Hills).

The overhead transmission line on the north side of the site would be relocated such that it would not cross over the future school site (refer to Figure 1.0-4). As stated previously, the City of San José does not have any setback requirements in place related to EMF. The only statewide mandate of any kind that has been established is the State of California School Siting Rules. The policy requires that schools be sited a minimum of: (a) 100 feet from the right-of-way edge of a 100/115 kV line; (b) 150 feet from the right-of-way edge of a 220/230 kV line; and (c) 250 feet from the edge of the easement of any 345 kV and higher voltage transmission line. Adherence to these setback requirements would reduce EMF impacts to the future school to a less than significant level. **(Less than Significant Impact)**

4.6.4.2 *Hazardous Materials Use, Transport, and Disposal*

The project proposes to rezone a roughly 55-acre portion of the site to *Industrial Park* to allow for future industrial/R&D/office development. This future development would locate new industrial park uses on lands currently used for heavy industrial uses in proximity to existing and future residential/sensitive uses located south of Hillsdale Avenue and on the northern and eastern sides of the project site.

Impacts to Sensitive Uses

Industrial and commercial facilities are known to use and store hazardous materials. Improper use, storage, transport, or disposal of hazardous materials could result in the accidental release of toxic gas, explosions, or leaks into the surrounding environment. The release of acutely hazardous chemicals such as concentrated ammonia could significantly affect people off-site. Populations that

[34] California Department of Forestry and Fire Protection. Wildland Fire Protection. Available at: http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland.php

are especially susceptible to the effects of hazardous materials include children, the elderly, and those with compromised immune systems. Thus, the health effects could be magnified if hazardous materials were released or emitted near residential areas, hospitals, day care facilities, nursing homes, and/or schools.

Industrial and commercial facilities may generate hazardous emissions during routine operations, which could expose the public to health risks. Adherence to existing regulations, programs, and General Plan policies, as described above and in the Envision 2040 PEIR, would reduce hazards to people and the environment. For these reasons, the project would not expose new sensitive uses to a substantial risks associated with hazardous materials users. Users of a future off-site trail to the existing Caltrain Station in the vicinity of the proposed industrial park property would not be adversely affected by nearby future industrial uses.

Impacts from New Uses

New businesses allowed under the proposed *Industrial Park* zoning could involve the routine transport, use, or storage of hazardous materials. Based on the regulations of the *Industrial Park* zoning designation, new facilities are not expected to involve the use of *substantial* quantities of hazardous materials or involve processes that would create a significant hazard to the public or environment under accidental release conditions.

Adherence to existing regulations, programs, and General Plan policies, as described above and in the Envision 2040 PEIR, would further reduce hazards to people and the environment. In general, requirements for hazardous materials users, including mechanical controls, security measures, and monitoring by regulatory agencies, reduces the probability of an accidental release *and* the magnitude of a release, should one occur.

Measures Included in the Project to Reduce and Avoid Impacts related to the Use or Generation of Hazardous Materials

Consistent with current regulations, future projects on the 55-acre *Industrial Park* portion of the site that involve the use or generation of hazardous materials would be subject to the following measures:

- **Hazardous Materials Business Plan.** Facilities that use, store, or handle hazardous materials in quantities greater than 500 pounds, 55 gallons, or 200 cubic feet are required to prepare a Hazardous Materials Business Plan (HMBP). The HMBP would contain facility maps, up-to-date inventories of all hazardous materials for each area, emergency response procedures, equipment, and employee training.

- **Hazardous Waste Generator Requirements.** Facilities that generate more than 100 kilograms per month of hazardous waste or more than one kilogram per month of acutely hazardous waste must be registered with the U.S. EPA. DTSC administers hazardous waste generator registration in California.

- **Contingency Plan.** All facilities that generate hazardous waste must prepare a Contingency Plan that establishes the duties of the facility's Emergency Coordinator, identification and location of emergency equipment, and reporting procedures to follow after an incident.

- **California Accidental Release Prevention Program (CalARP).** Facilities that use significant quantities of acutely hazardous materials must prepare a Risk Management Program (RMP) if there may be a significant likelihood that this use could pose an accident risk. The RMP must include a description of acutely hazardous material accidents occurring at the facility within the past three years, a description of equipment, procedures, and training to reduce the risk of acutely hazardous materials accidents, and an off-site consequence analysis that models potential impacts from an accidental release to surrounding areas.

- **Injury and Illness Prevention Plan.** The California General Industry Safety Order requires that all employers in California shall prepare and implement an Injury and Illness Prevention Plan, which should contain a code of safe practice for each job category, methods for informing workers of hazards, and procedures for correcting identified hazards.

- **Emergency Action Plan.** The California General Industry Safety Order requires that all employers in California prepare and implement an Emergency Action Plan. The Emergency Action Plan designates employee responsibilities, evacuation procedures and routes, alarm systems, and training procedures.

- **Fire Prevention Plan.** The California General Industry Safety Order requires that all employers in California prepare and implement a Fire Prevention Plan. The Fire Prevention Plan specifies areas of potential hazard, persons responsible for maintenance of fire prevention equipment or systems, fire prevention housekeeping procedures, and fire hazard training procedures.

- **Hazard Communication Plan.** Facilities involved in the use, storage, and handling of hazardous materials are required to prepare a Hazard Communication program. The purpose of the Hazard Communication program is to provide methods for safe handling of hazardous materials, ensure proper labeling of hazardous materials containers, and ensure employee access to Material Safety Data Sheets (MSDSs).

- **Supplemental Review.** Prior to issuance of building permits for development or redevelopment in the project area that may involve the use, storage, or disposal of hazardous materials, the City shall determine that the proposed use has adhered to current regulations and programs concerning hazardous waste. The City may impose additional avoidance measures through the Conditional Use Permit process.

  - In accordance with GP Policy EC-6.4, all proposals for new or expanded facilities that handle hazardous materials that could impact sensitive uses off-site will be required to include adequate mitigation to reduce and avoid hazardous materials impacts.

  - In accordance with GP Policy EC-6.7, land uses and development that use hazardous materials that could impact existing residences, schools, day care facilities, community or recreation centers, senior residences, or other sensitive receptors if accidentally released shall not be approved without the incorporation of adequate mitigation or separation buffers between uses.

Implementation of these measures as appropriate would minimize potential risks to future and existing sensitive uses associated with new hazardous materials users. The specific studies, plans, and control measures required to manage risks will vary depending on the type and quantity of hazardous materials to be used. **(Less than Significant Impact)**

4.6.4.3 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described below, the project's hazards and hazardous materials impacts would be mitigated to a less than significant level. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.6.5 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating hazards and hazardous materials impacts resulting from planned development within the City. Future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed in *Section 4.6.2.4,* resulting in less than significant impacts to hazards and hazardous materials.

4.6.6 Cumulative Impacts

The project's hazards and hazardous materials impacts are specific to the project site and would not result in cumulative impacts with other projects. For this reason, cumulative hazards and hazardous materials impacts would not occur. **(Less Than Significant Cumulative Impact)**

4.6.7 Conclusion

Impact HAZ-1: The implementation of mitigation measure MM HAZ-1, which requires the preparation of an Asbestos Dust Mitigation Plan and outlines methods for stabilization of soils containing asbestos, would reduce impacts from Naturally Occurring Asbestos (NOA) to a less than significant level. **(Less Than Significant Impact With Mitigation)**

Impact HAZ-2: The implementation of mitigation measure MM HAZ-2, which requires preparation of a soil management plan (SMP), would reduce impacts from mercury contamination in soils and bedrock, nickel contamination in soils, mercury contamination in one of the stockpiles in the lower quarry area, motor oil contamination in the eastern area of the site, and lead contamination in the quarry reclamation fill to less than significant levels. These measures would also be implemented off-site as needed. **(Less Than Significant Impact With Mitigation)**

Impacts HAZ-3 and HAZ-4: The implementation of mitigation measure MM HAZ-3, which requires compliance with NPDES permit requirements for any discharge of water, would reduce impacts related to the discharge of contaminated water from the quarry pond and natural springs on the site to a less than significant level. **(Less Than Significant Impact With Mitigation)**

The proposed project would not result in other hazards and hazardous materials impacts, including impacts related to the routine transport, use, or disposal of hazardous materials, accidental release of hazardous materials, hazardous emissions in the vicinity of a proposed school. The project is not located within and airport land use plan or within the vicinity of a private airstrip, nor would it impair implementation of an adopted emergency response plan or expose people or structures to risks associated with wildland fires. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less than Significant Cumulative Impact)**

4.7 BIOLOGICAL RESOURCES

The following discussion is based on biological evaluation prepared by *Live Oak Associates, Inc.* in June 2013. A copy of this report is included in Appendix H.

4.7.1 Existing Setting

4.7.1.1 *Regulatory Framework*

Regulated Habitats

United States Army Corps of Engineers Jurisdiction

Areas meeting the regulatory definition of "Waters of the United States" (jurisdictional waters) are subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The USACE, under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899), has jurisdiction over "Waters of the U.S." These waters may include all waters used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sandflats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as Waters of the U.S., tributaries of waters otherwise defined as Waters of the U.S., the territorial seas, and wetlands adjacent to Waters of the U.S.

Areas not considered to be jurisdictional waters include non-tidal drainage and irrigation ditches excavated on dry land, artificially-irrigated areas, artificial lakes or ponds used for irrigation or stock watering, small artificial water bodies such as swimming pools, and water-filled depressions.

Construction activities within jurisdictional waters are regulated by the USACE. The placement of fill into such waters must be in compliance with permit requirements of the USACE. No USACE permit will be approved in the absence of state water quality certification pursuant to Section 401 of the Clean Water Act. State Water Resources Control Board is the state agency charged with implementing water quality certification in California.

California Department of Fish and Wildlife Jurisdiction

Activities that result in the diversion or obstruction of the natural flow of a stream, or which substantially change its bed, channel or bank, or which utilize any materials (including vegetation) from the streambed requires that the project proponent enter into a Streambed Alternation Agreement with the CDFW, under Sections 1601-1603 of the state Fish and Wildlife Code. The CDFW potentially extends the definition of stream to include "intermittent and ephemeral streams, rivers, creeks, dry washes, sloughs, blue-line streams (USGS), and watercourses with subsurface flows. Canals, aqueducts, irrigation ditches, and other means of water conveyance can also be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife."

Special-Status Plant and Wildlife Species

Federal Endangered Species Act

The federal Endangered Species Act (FESA) protects listed wildlife species from harm or "take" which is broadly defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct. A take can also include habitat modification or degradation that directly results in death or injury to members of a listed wildlife species. An activity can be defined as "take" even if it is unintentional or accidental. Listed plant species are provided less protection than listed wildlife species. Listed plant species are legally protected from take under FESA if they occur on federal lands or if the project requires a federal action, such as a Section 404 fill permit.

California Endangered Species Act

The California Endangered Species Act (CESA) prohibits the take of any plant or animal listed or proposed for listing as rare (plants only), threatened, or endangered. In accordance with the CESA, CDFW has jurisdiction over state-listed species (California Department of Fish and Wildlife Code 2070). Additionally, the CDFW maintains lists of "species of special concern" that are defined as species that appear to be vulnerable to extinction because of declining populations, limited ranges, and/or continuing threats.

Federal Migratory Bird Treaty Act

The Federal Migratory Bird Treaty Act (16 U.S.C. Sec. 703) prohibits killing, possessing, or trading in migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

California Department of Fish and Wildlife Code Section 3503.5

Birds of prey are protected under Fish and Wildlife Code section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto."

The California Native Plant Society (CNPS), a non-governmental conservation organization, has developed lists of plant species of concern in California. Although the CNPS is not a regulatory agency and plants on these lists have no formal regulatory protection, plants appearing on List 1B or List 2 are, in general, considered to meet CEQA's Section 15380 criteria and adverse effects to these species may be considered significant.

Santa Clara Valley Habitat Plan

The Santa Clara Valley Habitat Plan (HCP) is a framework to protect, enhance, and restore natural resources in specific areas of Santa Clara County, while improving and streamlining the environmental permitting process for impacts on threatened and endangered species. The HCP is a regional partnership between six Local Partners (the County of Santa Clara, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, and the cities of San José, Gilroy, and Morgan Hill) and two Wildlife Agencies (the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service).

The Habitat Plan identifies and preserves land that provides important habitat for endangered and threatened species. The land preservation is both to mitigate for the environmental impacts of planned development and public infrastructure operations and maintenance activities as well as to enhance the long term viability of endangered species. Species covered in the Habitat Plan are as follows:

- Bay checkerspot butterfly
- California tiger salamander
- California red-legged frog
- Foothill yellow-legged frog
- Western pond turtle
- Western burrowing owl
- Least Bell's vireo
- Tricolored blackbird
- San Joaquin kit fox
- Tiburon Indian paintbrush
- Coyote ceanothus
- Mount Hamilton thistle
- Santa Clara Valley dudleya
- Fragrant fritillary
- Loma Prieta hoita
- Smooth lessingia
- Metcalf Canyon jewelflower
- Most beautiful jewelflower

Applicable City of San José 2040 General Plan Policies

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating biological resources impacts resulting from planned development within the City. All future development addressed by this SEIR for the project site will be subject to the biological resources policies listed in the 2040 General Plan, including the following listed below.

MIGRATORY BIRDS
Policy ER-5.1: Avoid implementing activities that result in the loss of active native birds' nests, including both direct loss and indirect loss through abandonment, of native birds. Avoidance activities that could result in impacts to nests during the breeding season or maintenance of buffers between such activities and active nests would avoid such impacts.
Policy ER-5.2: Require that development projects incorporate measures to avoid impacts to nesting migratory birds.
COMMUNITY FOREST
Policy MS-21.8: For Capital Improvement Plan or other public development projects, or through the entitlement process for private development projects, require landscaping including the selection and

planting of new trees to achieve the following goals:

1. Avoid conflicts with nearby power lines.
2. Avoid potential conflicts between tree roots and developed areas.
3. Avoid use of invasive, non-native trees.
4. Remove existing invasive, non-native trees.
5. Incorporate native trees into urban plantings in order to provide food and cover for native wildlife species.
6. Plant native oak trees and native sycamores on sites which have adequately sized landscape areas and which historically supported these species.

Policy CD-1.25: Within new development projects, include preservation of ordinance-sized and other significant trees, particularly natives. Any adverse affect on the health and longevity of such trees should be avoided through design measures, construction, and best maintenance practices. When tree preservation is not feasible include replacements or alternative mitigation measures in the project to maintain and enhance our Community Forest.

City of San José Tree Ordinance

The City of San José maintains the urban natural landscape partly by promoting the health, safety, and welfare of the City by controlling the removal of ordinance trees on private property. Ordinance-size trees are defined as trees over 56 inches or more in circumference at a height of 24 inches above natural grade. The removal of mature trees detracts from the scenic beauty of the City; causes erosion of topsoil; creates flood hazards; increases the risk of landslides; reduces property values; increases the cost of construction and maintenance of drainage systems through the increased flow and diversion of surface waters; and eliminates one of the prime oxygen producers and prime air purification systems in this area.

City of San José Heritage Trees

Under the City of San José Municipal Code, Section 13.28.330 and Section 13.32.090, specific trees are found, because of factors including, but not limited to, their history, girth, height, species or unique quality, to have a special significance to the community and are designated "Heritage Trees."

4.7.1.2 *Existing Conditions On-Site*

Habitat Types

Five biotic habitats have been identified on the site, including annual grassland, coyote brush/Diablan sage scrub, mixed woodland, aquatic, and developed/ruderal (i.e., disturbed areas) (refer to Figure 4.7-1). These habitats are described in more detail below.

Annual Grassland

The majority of the site supports annual grassland habitat. This habitat is present in two forms: annual grassland that has not been significantly disturbed in the past and reclaimed annual grassland, which includes previously quarried areas that have reestablished as grassland habitat. Grasses and

forbs of European origin dominate the vegetation of annual grassland habitat. Grasses common to this habitat include wild oats, ripgut, soft chess, and red brome. Common forbs include yellow star thistle, vinegar weed, Italian thistle, black mustard, and clover. Native spring-flowering forbs are also common to this habitat. California poppies, common fiddleneck, red maids, and blue dicks are typical components of this flora.

Cattle grazing has generally been absent from Communications Hill for more than a decade. However, grazing of a few head of cattle occurs annually on a limited portion of the southeastern side of the site during the spring and summer months.

The grasslands of the study area are used by several species of reptiles and amphibians. The California tiger salamander is known to breed in the quarry pond and aestivate in the annual grassland habitat surrounding the pond. Western fence lizards were observed in this habitat during site surveys. Logs and rocky outcroppings provide microhabitats suitable for western rattlesnakes and gopher snakes, which forage in grasslands and other adjacent habitats for small mammals.

Resident and migratory birds occur here, including the California horned lark, Western meadowlark, and the mourning dove. Winter migrants include American pipits and savannah sparrows. Western kingbirds are commonly seen in this part of Santa Clara County foraging from fences and utility lines during the spring and summer. A variety of raptors are attracted to this habitat by the presence of invertebrates and small reptiles, birds, and mammals. Raptors observed in or adjacent to the study area include white-tailed kites, red-tailed hawks, American kestrels, northern harriers, and turkey vultures.

Botta's pocket gophers burrows were observed in the annual grassland habitat of the site. Less than two dozen California ground squirrel burrows and one ground squirrel were observed in this habitat. Ground squirrel and Botta's pocket gopher burrows were absent in the developed area of the site. The California vole, the western harvest mouse, and the ornate shrew are also likely residents, and numerous California vole holes were observed in ruderal habitat along the railroad tracks. Most mammalian predators, except for the non-native red fox, house cat, striped skunk, and raccoon, are absent from the site due to its isolation from other suitable grassland habitats in the region. Red foxes have been observed on the site and den in burrows and abandoned mines on the property.

Coyote Brush/Diablan Sage Scrub

Patches of coyote brush/Diablan sage scrub are present within scattered portions of the site. This habitat is present in two forms: coyote brush/Diablan sage scrub that has not been significantly disturbed and reclaimed coyote brush/Diablan sage scrub, which includes previously quarried areas that have reestablished as scrub habitat.

The dominant shrubs of the habitat included coyote brush, although poison oak, blue elderberry, and California sagebrush were commonly observed. The overstory layer primarily consists of California buckeye, coast live oak, and willow, but trees are generally absent from this habitat. The same grasses and forbs observed in the annual grassland comprise the herbaceous understory.

1,000' 0 1,000 feet
approximate scale

N

Project Boundary

LEGEND

- Non-native Grassland
- Mixed Woodland
- Coyote Brush / Diablan Sage scrub
- Reclaimed non-native grassland
- Reclaimed Coyote Brush / Diablan Sage scrub
- Developed
- Ruderal

Aquatic Habitats

- Seasonal Wetland
- Wetland Seep
- Detention Basin
- Wetland Channel
- Non-wetland Channel
- Non-wetland Man-made Drainage Ditch
- Quarry Pond

Base Map courtesy of HMH Engineering,
biotic habitats courtesy of Live Oak Associates,
and reclaimed habitats courtesy of H.T. Harvey & Assoc.

BIOTIC HABITATS

FIGURE 4.7-1

Shrubs and low vegetation provide cover and nesting habitat for Anna's hummingbirds, black phoebes, Say's phoebes, and California towhees, which were observed on the site, as well as for other bird species such as Nashville warblers and black-headed grosbeaks. California quail can often be found foraging on seeds and plants under the cover of dense undergrowth. Wrentits, California thrashers, and canyon wrens are also common resident birds of sage scrub in Santa Clara County.

Diablan sage scrub of the study area provides important habitat for a variety of mammals. Some species, such as the deer mouse and California pocket mouse, forage within the protection of the dense brush, feeding largely on grasses and forbs or insects. Red foxes were also observed seeking cover in this habitat.

Mixed Woodland

There are two small areas classified as mixed woodland within the site. One occurs near the northwestern corner and is contiguous with off-site mixed woodland. Species observed include California buckeyes, valley oaks, and coast live oaks. The second area of mixed woodland occurs around the boundaries of one of the wetland seeps in the central portion of the site. Species observed include Fremont cottonwoods, buckeyes, a pepper tree, a willow, and poison oak.

Many of the terrestrial vertebrates occurring in the annual grassland and coyote brush/Diablan sage scrub habitats are likely to occur in the mixed woodland habitat as well.

Aquatic

Aquatic habitats were identified within the site in the form of a manmade quarry pond, four freshwater seeps, a defined natural drainage channel between one of the seeps and the quarry pond, seasonal manmade drainage ditches associated with the quarry, UPRR, and ranching practices, and two detention basins constructed as part of the Tuscany Hills development. Hydrophytic vegetation was generally absent from the manmade drainage ditches and the temporary detention basin located at the terminus of Adeline Avenue. Hydrophytic vegetation observed in the remaining aquatic features included, but is not limited to, rabbitsfoot grass, fiddle dock, common monkey flower, cattails, and Italian rye grass.

Aquatic sources on the site provide drinking water for resident and migratory wildlife through most or all of the year and often support invertebrate populations upon which wildlife may forage. They provide breeding habitat for the Pacific treefrog and western toad, which were observed in these areas. California tiger salamanders are known to breed in the quarry pond. Many of the terrestrial vertebrates occurring in the annual grassland are likely to occur here as well. Raccoons, feral cats, and striped skunks drink water from this habitat when passing through the site.

Developed/Ruderal

The developed/ruderal portion of the site includes the portions of the inactive Azevedo Quarry that are actively disturbed, as well as the UPRR, and areas disturbed as part of the Tuscany Hills development (i.e., water tank and pump station). While a few species, such as Russian thistle, occur

in the disturbed areas, most of these areas support no plants at all; thus, use of these areas by wildlife is minimal.

Regulated Habitats

A formal wetland delineation and waters of the U.S. analysis was completed for the site in 2013. Potentially jurisdictional waters are presumed to be present on the site in the form of four seeps, an intermittent drainage channel, manmade drainage ditches, a quarry pond, and two detention basins.

Because the seeps, intermittent drainage channel, manmade drainage ditches, and quarry pond are hydrologically isolated from known waters of the U.S. and lack a significant chemical, physical, or biological nexus to such waters, they do not fall under the USACE's jurisdiction. The two detention basins are manmade impoundments constructed as part of the neighboring Tuscany Hills development and connect into the public stormwater system. These features do not impound waters otherwise defined as waters of the U.S. and, therefore, should also be disclaimed from the USACE's jurisdiction.

In 2000, a 1.42-acre wetland was mapped in a swale along Hillsdale Avenue and verified by the USACE (File No. 24975S). This jurisdictional determination expired on March 1, 2005. In 2007, 2009, and 2012, *Live Oak Associates* surveyed this area and did not find positive indicators of wetlands. Therefore, it is believed that this area no longer meets the technical criteria for wetlands and should be disclaimed from the USACE's jurisdiction.

Despite this preliminary analysis of the extent of agency jurisdiction, it is important to note that the agencies are the final arbiters and could claim jurisdiction over some or all of these features. Should the USACE disclaim jurisdiction over all of the features on the site, the RWQCB will likely exert jurisdiction over the natural aquatic features, and the CDFW will likely exert jurisdiction over the natural aquatic features supporting a defined bed and bank. All three agencies would likely disclaim jurisdiction over the manmade drainage ditches and two detention basins.

Special-Status Plant and Wildlife Species

Special-Status Plant Species

A search of relevant databases was completed to identify special-status plant species which may occur in the project site vicinity. A total of 42 special-status plant species were identified in the databases with the potential to occur on the site vicinity. Of those species, only Halls' bush-mallow has been observed on-site. Two Hall's bush-mallow shrubs were identified on the site in 2007 and 2009. This species was not observed on the site in 2001. Following ground disturbance associated with the Tuscany Hills development, these two shrubs became established in ruderal areas of the site. During the 2012 survey, both shrubs had died, but a few young mallows were spouting at the base of one of the dead shrubs, so it is likely this species will reestablish on-site.

All other species are assumed to be absent from or unlikely to occur on the site. Protocol-level special status plant species surveys were conducted on the site in 2001 and 2007. Numerous other surveys have been conducted on-site since 1992, and no other special status plant species have been observed.

Special-Status Animal Species

A search of relevant databases was completed to identify special-status animal species which may occur in the project site vicinity. A total of 27 special-status animal species were identified in the databases with the potential to occur in the site vicinity. Of those, 14 are considered absent from the site. One species (peregrine falcon) is considered unlikely to occur on-site. Five avian species (golden eagle, northern harrier, black swift, Vaux's swift, and tri-colored blackbird), and three bat species (pallid bat, Townsend's big-eared bat, and California mastiff bat) may occasionally migrate or forage over the site.

Two special status animal species, California tiger salamander and the burrowing owl, are known to occur on the site. Two species of raptors, white-tailed kite and loggerhead shrike, may nest on the site. These species are discussed in further detail below. Additionally, although it is considered absent from the site, the Bay checkerspot butterfly is also discussed below.

California Tiger Salamander (CTS). CTS is listed as threatened under both FESA and CESA. CTS spend most of the year aestivating in underground burrows provided by California ground squirrels or Botta's pocket gophers, in undisturbed grasslands of the central San Joaquin Valley and lower Sierra Nevada foothills. There, they feed on earthworms, snails, insects, and even small mammals. On rainy nights from November to February, adult CTS migrate from subterranean refugia to breeding pools (e.g., vernal pools) to mate and lay eggs. Human made ponds are only occasionally used for reproduction if predatory fish and bullfrogs are absent, and habitats with flowing water are rarely used. After breeding and laying eggs, adult CTS usually linger at breeding pools for several days, and some individuals may stay a few weeks. During a rainy night, they migrate back to underground refugia. After larvae mature, sometime in late spring or early summer, they disperse from shrinking breeding pools and migrate up to 1.24 miles to find their own aestivation sites.

Communications Hill has been surveyed for CTS since 1992. Dr. Sam McGinnis from Hayward State University began a CTS study in the fall of 1994. Dr McGinnis captured over 200 adult CTS during this trapping study in the debris piles (which have since been removed) located near the quarry pond. CTS have consistently been found breeding in the quarry pond along the northern boundary of the site.

In 1992, CTS larvae were also found in seasonal depressions on either side of the UPRR. However, these depressions were not surveyed to ascertain if breeding was successful (e.g., juveniles survived and dispersed from the depressions). In May 1998, no seasonal ponding was detected in the UPRR right-of-way despite a 200 percent normal rainfall year. Grading associated with UPRR right-of-way for maintenance eliminated depressions that had formerly been present and apparently used by CTS. Surveys in 2001 and 2006 failed to detect CTS activity along the

UPRR. While some areas along the UPRR pool following heavy rains, these areas are not suitable to support breeding CTS due to the relative short period of time they support water.

CTS breeding within the quarry pond likely aestivate in much of the undisturbed habitats of the site. Portions of the inactive Azevedo Quarry do not support suitable aestivation habitat due to the level of past disturbance resulting in areas being void of vegetation and burrows. Areas that have been reclaimed as natural are considered suitable for aestivation. Exclusionary silt fencing was also constructed by Raisch Products (the land leased for the quarry) in 1996 or 1997 to discourage transient CTS from wandering into any portions of the quarry from the pond. However, the area immediately to the east of this fencing is not disturbed regularly and there are a number of debris piles that provide suitable aestivation habitat for CTS. It is believed that while the fencing may have discouraged CTS from aestivating within any areas of the quarry, due to the current site conditions, CTS could easily crawl around the southern terminus of the fencing into the portion of the quarry not actively disturbed. CTS would be unlikely to aestivate within the developed/ruderal areas in the southwestern portion of the site.

In summary, while breeding has occurred at times in depressions along the railroad tracks, the quarry pond is the only stable feature within the site that can provide breeding opportunities for CTS every year. CTS breeding within the quarry pond likely aestivate in much of the natural habitats of the site.

Burrowing Owl. The burrowing owl is considered a California species of special concern. This decision was based on the fact that the burrowing owl's population levels were decreasing due to habitat destruction, roadside nesting (vulnerability to human interference) and indirectly, ground squirrel poisoning.

Burrowing owls are unique, as they are the only owl that regularly lives and breeds in underground nests. In California, these birds typically occur in the Central and Imperial Valleys, primarily utilizing ground squirrel burrows (or the burrows of other animals, e.g., badgers, prairie dogs and kangaroo rats) found in grasslands, open shrub lands, deserts, and to a lesser extent, grazing and agricultural lands. Burrowing owls in this region are typically found in lower elevations, and have strong site fidelity. Pairs have been known to return to the same area year after year, and some pairs are known to utilize the same burrow as the previous year. The breeding season for the burrowing owl runs from February to August, with a peak between April and July.

Burrowing owls have been documented as occurring within the site or immediately adjacent to the site on four occasions. In 1992, a single, non-breeding owl was observed along the UPRR. In 1993, a burrow exhibiting signs of owl usage (i.e. pellets and whitewash) was found on the northeast facing slope of the site; however, an owl was not directly observed. In 2007, a single, non-breeding owl was observed immediately to the northwest of the site. This owl was found in a burrow in a grassy hillside between landscaping and the UPRR. Finally, on February 12, 2009, a single, non-breeding owl was observed on the plateau on top of Communications Hill. This owl was seeking refuge in an abandoned rubber conveyer belt that had rolled in areas creating artificial, shallow burrows. This location was surveyed again on February 20, 2009, at which time the owl was absent.

Based on the years of survey effort within the site, it is believed that the site provides foraging and refugia habitat for overwintering and transient burrowing owls. The burrows throughout the site, which are increasing in numbers, and rock piles in the quarry area provide suitable habitat for this species.

White-tailed Kite. The white-tailed kite is found in brushy grasslands and agricultural areas with low ground cover, as well as grassy foothills, marsh, riparian, woodland, and savanna. They require tall oaks, willows, or other broad-leaved deciduous trees for nesting. There is potential for kites to nest in the large trees on the site.

Loggerhead Shrike. Loggerhead shrikes are associated with grasslands and ruderal habitats. Loggerhead shrikes nest in the understory herbaceous vegetation, under dense trees and tall shrubs. There are records of breeding shrikes in areas around the site, and they may breed in the larger trees and shrubs in the study area.

Bay Checkerspot Butterfly. The bay checkerspot butterfly (BCB) was listed as a federally threatened species in 1987. Critical habitat for the BCB was designated by the USFWS in 2001, and subsequently revised in 2008. The 443-acre Communications Hill Critical Habitat Unit #6 that was originally designated in 2001 was excluded as critical habitat in 2008.

The presence of serpentine soil and patches of the BCB's larval host plant, dwarf plantain, on Communications Hill have caused suspicion that the site might be potential butterfly habitat. There have been twelve separate surveys of Communications Hill since the mid-1980s for the BCB, totaling over 80 days of effort. All of these surveys have been negative, with a possible lone exception of a transient individual observed in 1992 on a parcel that has since been developed.

In addition to this extensive survey effort over the last 25 years, from the late 1960s to the early 1990s, several biologists from Stanford University (from which the majority of research on the butterfly has come) reviewed most private and nearly all public collections of the butterfly. One of the primary goals of this effort was to discover potentially unreported locations of the butterfly and map the historical distribution of the BCB. None of these collections possessed butterflies collected from Communications Hill.

Thus, since the 1950s, when records have become available on the species, only a single transient individual has ever been recorded on Communications Hill and no evidence exists that BCB has ever reproduced on Communications Hill. This is quite notable, as the species has frequently been detected (breeding) from all its known localities with rather low survey efforts.

The overwhelming conclusion is that Communications Hill has never functioned in any known way to further the continued existence of the species. The site lacks various characteristics (e.g., suitable north slopes with dwarf plantain and nectar sources) that are critical to the survival of the species. Therefore, it has been concluded that the BCB is absent from the site.

Wildlife Movement Corridors

Wildlife movement corridors are areas where regional wildlife populations regularly and predictably move during dispersal or migration. Movement corridors in California are typically associated with valleys, rivers, and creeks supporting riparian vegetation, and ridgelines. With increasing encroachment of humans on wildlife habitats, it has become important to establish and maintain linkages, or movement corridors, for animals to be able to access locations containing different biotic resources that are essential to maintaining their life cycles.

The importance of an area as a "movement corridor" depends on the species in question and its consistent use patterns. Animal movements generally can be divided into three major behavioral categories: movements within a home range or territory, movements during migration, and movements during dispersal.

While a number of reptiles, birds, and mammals may use Communications Hill as part of their home range and dispersal movements, these movements would largely be confined to the hill itself, as it is considered an infill site and is surrounded on all sides by dense urban development. Very few animals can access and, thus, move through the property due to its lack of connectivity to more natural habitats. Thus, the site does not serve as a movement corridor and does not facilitate the movement of wildlife at a regional level.

Trees

A tree survey was completed on the site in 2009 by *Hortscience*. Of the 52 trees on the site, 51 are considered native to the San José area, although roughly half of these were planted. Twenty (20) trees are considered ordinance-sized.

4.7.3 Biological Resources Impacts

4.7.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a biological resources impact is significant if implementation of the proposed project would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; or
- Have a substantial adverse effect on any aquatic, wetland, or riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; or
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act, including, but not limited to marshes, vernal pools, or shorelines through direct removal, filling, hydrological interruption, or other means; or

- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; or
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

4.7.3.2 *Impacts to Special Status Animal Species*

California Tiger Salamander

A breeding population of CTS has been documented in the quarry pond on the site. Due to the presence of a stable breeding population in this pond, CTS are likely aestivating in much of the site's natural and reclaimed habitats in the hillsides to the west and south of the quarry pond. The quarry pond is approximately 1.53 acres in size, and the portion of the site providing suitable aestivation habitat is mostly above the quarry pond. This population is isolated from other CTS populations in the region, as Communications Hill is an infill site that is completely surrounded by development.

While the quarry was still in operation, the quarry operator constructed silt fencing to restrict access of CTS into much of the active quarry site. Since the quarry operation has largely ceased in the last few years, this fence has fallen into disrepair and does not act as a barrier to CTS as they leave the pond.

The project proposes to grade the entire site, including the quarry pond and CTS aestivation habitat. As a result, implementation of the project would result in significant impacts to CTS.

Standard Project Conditions:

California tiger salamander (CTS) is a covered species in the Santa Clara Valley Habitat Plan (HCP). The project would be required to comply with the provisions of the HCP, as described below:

- The project shall comply with the HCP to fulfill all requirements related to avoiding take of CTS, including the submittal of relevant permit applications to the appropriate agencies.

- The project shall pay all applicable development-related fees established by the HCP. These per-acre fees are calculated based on the amount of permanent and temporary impacts occurring on the site. As discussed in Section 9.4.1 of the HCP, these fees will fund mitigation to offset impacts to covered species and their habitat.

- The applicant shall comply with conditions as set forth in Chapter 6 of the HCP that would affect CTS. While no conditions apply explicitly to CTS, Condition 12 in Section 6.5 of the Habitat Plan is designed to minimize direct and indirect impacts to wetlands and ponds and requires projects to avoid and minimize impacts to such features to the maximum extent practicable. Due to constraints posed by the topography and geology of the site, avoidance of the existing quarry pond (i.e., the only CTS breeding habitat on the site) is not feasible.

Therefore, development related fees will be required to the fullest extent to offset impacts to CTS breeding and aestivation habitat on the site.

- The project sponsor and/or contractors shall submit evidence of compliance with the HCP to the City of San José prior to issuance of grading permits.

Compliance with HCP provisions would reduce impacts to CTS to a less than significant level.

Burrowing Owl

Extensive surveys for burrowing owls have been conducted on Communications Hill since 1992. During that time, non-breeding burrowing owls have been observed on or immediately adjacent to the site four times, the most recent sighting of which occurred in 2009. Breeding habitat is absent from the site, as no breeding burrowing owls have ever been documented on Communications Hill.

The site does not occur within modeled occupied habitat as shown in Fig. 5-11 of the HCP and is very infrequently used as overwintering habitat. Impacts to infrequently used grassland habitat would be less than significant.

Although impacts to burrowing owl habitat would be considered less than significant, project build-out could harm, injure, or kill non-breeding burrowing owls should they occur on the site. This would be considered a significant impact.

Standard Project Conditions:

Burrowing owl is a covered species in the Santa Clara Valley Habitat Plan (HCP). The project would be required to comply with the provisions of the HCP, as described below:

- The project shall comply with the HCP to fulfill all requirements related to avoiding take of burrowing owl, including the submittal of relevant permit applications to the appropriate agencies.
- The project shall pay all applicable development-related fees established by the HCP. These per-acre fees are calculated based on the amount of permanent and temporary impacts occurring on the site. As discussed in Section 9.4.1 of the HCP, these fees will fund mitigation to offset impacts to covered species and their habitat.
- The applicant shall comply with conditions as set forth in Chapter 6 of the HCP that would apply to burrowing owls. These measures include pre-construction surveys by a qualified biologist in all areas of suitable habitat. If the surveys locate active nests or occupied burrows within or near construction zones, a 250-foot non-disturbance buffer zone shall be established around the nest or burrow and shall remain off-limits to construction until the owl(s) have moved out of the project site.
- The project sponsor and/or contractors shall submit evidence of compliance with the HCP to the City of San José prior to issuance of grading permits.

Compliance with HCP provisions would reduce impacts to burrowing owls to a less than significant level.

Nesting Raptors: White-Tailed Kite and Loggerhead Shrike

Impacts to any migratory bird or bird of prey would be in violation of the Migratory Bird Treaty Act and California Fish and Wildlife Code. The on-site trees and large shrubs provide suitable habitat for nesting avian species, including the white-tailed kite and loggerhead shrike. The loss of habitat for migratory birds and birds of prey would not be considered significant. However, construction-related activities that result in harm, injury or death of individuals, or abandonment of an active nest would constitute a significant impact.

If a raptor or other migratory bird, regardless of its federal or state status, were to nest on or adjacent to the site prior to or during proposed construction activities during the nesting season (February 1 through August 31), such activities could result in the abandonment of active nests or direct mortality to these birds. Construction activities that adversely affect the nesting success of raptors and migratory birds or result in mortality of individual birds would be considered a significant impact.

Impact BIO-1: Construction activities could result in significant impacts to nesting raptors, including the white-tailed kite and loggerhead shrike. **(Significant Impact)**

Mitigation Measures:

MM BIO-1.1: To the maximum extent practicable, trees and large shrubs planned for removal shall be removed during the non-breeding season (September 1 through January 31). If it is not possible to avoid tree removal or other disturbances during the breeding season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey in all trees, large shrubs, or other areas of potential nesting habitat within the construction footprint and within 250 feet of the footprint, if such disturbance will occur during the breeding season. This survey shall be conducted no more than 14 days prior to the initiation of demolition/construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May through August).

MM BIO-1.2: If nesting raptors or migratory birds are detected on the site during the survey, a suitable construction-free buffer shall be established around all active nests. The precise dimension of the buffer (a minimum of 150 feet, up to a maximum of 250 feet) would be determined at that time and may vary depending on location and species. Buffers shall remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents.

Other Special Status Animal Species

As discussed previously, the project site does not provide suitable habitat for special status animal species that have the potential to occur in the project area, with the exception of those identified above. As a result, the project would not result in significant impacts to these remaining species. **(Less Than Significant Impact)**

4.7.3.2 *Impacts to Special Status Plant Species*

Hall's Bush-Mallow

Two Hall's bush-mallow shrubs were identified on the site in 2007 and 2009. The locations of the Hall's bush-mallows on the site have been disturbed by humans and are subject to ongoing anthropogenic disturbances. Given the ruderal and disturbed character of the Hall's bush-mallow locations on-site and the existence of populations that are permanently protected on County Park and Open Space Authority lands, impacts to Hall's bush-mallow on the site would be considered less than significant.

Santa Clara Valley Dudleya

The EIR for the Tuscany Hills development (2001 K&B Communications Hill Project Final Supplemental EIR) included mitigation for the loss of dudleya plants associated with the project. Three mitigation areas were established on the western slopes of the hill. The mitigation plan was implemented and monitoring occurred for 10 years.

One of the mitigation areas, a 3.4-acre area used for preserving existing dudleya plants, is located in the vicinity of the pedestrian trail proposed by the project. No fencing is currently in place to delineate the mitigation area. Prior to construction of the trail, the boundaries of the mitigation area shall be marked, and no construction shall occur within the mitigation area.

Other Special Status Plant Species

Of the 42 special status plant species potentially occurring in the region of the site, only Halls' bush-mallow has been observed on-site. All other species are assumed to be absent from or unlikely to occur on the site. Protocol-level special status plant species surveys were conducted on the site in 2001 and 2007. Numerous other surveys have been conducted on-site since 1992, and no other special status plant species have been observed. Therefore, potential impacts to regional populations of the remaining 41 species would not be significant, as none of these special status plants would be expected to occur on the site. **(Less Than Significant Impact)**

4.7.3.2 *Impacts to Sensitive Habitats*

Aquatic Habitat/Wetlands

Sensitive habitat present on the site is limited to aquatic features, including four seeps, an intermittent drainage channel, and a quarry pond. Three of the four seeps and a reach of the channel also meet the USACE's criteria for wetlands. While the quarry pond supports a breeding population of CTS, it

is a manmade feature that was constructed adjacent to the railroad tracks in association with historic quarrying operations on the site. The seeps and intermittent drainage channel all developed in reclaimed parts of the site that had previously been mined. All of the aquatic features on the site are isolated from known waters of the U.S. The project would result in permanent fill of these features, including all four seeps (approximately 0.87 acres), the quarry pond (approximately 1.53 acres), and the intermittent drainage channel (approximately 0.04 acres and 612 linear feet). In total, approximately 2.4 acres of aquatic habitat, including wetlands, would be permanently impacted.

While these features, from a purely aquatic standpoint, are of moderate to low quality, their fill constitutes a significant adverse impact.

Impact BIO-2: The project would result in the loss of 2.4 acres of aquatic habitat, including wetlands. **(Significant Impact)**

Several manmade drainage ditches and two detention basins are also present on the site. The two detention basins were constructed as part of the neighboring Tuscany Hills development and connect into the public stormwater system. Impacts to the manmade drainage ditches and detention basins are not considered significant, as they do not function as natural aquatic features, do not replace the functions and values of historic features, and were created in upland habitats to function in developed and agricultural practices.

Standard Project Conditions:

In accordance with the HCP, the project proponent shall implement avoidance, minimization, and/or compensation measures to reduce impacts to aquatic habitats, including wetlands, to a less than significant level. These measures are described below.

- *Avoidance and Minimization*. To the maximum extent feasible, the project shall avoid all on-site waters by designing the project so that it avoids the placement of fill within potential jurisdictional waters.

  If avoidance is not possible, actions should be taken to minimize impacts to aquatic habitat features. Chapter 6 of the HCP outlines conditions for avoidance and minimization of impacts to natural communities. Specifically, Condition 11 in section 6.5 of the HCP describes stream and riparian setbacks, and Condition 12 in section 6.5 of the HCP describes avoidance and minimization of direct and indirect impacts to wetlands and ponds.

  The intermittent stream channel on the site may be considered a "Category 2" stream under Condition 11 of the Habitat Plan and, as such, may be subject to the setback condition of 35 feet from the top of the stream bank for Category 2 streams.

  Avoidance and minimization of impacts to wetlands and ponds as described in Condition 12 of the HCP would apply to the seeps and quarry pond.

Due to constraints posed by the site's topography and by vehicular connection requirements between the lower and upper parts of the site, the project cannot be achieved without extensive grading (i.e.,

cut and fill) over the entire site, including all of the aquatic habitats described above. Therefore, both avoidance and minimization of impacts to these features likely is not feasible. In lieu of implementing avoidance and minimizaion, the project may instead implement the measures below.

- *Compensation*. As discussed in Section 9.4.1 of the HCP, the applicant may choose to create, manage, and monitor their own mitigation site in lieu of paying all or part of the HCP wetland mitigation fee. This option would require approval by the Implementing Entity of the HCP. The goal of this compensation effort would be to replace the lost functions and values of these features at an equal or greater value. Because the impacted features are either manmade or developed in disturbed and reclaimed parts of the site, and due to their moderate to low quality, impacts to these features should be compensated by creating or restoring aquatic and/or wetland habitat at a minimum of a 1:1 replacement-to-loss ratio.

  Restored or created aquatic features must be consistent with the conservation strategy and all other requirements of the HCP. The creation or restoration effort shall be consistent with Chapter 5 of the HCP, shall be protected by a conservation easement, and shall be funded for management and monitoring into perpetuity.

  These features may also need to be approved by the regulatory agencies (i.e., USACE, CDFW, and RWQCB) in order to satisfy their permitting requirements.

  If on-site mitigation is not feasible or cannot adequately compensate for all of the impacts, the applicant may also choose to purchase appropriate mitigation credits from a mitigation bank in the permit area that has been approved by the USFWS and CDFW and pre-approved to service the Habitat Plan.

  Impacts to the wetlands, ponds, and streams on Communications Hill that are not compensated for via in-lieu mitigation will be mitigated for via payment of a wetland fee in addition to other development fees as mandated by the HCP. As described in sections 9.4.1 and Chapter 5 of the HCP, the wetland fee will be applied towards acquiring, enhancing, restoring, and creating ponds and wetlands within the HCP Reserve System. This approach not only compensates for the loss of aquatic/wetland functions and values on the site, but it also maximizes conservation for the covered species.

  All HCP requirements as they relate to sensitive aquatic habitats shall be followed, including the submittal of relevant permit applications to the appropriate agencies and payment of required development-related fees.

Compliance with HCP provisions would reduce impacts to wetlands to a less than significant level.

Mitigation Measures:

In addition to compliance with the HCP, the project will be required to comply with all state and federal regulations related to disturbance to jurisdictional waters that are not covered by the HCP. Therefore, the applicant may be required to obtain a CWA Section 401 water quality certification

from the RWQCB for impacts to waters of the State (totaling approximately 2.4 acres) and a Section 1602 streambed alteration agreement from the CDFW for impacts to natural watercourses supporting a defined bed and bank (i.e., the intermittent drainage channel, which totals approximately 0.04 acres and 612 linear feet).

As described previously, all of the aquatic features on the site are believed to be isolated and, therefore, not requiring a Clean Water Act section 404 permit from the USACE. However, should the USACE take jurisdiction over these features, a CWA Section 404 individual permit would be necessary. As such, mitigation to satisfy the USACE would fall outside the purview of the HCP (i.e., wetland mitigation through the payment of wetland fees or in-lieu mitigation could not be completed via the HCP to satisfy any mitigation requirements by the USACE).

At the time this SEIR was prepared, the CDFW and RWQCB also do not have a mechanism to permit projects impacting jurisdictional waters in conjunction with the HCP. If they are deemed necessary, these permits must be obtained prior to initiating any ground disturbance within jurisdictional waters. Typical mitigation measures required by these agencies are provided below; however, additional or slightly different measures may be required by the agencies during the permit process to be completed at some point in the future. Implementation of all measures required by the agencies during the permit process would reduce impacts to a less than significant level.

MM BIO-2.1: *Regulatory Agency Mitigation*. If required by the pertinent regulatory agencies, the applicant shall satisfy agency mitigation requirements by compensating for aquatic impacts at a 1:1 replacement-to-loss ratio either on-site or offsite, in addition to payment of wetland fees via the HCP.

Should the applicant choose to complete its own mitigation on-site, several areas within designated open space on the site may have the potential to accommodate such mitigation. Potential opportunities for wetland/aquatic creation or restoration include, but are not limited to, as aquatic/wetland feature along the proposed water quality and detention basins, and creation of one or more aquatic/wetland features in the eastern part of the site designated as open space. These areas could offset some of the required wetland fee and/or may also satisfy a portion of the anticipated mitigation requirements by the CDFW and RWQCB.

An on-site mitigation and monitoring plan (MMP) would need to be developed to mitigate for impacts to these features. At a minimum, the MMP shall:

- Define the location of all restoration/creation activities;
- Provide evidence of a suitable water budget to support any created aquatic and riparian habitats;
- Identify the species, amount, and location of plants to be installed in the aquatic and riparian habitats;

- Identify the time of year for planting and method for supplemental watering during the establishment period;
- Identify the monitoring period. This should be not less than 5 years for aquatic restoration.
- Define success criteria that will be required for restoration efforts to be deemed a success;
- Identify adaptive management procedures that accommodate the uncertainty that comes with restoration projects. These include, but are not limited to, measures to address colonization by invasive species, unexpected lack of water, and excessive foraging of installed plants by native wildlife;
- Define management and maintenance activities (weeding of invasive plants, providing for supplemental water, repair of water delivery systems, etc.); and
- Provide for surety in funding the monitoring and ensuring that the created aquatic and riparian habitats fall within lands to be preserved and managed into perpetuity.

Any remaining mitigation required by these two agencies to satisfy the additional 1:1 replacement-to-loss ratio would need to be obtained offsite (e.g., via the purchase of credits from an approved mitigation bank).

4.7.3.2 *Impacts to Serpentine Habitat*

The HCP considers serpentine soils to be of high conservation value. Sections 3.2.4 and 3.3.5 of the HCP note that Communications Hill supports outcrops of serpentine soils and small patches of serpentine bunchgrass grassland, respectively. While the project site has historically supported serpentine habitats, much of the site has been disturbed and degraded over the last several decades as a result of quarrying activities and by reclamation efforts that imported a considerable amount of clean fill that was not serpentine in nature. Any remaining areas of the site that have not been disturbed are best characterized as annual grasslands dominated by non-native grasses and supporting a mix of native and non-native spring-flowering forbs.

The HCP explicitly notes that Communications Hill is not slated for conservation for the Bay checkerspot butterfly (BCB) nor for serpentine bunchgrass grassland. The site does not presently support BCB or other unique species that are restricted to serpentine soils (i.e., serpentine endemics). Because the serpentine habitat of the site has been severely degraded over the years due to the extensive on-site disturbances and surrounding urbanization, and because it does not support serpentine endemic species, impacts to serpentine habitat would be considered less than significant.

However, the HCP requires mitigation to reduce impacts to serpentine habitat, including payment of a serpentine fee as described in section 9.4.1 of the Plan. The project will be required to pay this fee. **(Less Than Significant Impact)**

4.7.3.2 *Impacts to Wildlife Movement Corridors*

The project site is not considered to be part of a wildlife movement corridor, although some species move within and through it. While small pockets of open space lands occur immediately adjacent to the site (i.e., Dairy Hill to the north and lands southwest of the Tuscany Hills development), when considered as a whole, the site is an urban infill area that is completely surrounded by development. Therefore, the proposed project will result in a less than significant effect on the movements of native wildlife. Non-native, urban adapted wildlife such as skunks and raccoons are located throughout the urban areas surrounding the project site. Development of the site would not have a significant impacts on the movements of urban-adapted wildlife species. **(Less Than Significant Impact)**

4.7.3.3 *Impacts to Trees*

Of the 52 trees on the site, 51 trees are considered native to the San José area, and 20 trees are considered ordinance size. It is anticipated that the project would remove all 52 existing trees from the site. The removal of native and ordinance size trees would be considered a significant impact.

Impact BIO-3: Development of the proposed project would result in the removal of 52 trees on-site, including 51 native trees and 20 ordinance size trees. **(Significant Impact)**

Mitigation Measures:

As a condition of approval, the project proponent shall implement the following measures to reduce impacts to trees from project construction to a less than significant level by requiring replacement trees for ordinance size and native trees to be removed consistent with the City's Tree Ordinance.

MM BIO-3.1: Prior to approval of a PD Permit for any phase of development on the project site, an updated tree survey, which identifies the number of ordinance size trees on the site, prepared by a certified arborist or licensed landscape architect shall be completed. In locations where preservation of existing trees is not feasible due to site constraints, relocation and replanting of significant existing trees (especially native species) shall be incorporated into the project, where feasible and appropriate, to the satisfaction of the Director of PBCE.

MM BIO-3.2: Trees to be removed as part of the project shall be replaced at the following ratios:

Table 4.7-1: Tree Replacement Requirements

Diameter of Tree to be Removed	Type of Tree to be Removed			Minimum Size of Each Replacement Tree
	Native	Non-Native	Orchard	
18 inches or greater	5:1	4:1	3:1	24-inch box
12-18 inches	3:1	2:1	None	24-inch box
Less than 12 inches	1:1	1:1	None	15-gallon container

Notes: X:X = tree replacement to tree loss ratio
Trees greater than 18-inches in diameter shall not be removed unless a Tree Removal Permit, or equivalent, has been approved for the removal of such trees.

MM BIO-3.3: The species and exact number of trees to be planted on the site shall be determined in consultation with the City Arborist and to the satisfaction of the Director of PBCE. In the event the sites do not have sufficient area to accommodate the required tree mitigation, one or both of the following measures shall be implemented at the PD Permit stage:

- The size of a 15-gallon replacement tree may be increased to 24-inch box and count as two replacement trees.
- An alternative site(s) will be identified for additional tree planting, with a priority placed on proximity to the project site. Alternative sites may include local parks or schools, or installation of trees on adjacent properties for screening purposes, to the satisfaction of the Director of PBCE.
- A donation equal to the replacement/installation cost per replacement tree will be made to Our City Forest or a similar organization for in-lieu off-site tree planting in the community. These funds will be used for tree planting and maintenance of planted trees for approximately three years. A donation receipt for off-site tree planting will be provided to the Planning Project Manager prior to issuance of a development permit.

4.7.3.4 *Compliance with Habitat Conservation Plan (HCP)*

The project site is located within the covered lands of the HCP and several provisions of the plan would pertain to this project, including compliance with conditions on covered activities as described in Chapter 6 of the HCP.

Compliance with the HCP also includes payment of development-related fees. Three development fee types would apply to this project: a land cover fee, a nitrogen deposition fee, and a wetland fee.

Land Cover Fees. The HCP breaks down the land cover fees by zone. Communications Hill is classified primarily as Fee Zone A (mostly natural lands), with smaller areas of Fee Zone B (mostly agricultural and valley floor rural residential lands) and Fee Zone C (small vacant sites). The fee amount would be calculated based on the exact acreages of resources impacted, which would be the total area that will be graded.

Nitrogen Deposition Fee. A nitrogen deposition fee will be applied to the project in the form of a fee per each new daily vehicle trip over the existing condition. The projected initial fee amount is $3.60 per new vehicle trip generated by the project.

Wetland Fee. A wetland fee would also be applied for impacts to aquatic features.

The project will be required to comply with all applicable policies in the HCP, including compliance with the conditions on covered activities and via the payment of mandatory development impact fees. Therefore, the project would not be in conflict with the HCP.

4.7.3.5 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described below, the project's impacts to biological resources would be mitigated to a less than significant level. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.7.4 Program Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating biological resources impacts resulting from planned development within the City. Future development allowed by the proposed GPA and rezoning on the site shall be conducted in

conformance with adopted City plans and policies, including those listed in *Section 4.7.1.1*, resulting in less than significant impacts to biological resources.

4.7.5 Cumulative Biological Resources Impacts

Special-Status Species and Sensitive Habitats

Other development projects may adversely affect the same plant and animal species present on the project site, including both special-status species and more common, widespread species. Cumulatively, these projects will result in some losses of individuals of common species and habitats that will not be mitigated, since these impacts are considered less than significant individually for each project, as well as impacts to sensitive habitats and special-status species that are likely to require mitigation.

As discussed above, the project would result in significant impacts to California Tiger Salamanders, Burrowing Owls, and wetlands habitat. To mitigate these impacts, the project will be required to comply with all applicable measures and fees in the HCP. The HCP identifies and preserves land that provides important habitat for endangered and threatened species, including those impacted by the project. The land preservation is both to mitigate for the environmental impacts of planned development and public infrastructure operations and maintenance activities as well as to enhance the long term viability of endangered species. By complying with the requirements of the HCP, the project's contribution to cumulative impacts to California Tiger Salamanders, Burrowing Owls, and wetlands habitat would be reduced to a less than significant level.

Nesting Birds

Due to the mitigation measures included in the project for nesting birds, and because of the regional abundance of these species, the proposed project would not have a cumulatively considerable contribution to cumulative impacts to nesting birds.

Trees

The development of the cumulative projects would result in the removal of trees. As discussed above, the project would result in the removal of up to 51 trees (including 20 ordinance-size trees) on-site. The proposed project, with the implementation of appropriate tree replacement identified in *Section 4.7.4*, would not result in a cumulatively considerable impact to trees. **(Less Than Significant Cumulative Impact)**

Indirect Impact to Sensitive Serpentine Habitats

Atmospheric nitrogen deposition is a complex process by which reactive chemical forms of nitrogen (N) – nitrogen oxides (NO_X), ammonia (NH_3), and other compounds – are deposited onto plant and soil surfaces. These forms of nitrogen can enter ecosystems and act as nitrogen fertilizer to plants.

Some nitrogen deposition is a normal part of the "nitrogen cycle" of nitrogen compounds between water, soil, and the atmosphere. Development in San José, as well as other urban and rural development in the County, is expected to increase air pollutant emissions due to an increase in

passenger and commercial vehicle trips and other new industrial and non-industrial sources, such as boilers and backup generators. Emissions from these sources are known to increase airborne reactive nitrogen compounds, of which a certain amount is converted into forms that can fall to the ground as depositional nitrogen.

Indirect impacts associated with development under the City's General Plan include the deposition of atmospheric nitrogen-containing compounds on serpentine grasslands within and outside of the City limits, mostly from air pollutant emissions associated with increased levels of traffic. Indirect impacts from nitrogen deposition associated with human activities may include decreasing habitat suitability for native plants in serpentine grasslands. This would be due to an increase in non-native grass growth in these areas, which could lead to decreasing population size and density of such native forb species as dwarf plantain, dudleya, and lessingia, and subsequent decreases in population size and density of species that depend on these species, such as the Bay checkerspot butterfly. These impacts are less likely to occur under specific grazing regimes designed to remove additional non-native grass cover.

These indirect impacts could occur in any area containing serpentine grassland or serpentine outcrop habitats. Within the City limits, this includes planned growth areas within the Urban Growth Boundary (UGB) containing lands mapped as serpentine grasslands, which occur in the North Coyote Valley Employment Lands in the Coyote Planning Area, New Edenvale Employment Lands in the Edenvale Planning Area, and within the Communications Hill Specific Plan in the South Planning Area. Outside the UGB but within the City limits, Coyote Ridge, the Santa Teresa Hills, Tulare Hill, and the hills on the west side of Coyote Valley and in the Calero Reservoir area contain a significant amount of serpentine grassland habitats, all of which could be impacted indirectly. Nitrogen deposition effects, however, are also not confined to habitats within these areas. Serpentine areas throughout the air basin, such as those along Coyote Ridge that are within the US 101 corridor, are likely to be subjected to substantial amounts of vehicular-based nitrogen deposition resulting from an increase in commuter traffic into the City due to job development.

Indirect impacts to serpentine grasslands resulting from increased nitrogen deposition from development allowed by the proposed General Plan could be substantial because of the extreme rarity and sensitivity of serpentine grassland habitats, and the number of special-status species that depend on the integrity and quality of such habitats. The proposed project would contribute to this significant cumulative impact.

Standard Project Measures: In compliance with the HCP, the project shall implement the following mitigation measure to reduce its indirect impact to sensitive serpentine habitat to a less than significant level:

- The project shall comply with the HCP and pay the applicable nitrogen deposition fee based on the number of new vehicle trips.

4.7.6 Biological Resources Conclusion

Impact BIO-1: The project shall implement the identified mitigation (MM BIO-1.1 and 1.2) to reduce impacts to nesting birds to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact BIO-2: The project shall implement the identified mitigation (MM BIO-2.1 through 2.3) to reduce impacts to wetlands to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Impact BIO-3: The project shall implement the identified mitigation (MM BIO-3.1 through 3.3) to reduce impacts to trees to a less than significant level. **(Less Than Significant Impact with Mitigation Incorporated)**

Compliance with the provisions of the HCP would ensure the project's impacts to California Tiger Salamanders and Burrowing Owls would be less than significant. Additionally, compliance with the HCP would ensure the project's contribution to cumulative nitrogen deposition impacts are less than significant.

The project would not result in other significant impacts to biological resources, such as impacts to wildlife migratory corridors. The project would not result in cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.8 GEOLOGY AND SOILS

The discussion in this section is based upon a Geologic and Geotechnical Hazards Investigation completed by *Cornerstone Earth Group* in April 2014 and the Mine Backfill Work Plan for Communications Hill prepared by SRK Consulting in April 2014. These reports are included as Appendices I-1 and I-2 to this SEIR, respectively.

4.8.1 Existing Setting

Communications Hill is a bedrock ridge that rises above the relatively flat alluvial plain of the Santa Clara Valley, a northwest-southeast trending valley within the Coast Range Geomorphic Province. The Santa Clara Valley is within the San Francisco Bay Block, which is bounded on the east by the Hayward and Calaveras faults and on the west by the San Andreas fault. The bedrock on the project site is overlain by colluvium, local landslide debris, locally residual soil, and artificial fill.

The site encompasses a northwest trending ridge and is characterized by rolling hills surrounded by flat-lying areas to the north, east and west. A substantial amount of quarrying and off hauling began in the early 1970's over much of the project site. By 1981, the quarry was extensively developed and included a significant amount of cutting in the higher elevation portions of the property. The underground Hillsdale Mercury Mine (now abandoned) was also located on-site beneath a topographic knoll in the central portion of the site. The mine was established in 1847 and actively mined until 1874, then again from 1892 to 1907, in 1915, and during WWII. Aerial photographs covering the area of the mine suggest the mining activity probably ceased in the late 1940's or early 1950's. Figure 1.0-3 shows the general location of the existing mine.

The site ranges from approximately 150 feet above mean sea level (msl) in the northern and eastern portions up to approximately 430 feet msl in the south-central portion. Slope inclinations vary considerably across the site from level to as steep as vertical where cuts have been made. The quarry covers a large portion of the northern half of the site. The quarry is characterized by highly modified, continually changing topography, dominated by steep cutslopes, graded access roads, and stockpiles of quarried and imported material. Fills were spread over the northern portion of the site sometime early in the site history to provide a flat working surface for quarry traffic and to create a runoff retention basin in the northern portion of the site.

4.8.2 Regulatory Framework

Development within the City of San José is subject to various federal, state, and local regulations aimed at reducing the potential impacts of geologic and seismic hazards to people, property, and the environment. As described in Section 4.9 *Hydrology and Water Quality*, erosion control is regulated by the federal Clean Water Act, State of California Porter-Cologne Water Quality Act, NPDES permit program, and City policies (6-29 and 8-14).

The California Alquist-Priolo Earthquake Fault Zoning Act requires the State Geologist to establish regulatory zones (known as Earthquake Fault Zones) around the surface traces of active faults and to issue appropriate maps. Local agencies must regulate the construction of buildings used for human occupancy in these zones.

The California Building Code (in Title 24, California Code of Regulations) serves as the basis for the design and construction of buildings in the state. Currently, the 2007 California Building Code contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, the strength of the ground, and distance to seismic sources.

4.8.2.1 *City of San José Policies*

Title 24 of the San José Municipal Code includes the 2007 California Building, Plumbing, Mechanical, Electrical, Existing Building, and Historical Building Codes. Requirements for building safety and earthquake hazard reduction are also addressed in Chapter 17.40 (Dangerous Buildings) and Chapter 17.10 (Geologic Hazards Regulations) of the Municipal Code. Requirements for grading, excavation, and erosion control are included in Chapter 17.10 (Building Code, Part 6 Excavation and Grading). In accordance with the Municipal Code, the Director of Public Works must issue a Certificate of Geologic Hazard Clearance prior to the issuance of grading and building permits within defined geologic hazard zones, including State Seismic Hazard Zones for Liquefaction.

4.8.2.2 *Envision San José 2040 General Plan*

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating geology and soils impacts resulting from planned development within the City. All future development addressed by this SEIR for the project site will be subject to the geology and soils policies listed in the City's 2040 General Plan, including the following listed below.

SOIL AND LANDSLIDE HAZARDS
Policy ES-4.9: Permit development only in those areas where potential danger to the health, safety, and welfare of persons in that area can be mitigated to an acceptable level.
Policy EC-4.1: Design and build all new or remodeled habitable structures in accordance with the most recent California Building Code and municipal code requirements as amended and adopted by the City of San José, including provisions for expansive soil, and grading and storm water controls.
Policy EC-4.2: Approve development in areas subject to soils and geologic hazards, including unengineered fill and weak soils and landslide-prone areas, only when the severity of hazards have been evaluated and if shown to be required, appropriate mitigation measures are provided. New development proposed within areas of geologic hazards shall not be endangered by, nor contribute to, the hazardous conditions on the site or on adjoining properties. The City of San José Geologist will review and approve geotechnical and geological investigation reports for projects within these areas as part of the project approval process.
Policy EC-4.7: Consistent with the San José Geologic Hazard Ordinance, prepare geotechnical and geological investigation reports for projects in areas of known concern to address the implications of irrigated landscaping to slope stability and to determine if hazards can be adequately mitigated.
EROSION IMPACTS [ALSO SEE POLICY EC-4.1 ABOVE]
Policy EC-4.5: Ensure that any development activity that requires grading does not impact adjacent properties, local creeks and storm drainage systems by designing and building the site to drain properly and minimize erosion. An Erosion Control Plan is required for all private development projects that have a soil disturbance of one acre or more, are adjacent to a creek/river, and/or are located in hillside areas. Erosion

Control Plans are also required for any grading occurring between October 15 and April 15.
SEISMIC HAZARDS
Policy EC-3.1: Design all new or remodeled habitable structures in accordance with the most recent California Building Code and California Fire Code as amended locally and adopted by the City of San José, including provisions regarding lateral forces.

4.8.3 Existing Conditions on the Site

The geotechnical analysis on the site included a site survey, subsurface exploration, including borings and test pits, and laboratory testing of samples collected. Findings are described below.

4.8.3.1 *Soils*

Alluvium. The low-lying areas in the northern and eastern sides of the site within the quarry area are underlain by Holocene and Pleistocene alluvium. The material can be characterized generally as stiff to very stiff, silty to sandy clay with some interbedded layers of clayey sand. Borings encountered varying thicknesses of alluvium ranging from 10 feet to 37 or more feet. The alluvium is underlain by Franciscan Complex bedrock and it is locally overlain by colluvium near the base of slopes and/or artificial fill in the nearly level portions of the site.

Colluvium. Colluvium is present on slopes, in the swales, and at the base of slopes on the site. The colluvium shows evidence of active soil creep on the steeper slopes. The colluvium varies in thickness; on moderate to steep slopes (i.e. 3:1 to 2:1 horizontal to vertical) it is generally less than three feet thick, but where slopes become more gentle (especially near the base of slopes) the colluvium thickness is generally between 6.5 and 12 feet thick. The colluvium encountered in borings and test pits consisted of soft to very stiff silty clay with minor amounts of sand and gravel and cobbles derived from the surrounding hillsides. Deep erosion rills exist locally on moderate to steep slopes where colluvium mantels the bedrock.

Landslide Deposits. Several landslide deposits have been mapped on the site. These landslides appear to consist of shallow slope and soil flows restricted to thick accumulations of colluvium within swales or flow failure of local soils underlain by Franciscan bedrock.

Artificial Fill. During site reconnaissance, areas were noted where undocumented fills associated with the quarry operations were present. The fills are primarily due to previous quarrying activity (borrowing and redistributing, some importing), but some fills on the higher elevations of the site are partly from mass grading operations completed for the Tuscany Hills development. The majority of the fills contain varying proportions of bedrock material and surficial deposits but vary considerably in terms of composition. All the fills at the site likely vary in composition and thickness and have unknown densities.

Expansive Soils

Expansive soils and bedrock are located on the site. Expansive soils can undergo significant volume change with changes in moisture content. In general, expansive soils shrink and harden when dried and swell and soften when wetted. Such changes can cause distress to building foundations and structures, slabs on grade, pavements, and other surface improvements.

Expansive soils are also generally a major contributing factor to soil creep on slopes. Swales with accumulated colluvial soils are common on the flanks of Communications Hill. Some colluvium-filled swales show signs of creep. Such movement is generally slow and gradual and is generally the result of seasonal expansion and contraction of the upper few feet of soil under the influence of gravity. Though not a substantial geologic hazard, this condition could be a nuisance to proposed development where slow displacement of surficial soil could impact site development located on or at the base of slopes.

Compressible Soils

Subsurface materials at the site are expected to have widely varying compressibility. Bedrock materials generally have low compressibility. Colluvium generally possesses low to moderate compressibility. A map of Cooper-Clark and Associates (1974) indicates there is a low to moderate potential for encountering compressible soil within alluvium surrounding Communications Hill. Structural fill can have variable compressibility depending on its thickness and how the fill is constructed. Quarry materials will have a quite variable, and possibly very high, compressibility.

Near surface, compressible, saturated clays are present in some areas of the site, mainly in the colluvium-filled ravines and swales. These compressible soils are of concern in the design of fill slopes. The alluvium in the lower part of the site is stiff to very stiff and is considered to have low compressibility characteristics under the anticipated loads of future development.

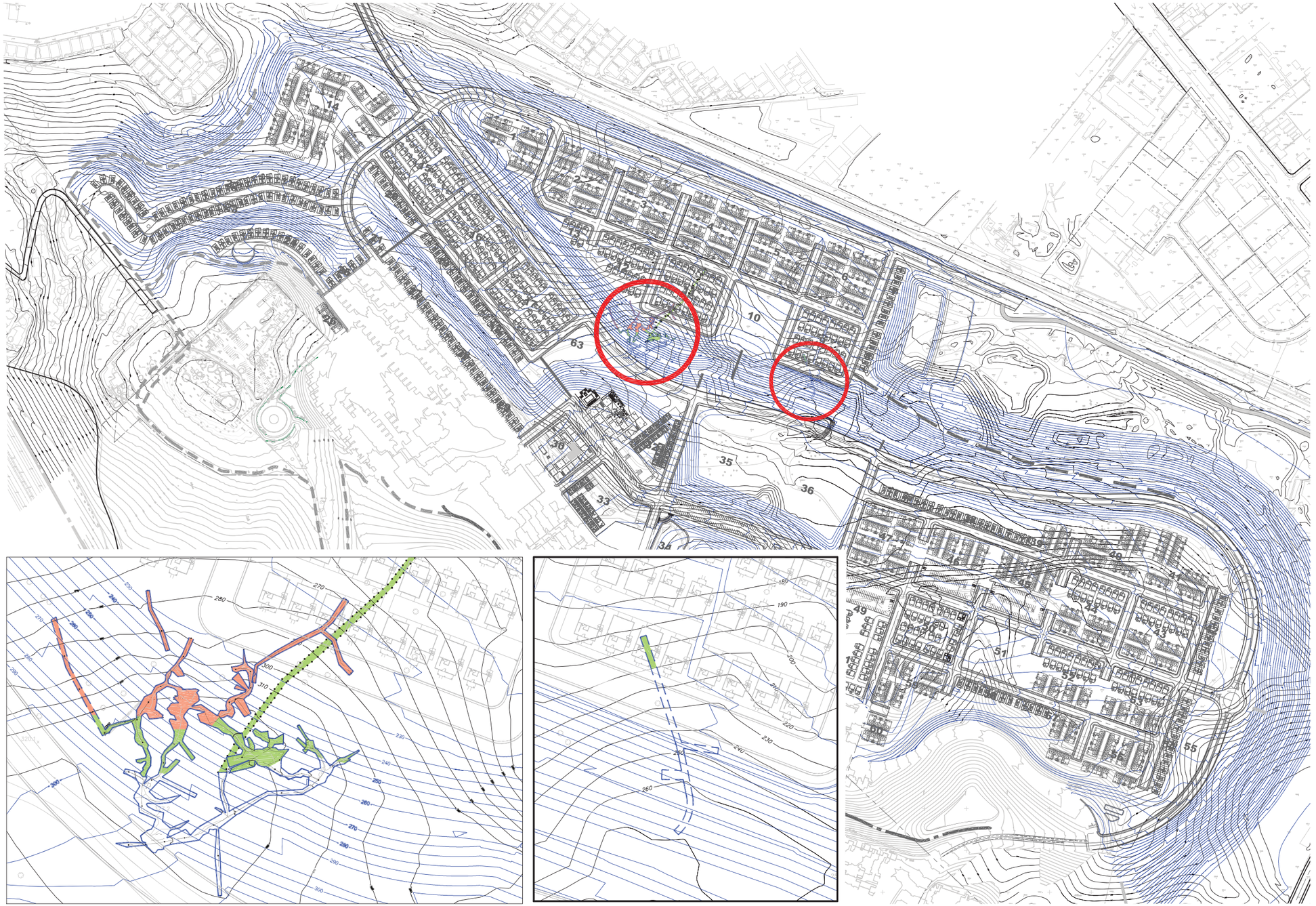
4.8.3.2 *Hillsdale Mercury Mine*

A geophysical investigation of the approximately six-acre Hillsdale Mercury Mine was completed by NORCAL Geophysical, Inc. in 2007. A more recent mine subsidence analysis by Vector Engineering was prepared in 2009. NORCAL indicated the tunnels that comprise the mine occur in two different levels and three of the tunnels daylight on the slope in the northern portion of the mine area. Based on electrical resistivity profiling (ERP), multi-channel analysis of surface waves (MASW), and ground penetrating radar (GPR), NORCAL provided support in mapping the extent of tunnels associated with the mine. The subsidence analysis by Vector Engineering consisted of observations of the mine tunnels, subsurface profiling, stability analysis based on estimated material properties, and boundary conditions for the mine site.

In 2009, HMH Engineering completed underground mapping and surveying of the historic mine workings. This information is the most up-to-date survey data available for the historic workings and are shown in plan view in Appendix I-2. The survey work was completed using traditional surveying methods. Three portals were accessed. Vector indicated that no ventilation rises could be

LEGEND

- FINISH GRADE CONTOUR (PROVIDED BY HMH, NOV 2013)
- 2008 EXISTING GRADE CONTOUR
- MINE SHAFT FLOOR
- MINE SHAFT - BASED ON MINE TOPO OBTAINED BY HMH, OCT. 08 2008
- MINE SHAFT - BASED ON TUNNEL EXPLORATION BY OTHERS, APRIL 2014
  NOTE: LOCATION IS APPROXIMATE. NO FIELD SURVEYS WERE CONDUCTED FOR THIS MINE.
- MINE SHAFT - APPROXIMATE LOCATION BASED ON 1943 HILLSDALE MERCURY MINE RECORD DRAWING. LOCATION HAS NOT BEEN VERIFIED ON FIELD.
- MINE SHAFT TO BE REMOVED BY GRADING
- MINE SHAFT TO BE REMOVED BY GEOTECHNICAL OVER-EXCAVATION
- MINE SHAFT TO REMAIN



20 0 10 20

GRAPHIC SCALE
1 INCH = 20 FEET

TOPOGRAPHIC MINE LOCATION

FIGURE 4.8-1

identified and postulated that two collapsed drifts within the claystone may have originally led to ventilation rises. Such rises could not be verified in the field, but they may have been infilled on purpose or naturally.

Based on previous mine mapping, an additional portal and tunnel were located and characterized by McCloskey Consultants in April 2014. This area, located south of the main mine workings, is shown on Figure 4.8-1 and described in detail in Appendix I-2.

4.8.3.3 *Seismicity*

The project site is located within the seismically active San Francisco Bay region that has been subjected to recurring large earthquakes. In 2008, the Working Group on California Earthquake Probabilities released a new earthquake forecast for the State of California called the Uniform California Earthquake Rupture Forecast (UCERF). The UCERF has determined the overall probability of a magnitude 6.7 or greater earthquake in the Greater Bay Area from 2007 to 2036 is 63 percent.

The major active faults that could impact the project area include the San Andreas fault, located approximately 10.5 miles southwest, the Hayward fault, located approximately 6 miles northeast, the Monte Vista-Shannon fault, located approximately 4.5 miles southwest, and the Calaveras fault, located approximately nine miles northeast of the site. The San Andreas fault produced the 7.1 magnitude 1989 Loma Prieta earthquake and the Calaveras fault produced the 1984 magnitude 6.2 Morgan Hill earthquake. It can be expected that earthquakes could produce strong ground shaking at the project site during the lifetime of the structures built there.

According to the Santa Clara County *Fault Rupture Hazard Zones* map, the project site is not located within a fault rupture hazard zone.[35]

Liquefaction

The project site is not located within a liquefaction hazard zone.[36] Because the alluvium encountered in borings on the site consisted either of stiff clays or very dense clayey sands overlying bedrock and because the historically high water table is 40 feet or deeper, there is a low potential for liquefaction.

Lateral Spreading

Lateral spreading typically occurs as horizontal displacement of relatively flat-lying alluvial material toward an open or "free" face such as an open body of water, channel, or excavation. Generally in soils, this movement is due to failure along a weak plane and is associated with earthquake-induced liquefaction. A significant factor for lateral spreading to occur is the presence of loose, shallow, saturated sands.

[35] Santa Clara County. *Santa Clara County Geologic Hazard Zones, Fault Rupture Hazard Zones Map*. Sheet 37. February 26, 2002.
[36] Santa Clara County. *Santa Clara County Geologic Hazard Zones, Liquefaction Hazard Zones Map*. Sheet 37. June 2004.

Whereas local "free" faces associated with existing detention basins are present on the site, the subsurface conditions indicate sufficiently stiff soil conditions that would tend to resist lateral spreading. Therefore, the potential for lateral spreading on the site is considered to be low.

Seismic Settlement

Strong earthquake shaking can cause non-uniform compaction of soil strata, resulting in settlement of near-surface soils. Factors that affect this hazard include soil composition and consistency, the magnitude of loading on native soils, such as from fills and structures, and any other changes in thickness or consistency abruptly over short distances. Because the site is underlain by shallow bedrock, stiff clays, or very dense sand, and because all proposed fills will be compacted to standard of practice compaction requirements, the probability of differential seismic compaction at the site is considered low.

4.8.3.4 *Groundwater*

Groundwater on the site has been recorded at a depth 23 feet below ground surface. Based on historic groundwater data, it is expected that groundwater levels on the site would range from 30 to 50 feet below current site grades.

No significant water courses are known to exist at the site, but perched water and localized seasonal springs occur on the moderately inclined slopes at various locations. During site reconnaissance of the Hillsdale Mercury Mine, a pond with standing water was located at the lowest, southern end of the mine. The main mine shaft (now collapsed) at the northern end of the mine seeps water as well. In addition, during mass grading for the adjacent Tuscany Hills development, groundwater seepage was encountered. Areas of localized groundwater seepage were also observed during site reconnaissance.

Fluctuations in groundwater levels occur due to many factors including seasonal fluctuation, underground drainage patterns, and regional fluctuations. It is anticipated that perched water and water seepage would be encountered in swale areas at the site during mass grading, primarily at the bedrock/colluvium contacts but also possibly at contacts between different bedrock types.

4.8.3.5 *Landsliding and Slope Stability*

Based on surface reconnaissance, research of published and unpublished geologic maps and reports, and a review of aerial photographs, no significant landslides are present on Communications Hill that could impact the proposed development. One moderate-sized landslide is present on a north facing slope about 600 feet northwest of the former Hillsdale Mine. In addition, a very small landslide is located behind the retaining walls for the VTA Caltrain Track Widening Project.

The existing slopes on Communications Hill are considered to have a low to moderate susceptibility for landsliding.

4.8.4 Geology and Soils Impacts

4.8.2.1 *Thresholds of Significance*

For the purposes of this SEIR, a geology and soils impact is considered significant if the project would:

- Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:
  - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42);
  - Strong seismic ground shaking;
  - Seismic-related ground failure, including liquefaction; or
  - Landslides.
- Result in substantial soil erosion or the loss of topsoil;
- Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse;
- Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property; or
- 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 project does not propose septic tanks or alternative wastewater disposal systems. Therefore, that threshold is not discussed further.

4.8.2.2 *On-Site Geologic Impacts*

Landsliding and Slope Stability

The proposed grading on the site includes several areas of cut and fill slopes with maximum cuts of 105 to 110 feet and maximum fills of up to 80 feet. Most graded slopes are planned at a 2:1 ratio (horizontal to vertical), resulting in maximum cut and fill slope heights ranging to 150 to 160 feet. Several slopes would transition from cut to fill.

The stability of a slope is influenced by many factors, including, but not limited to, the geologic structure, composition, inclination, and height of a slope. Additional factors include groundwater, rainfall, and irrigation. In geotechnical engineering, "stability" is expressed as a ratio of resisting moments and forces divided by driving moments and forces termed the factor of safety. Factors of safety can be calculated for static and seismic conditions.

A slope stability analysis was completed for the proposed project (refer to Appendix I-1), following relevant California Geological Survey (CGS) guidelines. Based on current standards of practice, the minimum allowable factor of safety with respect to slope stability is generally 1.5 for static conditions and 1.0 for seismic conditions. A pseudo-static factor of safety of 1.0 typically implies "movement" of the slope mass and does not necessarily result in complete slope failure. For the purposes of this SEIR, consistent with CGS guidelines, if seismic stability factors of safety meet or exceeded 1.0, it is assumed that yielding or movement will not occur on the proposed slopes.

Nine cross sections of slopes proposed in various locations on the site were analyzed for slope stability. The analysis indicated that factors of safety with respect to slope movement under static loading conditions are above 1.5, and thus would be considered acceptable under the CGS guidelines. However, under seismic loading conditions, the factor of safety was estimated to range from 0.8 to 0.9, which is below the minimum acceptable value of 1.0 and implies movement of the slide mass. Therefore, the slope configurations do not meet the acceptable safety factor criteria established in relevant California Geological Survey guidelines.

Impact GEO-1: Slope configurations on the site do not meet the minimum safety factor established by the California Geological Survey. **(Significant Impact)**

Soils

Expansive Soils. As discussed previously, highly expansive soils and bedrock are present on the site. Fluctuations in the volumes of soils and bedrock on the site could result in significant structural damage due to settlement. However, potential impacts from the presence of expansive soils and bedrock would be reduced to a less than significant level by the use of standard engineering techniques proposed as part of the project. Off-site improvements are mostly on or adjacent to existing roadways. As plans for these improvements are developed, specific geotechnical recommendations for slopes, retaining walls, foundations, and underground utilities shall be developed.

Compressible Soils. The potential for compressibility in soils on the site ranges from low to very high. Compression of soils on the site could result in significant structural damage to future development due to settlement.

Artificial Fill. Numerous areas on the site contain artificial fill that has been placed with varying degrees of compactive effort. The artificial fill on the site could be weak and subject to compression, which could result in significant structural damage to future development due to settlement.

Impact GEO-2: Portions of the proposed project would be located on unstable soils, including compressible soils and artificial fill. **(Significant Impact)**

Groundwater

Shallow groundwater was observed seeping from surface springs on the site. Additionally, similar spring areas were discovered in the northern portion of the site during previous development. The presence of shallow groundwater on the site could lead to wet and unstable subgrade, difficulty achieving compaction, and adverse impacts on slope stability.

Impact GEO-3: The presence of shallow groundwater on the site could lead to significant geologic impacts resulting from development on unstable geologic units or soils. **(Significant Impact)**

Mitigation Measures (Impacts GEO-1 through GEO-3):

MM GEO-1.1, 2.1, and 3.1: The project proponent shall have a qualified geotechnical professional complete a design-level geotechnical investigation to address the geologic hazards identified on the site. The investigation shall be consistent with the guidelines published by the State of California (CDMG Special Publication 117) and the Southern California Earthquake Center (SCEC report). The investigation shall identify the specific design features that will be required for the future development on-site, including site preparation, compaction, trench excavations, foundation and subgrade design, drainage, and pavement design. Field exploration shall concentrate on obtaining engineering parameters of the site soils for determining site specific bearing capacity, settlement, and liquefaction potential. The geotechnical investigation shall be reviewed and approved by the City Geologist prior to issuance of a grading permit or Public Works Clearance.

Examples of measures to be included in the design-level geotechnical investigation include the following:

Slope Stability:

- The maximum inclination of cut and fill slopes shall be 2:1 (horizontal to vertical) unless retained by a retaining wall.
- For cut slopes in weak serpentinite or claystone, slopes higher than 40 feet inclined at 2:1 will require geogrid-reinforced fills. For cut slopes in stronger serpentinite, slopes higher than 50 feet inclined at 2:1 will require geogrid-reinforced fills.
- In general, fill slopes greater than 40 feet in height will require either flattening the slope to 2.5:1 or reinforcing the fill with geogrid.
- Benches shall be shown on the grading plans and shall be at least six feet wide and spaced at a maximum of 30 feet in vertical height.
- Every effort shall be made to reduce cut/fill transitions occurring in the slopes. These areas will require remedial grading.

- "V" ditches or "J" ditches shall be placed along the benches and the tops of the slopes to intercept surface water.
- Irrigation of the slope areas shall be kept to a minimum. Subdrains may be necessary to remove excess surface and subsurface water.
- Grading plans shall show locations of keyways, subdrains, and colluvium and fill removals. Grading plan details shall include geogrid type, strength, vertical spacing, and length, subdrain details, and keying and benching details.

Expansive Soils:

- Structures located on relatively flat building pads shall be founded on post-tensioned mat foundations.
- Structures located on slopes shall be designed on pier and grade beam foundation systems.
- Reuse of claystone and colluvium on the site shall be limited to deeper fill areas and not at the outer edges of new engineered fill slopes.

Compressible Soils:

- Quarry stockpiles and soils disturbed or loosened by quarry operations shall be excavated and recompacted.
- During mass grading, colluvium soils shall be removed down to bedrock.

Artificial Fill:

- Artificial fill shall be removed and replaced with engineered fill.

Shallow Groundwater:

- Routine earthwork procedures such as chemical treatment, drying/mixing soil before compaction, and installing subdrains shall be implemented during project construction.

MM GEO-1.2 and 2.2: The proposed project shall be constructed in accordance with the standard engineering practices in the Uniform Building Code.

MM GEO-1.3, and 2.3: Prior to issuance of a Public Works Clearance and prior to commencement of excavation and construction, the project proponent shall obtain a grading permit. The grading permit requires implementation of standard grading and best management practices that would prevent substantial erosion and siltation during development of the site.

Seismicity and Seismic Hazards

As previously discussed, the project site is not located within a fault rupture hazard zone. The site is located in a seismically active region, and, therefore, strong ground shaking would be expected during the lifetime of the proposed project. While no active faults are known to cross the site, ground shaking on the site could damage future residences and other structures, and threaten the welfare of future residents. The potential for liquefaction, lateral spreading, and seismic settlement on the site are considered low.

Standard Project Conditions: The project shall implement the following standard measure to reduce seismic and seismic-related impacts by designing and constructing the project in conformance with the current California Building Code:

- The project shall be designed and constructed in conformance with the current California Building Code to avoid or minimize potential damage from seismic shaking and seismic-related hazards, including liquefaction, on the site.

The proposed project, in conformance with the current California Building Code, would not result in significant seismic and seismic-related impacts. **(Less than Significant Impact)**

Hillsdale Mercury Mine

As previously described, there is an abandoned mine located in the central/northern portion of the site. The analysis completed for the project (Appendix I-2) was based on estimates of the potential failure area in a given drift, the estimated rock mass properties, and estimates of the height a potential collapse can propagate before it would be arrested due to bulking of the caved material. It was determined that the probability of experiencing subsidence at the ground surface due to drift collapse is very low. If collapse were to occur, massive blocks of the ore body would fill the opening void and arrest progressive collapse. It is also extremely unlikely that sinkholes would occur at ground surface.

A small portion of the proposed Communications Hill Boulevard and residential development would be constructed over areas where mine workings have been identified. Although it has been determined that the probability of collapse is very low, the project proposes to remove the majority of the mines by grading and over-excavating as described in the Mine Backfill Work Plan prepared for the project (Appendix I-2). The project includes the filling of mine workings as described below, prior to site grading or over-excavating to ensure worker and equipment safety during initial site grading.

Access to the mines can be achieved through either underground or surface access, depending upon depth of the workings and proposed site grading. Access from underground would require stabilization of some of the mine workings and additional safety precautions for workers, including ventilation and other measures described below. The following steps will be completed prior to site grading in proximity to the mine workings:

1. While extensive mine characterization has occurred on the site (underground mapping, excavation work to identify portal locations, directional drilling, and geophysical analysis), supplemental surveys of mine workings will be completed for areas not previously confirmed. The limits of the underground workings would be identified along the existing ground surface accounting for depth below final grade surface.
2. All identified mine portals (openings) will be removed by over-excavation to access the open workings. Collapsed materials will be removed until a stable opening is reached and ventilation will be provided as necessary. The limit of excavation will be assessed by a qualified geotechnical engineer in the field to determine sufficient rock about the portal.
3. Concrete plug containment systems (bulkheads) will be installed at portals, as necessary. The purpose of using bulkheads is to contain the flowable fill in areas of the underground mine that will not be removed by grading or manual collapsing, as well as to contain the flowable fill so that the entire height of the workings will be filled;
4. Mine workings will be accessed via vertical boreholes drilled from the surface. Reverse Circulation (RC) drilling will be used to drill boreholes on a regular spacing to intercept the known workings.
5. The boreholes that intercept the workings will be used to place the flowable backfill into the underground workings. Borehole lights and cameras will be used to monitor the placement of flow.
6. The flow material used within the mine workings will depend upon depth of the openings. Deeper openings will require more solid materials; however, it is anticipated that the majority of the openings will ultimately be graded out and therefore, will be comprised of an engineered foam and sand material. The foam is the main transport medium and entrains the sand allowing it to flow into the mine voids in a self-leveling manner. The foam is 100% biodegradable and dissipates after a short time, leaving the void filled with sand.
7. The filling of deeper mine openings could require some de-watering and would utilize SCC flowable material (self-compacting concrete) for additional structural strength.
8. The site would then be graded along with the naturally occurring ground surface into the proposed slopes and elevations shown in the grading plan (refer to Figure 2.0-6). Much of the flowable material would be excavated out during this process; however, concrete-based fill will remain within the deeper mine shafts.

In summary, the analyses completed have determined that in the event that the proposed backfilling does not fill 100% of the voids, there is an extremely low probability that a collapse would occur such that a subsidence feature would reach the surface. If such an event were to occur, the magnitude of associated surface subsidence would be essentially undetectable. The proposed backfilling would ensure the stability of the slopes in the vicinity of the mines. For this reason, impacts to future residents would be less than significant.

However, during backfilling activities, operating construction equipment above and adjacent to non-backfilled mine workings may result in destabilization, possible disruption of underground access, and unearthing of unmapped mine workings. Health and safety risks can occur when working underground and above shallow voids. Therefore, potential health and safety impacts to construction workers during grading and backfilling of the mine workings would be significant.

Impact GEO-4: The grading and backfilling of the mines could result in impacts associated with construction worker safety during remediation. **(Significant Impact)**

Mitigation Measures:

MM GEO-4.1: Quality Assurance and Construction Quality Control (QA/QC) shall be provided consistent with a Construction Quality Assurance (CQA) Plan for remediation of the abandoned mercury mine. The intent of the CQA Plan is to provide independent third party verification and testing to demonstrate that the Contractor has met its obligations in the supply and installation of earthwork (soils) materials according to the design and project specifications and Backfill Work Plan.

Specific components of the QA/QC process are included in Appendix I-2 and will generally consist of the following:

- Assessment of the underground working stability;
- Assessing the quality and competence of the rock material encountered during over-excavation to confirm the over-excavation depth required.
- Addressing on-site queries and making recommendations as to any revisions to the original remediation plan;
- Working with on-site surveyors to develop initial estimate of backfill quantities;
- Issuing daily reports;
- Documentation of remediation quantities; and
- Issuing as-built report.

MM GEO-4.2: To avoid potential incidents, all MSHA and OSHA regulations and guidelines shall be followed for mine remediation. A qualified safety officer shall prepare a Worker Safety Program for the project and shall oversee all aspects of the program. The program will include at least the following measures:

- Proper Personnel Protection Equipment (PPE) shall be worn while working in the mine. PPE should include as a minimum:
    - Steel-toe boots;
    - Hard hat;
    - Safety glasses;
    - Gloves;
    - Battery lamp light; and
    - Hearing protection when mechanical equipment is working underground.
- Due to the abandoned nature of the workings, the following additional safety equipment shall be provided to the crew working underground:
    - Gas monitor;

- Fresh ventilation air;
- Pry bars for loose ground; and
- Communication radio.

- Injury by ground fall is the single largest hazard underground, especially because ground conditions have not been verified for some time. Before any area can be accessed a crew member trained in ground control measures, tunnel conditions will be determined and any loose ground will be removed before other members of the crew have access to the area. It is important that crew members do not wander off into uninspected/secured areas.

Erosion

No evidence of unusual erosion was encountered at the site. No significant unprotected watercourses are present in the undeveloped part of the site. Cooper-Clark & Associates classified the potential for erosion on Communications Hill as generally high, although materials underlying the hillsides have various erosion potentials. Serpentinite and silicacarbonate rock have low erosion potential, the sandstone and shale unit has moderate erosion potential, and colluvium, alluvium, and artificial fill have high erosion potential.

Grading, alteration of runoff, and the increase of impervious surface area will increase the potential for erosion locally. Refer to *Section 4.9 Hydrology and Water Quality* for a discussion of the project's impacts on runoff and water quality, as well as the measures included to mitigate drainage and water quality impacts. With implementation of these measures, the project would not result in a significant erosion impact. **(Less Than Significant Impact)**

4.8.2.3 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described below, the project's geology and soils impacts would be mitigated to a less than significant level. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.8.3 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating geology and soils impacts resulting from planned development within the City. Future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed in *Section 4.8.2.2*, resulting in less than significant impacts to geology and soils.

4.8.4 Cumulative Impacts

The project's geology and soils impacts are specific to the project site and would not result in cumulative impacts with other projects. For this reason, cumulative geology and soils impacts are less than significant. **(Less Than Significant Cumulative Impact)**

4.8.5 Conclusion

Impact GEO-1: The implementation of mitigation measures MM GEO-1.1, 1.2, and 1.3, which requires a design-level geotechnical investigation that includes measures to address geologic hazards on the site, as well as construction in accordance with the Uniform Building Code, would reduce geology and soils impacts associated with slope configurations to a less than significant level. **(Less than Significant Impact with Mitigation)**

Impact GEO-2: The implementation of mitigation measures MM GEO-2.1, 2.2, and 2.3, which are identical to MM GEO-1.1, 1.2, and 1.3, would reduce geology and soils impacts associated with unstable soils to a less than significant level. **(Less than Significant Impact with Mitigation)**

Impact GEO-3: The implementation of mitigation measures MM GEO-3.1, which is identical to MM GEO 1.1, would reduce geology and soils impacts associated with shallow groundwater to a less than significant level. **(Less than Significant Impact with Mitigation)**

Impact GEO-4: The implementation of mitigation measures MM GEO-4.1 and 4.2, which include measures to protect construction workers, would reduce health and safety impacts to construction workers associated with mine remediation to a less than significant level. **(Less than Significant Impact with Mitigation)**

The project would not result in other significant impacts to geology and soils, such as impacts related to rupture of known earthquake faults. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.9 HYDROLOGY AND WATER QUALITY

This section is based on a Hydrology and Water Quality Report prepared for the project by Schaaf and Wheeler in October 2013. This report is included as Appendix J.

4.9.1 Existing Setting

4.9.1.1 *Stormwater Drainage*

The Communications Hill Specific Plan area is divided into two major watersheds: the Guadalupe River and Coyote Creek.

Guadalupe River

The western side of Communications Hill, which includes the existing Tuscany Hills development, is divided into separate drainage areas which drain to separate storm drain systems, all of which drain to the Guadalupe River watershed.

The northwestern end of the hill drains downhill toward the Mill Pond area and the mobile home park drainage system. The Mill Pond area is served by a City of San José stormdrain system connection to the Canoas Garden Avenue stormdrain which discharges to the Guadalupe River upstream of Malone Road. The Dairy Hill development northwest of the site includes a detention basin to reduce peak flows into the Mill Pond and Canoas Garden drainage system to mitigate for potential induced flood effects. The Dairy Hill detention system was designed to mitigate for additional later development within the project site based on the specific plan.

The northern portion of the existing Tuscany Hills development is served by a drainage system that discharges to Canoas Creek at Helzer Road. Canoas Creek is a tributary to the Guadalupe River and discharges to the river near Almaden Expressway. The southern portion of the existing Tuscany Hills development is served by a drainage system at Communications Hill Boulevard which drains to Hillsdale Avenue. The Hillsdale Avenue system drains to the west to Canoas Creek. The drainage system includes an existing detention basin on the north side of Communications Hill Boulevard. The existing detention basin was designed to mitigate for increased peak flows to the Hillsdale drainage system and Canoas Creek for the existing Tuscany Hills development and the proposed development on the project site.

Runoff from the hillside area below Communications Hill Boulevard collects on the north side of Hillsdale Avenue and either evaporates by evapotransporation or infiltrates into the ground.

Coyote Creek

The eastern side of the project site from the hill crest down to the UPRR tracks is historically part of the Coyote Creek watershed. The area has been extensively disturbed by quarry operations on the site. The existing quarry site area does not have a low flow connection to a drainage system. The site runoff collects in a number of low lying areas within the quarry site and an existing approximately three-acre retention basin area, which is also referred to as the quarry pond. After the

quarry operations were ended, the past and current asphalt and concrete recycling operations have drained to a ditch system which connects to the retention basin.

There are City of San José stormdrain systems which serve the area east of the project site. The Lewis Road/Southside Drive system drains the area southeast of the site, including the development east of Old Hillsdale Avenue and portions of the development south of Hillsdale Avenue east of Communications Hill Boulevard. An existing mobile home park south of Monterey Road at Umbarger Road drains to a parallel stormdrain system in Umbarger Road.

4.9.1.2 *Groundwater*

The average depth to groundwater in the project area ranges from 10 to 20 feet. Fluctuations in the level of groundwater may occur due to variations in rainfall and local underground drainage patterns.

4.9.1.3 *Seiche and Tsunami Hazards*

A seiche is the oscillation of water in an enclosed body of water. A tsunami is a sea wave generated by an earthquake, landslide, or other large displacement of water in the ocean. The project site is not located near large water bodies such as the San Francisco Bay and is not subject to inundation by seiche, tsunami, or mudflow.[37, 38]

4.9.2 Regulatory Framework

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality. Regulations set forth by the U.S. Environmental Protection Agency (US EPA) and the State Water Resources Control Board (SWRCB) have been developed to fulfill the requirements of this legislation. Federal and state regulations are implemented at the regional level by water quality control boards, which for the San José area is the San Francisco Bay Regional Water Quality Control Board (RWQCB).

The Santa Clara Valley Water District (SCVWD) operates as the flood control agency for Santa Clara County. The SCVWD is also responsible for creek restoration, pollution prevention efforts, and groundwater recharge. The SCVWD's Water Resources Protection Ordinance and Well Ordinance require permits for all well construction and destruction work, most exploratory borings for groundwater exploration, and projects occurring on any SCVWD property or easement. The SCVWD along with 15 cities, the county, businesses, streamside property owners, and environmental interests set up the Water Resources Protection Collaborative, which has prepared and adopted *Guidelines and Standards for Land Use Near Streams*.

[37] A seiche is an oscillation of the surface of a lake or landlocked sea varying in period from a few minutes to several hours. Seiches are often generated by small oscillations from earthquakes.
[38] Association of Bay Area Governments. *ABAG Geographic Information Systems, Hazard Maps, Tsunami Evacuation Planning Map for San Francisco Bay Area*. Accessed January 16, 2014. http://www.abag.ca.gov/bayarea/eqmaps/tsunami

4.9.2.1 *National Flood Insurance Program*

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP) to provide subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of this program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify flood hazard zones within a community.
The type of flooding most likely to affect the Plan area is storm-related flooding of creeks and storm drains. According to the FEMA maps, Communications Hill is not within a 100-year flood hazard area.[39] A segment of Curtner Avenue that would be enhanced as part of the project's off-site roadway improvements is located in Flood Zone AH. These areas could experience flood depths of one to three feet during a 100-year storm event.

4.9.2.2 *Dam Safety*

Dam failure is the uncontrolled release of impounded water from behind a dam that can result from a variety of causes such as flooding, earthquakes, blockages, landslides, and human error. Dams are under the jurisdiction of the California Division of Safety of Dams (DSOD) and/or the Federal Energy Regulatory Commission (FERC). In accordance with the State Dam Safety Act, detailed evacuation procedures have been prepared for each dam and are contained in San José's Dam Failure Evacuation Plan. As part of its comprehensive dam safety program, the SCVWD routinely monitors and studies the condition of each of its 10 dams. The SCVWD also has its own Emergency Operations Center and a response team that inspects dams after significant earthquakes. These regulatory inspection programs reduce the potential for dam failure.

Dam Failure Hazard

Although Communications Hill is not located within a dam failure inundation zone, the roadway segments included in the proposed off-site improvements are located within a dam failure inundation zone for Anderson Dam, which was built in 1950 and is owned and operated by the SCVWD. The SCVWD has received preliminary findings of a seismic study of Anderson Dam that show the material at the base of the dam could liquefy in a 7.25 magnitude earthquake on the nearby Calaveras Fault. The SCVWD is currently studying what corrective measures are needed to ensure public safety and has imposed storage restrictions at Anderson Dam. The SCVWD is planning to complete design and construction of a seismic retrofit by the end of 2018. The operating restriction will remain in place until the retrofit project is completed.[40]

It should be noted that the majority of San José is within a dam failure inundation zone for one or more reservoirs. The mapping of inundation zones assumes complete failure of the dams with a full reservoir that is completely emptied. The actual extent and depth of inundation in the event of a failure would depend on the volume of storage in the reservoir at the time of failure. Since 1950, there have been nine dam failures in the state.

[39] The "100-year flood" (also referred to as the "one percent flood or "base flood") is the flow of water that has a one percent chance of being equaled or exceeded in any given year.
[40] Santa Clara Valley Water District. "Anderson Dam and Reservoir". 2011. Accessed July 21, 2011. <http://www.valleywater.org/Services/AndersonDamAndReservoir.aspx>.

4.9.2.3 *Section 303(d) of the Federal Clean Water Act*

Section 303(d) of the federal Clean Water Act requires states to develop a list of water bodies that do not meet water quality standards, establish priority rankings for waters on the list, and develop action plans, called Total Maximum Daily Loads (TMDL), to improve water quality. The U.S. EPA lists Guadalupe River as an impaired water body for mercury, diazinon, and trash.[41]

The TMDL for mercury in the Guadalupe River watershed was adopted by the RWQCB and incorporated into the Basin Plan in 2008.[42] The main source of mercury in the watershed is identified as the New Almaden Mining District, which was the largest-producing mercury mine in North America. Other sources include atmospheric deposition from global and local sources, soil erosion from areas not known to contain mines, urban stormwater runoff, seepage from landfills, and Central Valley Project water inputs to Calero Reservoir. The improper disposal of mercury-containing products is considered the most likely controllable source of mercury in urban runoff in the Bay Area.[43] Household products that may contain mercury include thermometers, batteries, fluorescent lamps, pharmaceuticals, sensors, thermostats, detergents, and cleaners.

Diazinon is being addressed by a US EPA-approved TMDL for pesticide-related toxicity in all urban creeks, while a TMDL for trash has not been completed. The primary source of diazinon and trash has been identified as urban runoff. As of December 2004, it became unlawful to sell non-agricultural products containing diazinon in the U.S.[44]

4.9.2.4 *National Pollutant Discharge Elimination System*

The U.S. EPA's regulations, as called for under Section 402 of the Clean Water Act, also include the National Pollutant Discharge Elimination System (NPDES) permit program, which controls sources that discharge pollutants into waters of the United States (e.g., streams, lakes, bays, etc.).

NPDES General Construction Permit

The SWRCB has implemented a NPDES General Permit for Discharges of Stormwater Associated with Construction Activity ("General Construction Permit") for the State of California. Projects that would disturb more than one acre of land are required to submit a Notice of Intent and a Storm Water Pollution Prevention Plan (SWPPP) to the SWRCB to apply for coverage under the NPDES General Construction Permit. Construction activities subject to this permit include grading, clearing, or any activities that cause ground disturbance such as stockpiling or excavation. The SWPPP will include the site-specific best management practices (BMPs) to control erosion and sedimentation and maintain water quality during the construction phase, as well as BMPs to be implemented during the post-construction period.

[41] State Water Resources Control Board. "Impaired Water Bodies." 2011. Accessed January 20, 2012. http://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2010.shtml
[42] State Water Resources Control Board. "Guadalupe River Watershed Mercury TMDL." 2011. Accessed January 20, 2012. http://www.swrcb.ca.gov/rwqcb2/water_issues/programs/TMDLs/guadaluperivermercurytmdl.shtml
[43] Santa Clara Valley Urban Runoff Pollution Prevention Program. Mercury Pollution Prevention Plan. March 2002. Available at: http://www.scvurppp-w2k.com/pdfs/0102/SC34.03_c9c_Merc_Pol_Prevention_plan.pdf.
[44] U.S. EPA. "Diazinon: Phase Out of all Residential Uses of the Insecticide." Last updated September 6, 2011. Accessed January 20, 2012. http://www.epa.gov/opp00001/factsheets/chemicals/diazinon-factsheet.htm.

NPDES Industrial Discharge Permits

To minimize the impact of stormwater discharges from industrial facilities, the NPDES program includes an industrial stormwater permitting component that covers 29 industrial sectors. Facilities requiring permit coverage include heavy manufacturing, landfills, metal scrap yards, wastewater treatment works, airports, food processors, public warehousing and storage, and light manufacturing such as printers. The NPDES Industrial Discharge permit requires the implementation of management measures that will achieve the performance standard of best available technology economically achievable and best conventional pollutant control technology. The NPDES Industrial Discharge permit also requires the development of a SWPPP and a monitoring plan.

Municipal Regional Stormwater NPDES Permit

In 2009, the San Francisco Bay RWQCB issued a regional NPDES permit to all Bay Area municipalities and flood control agencies that discharge directly to San Francisco Bay.[45] The current permit is based in large part on an earlier joint NPDES Permit to Santa Clara County, the Santa Clara Valley Water District, and 13 of the cities within the County, including San José. This collection of municipalities and agencies formed an association called the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) to meet NPDES permit regulations by sharing resources and collaborating on projects of mutual benefit.

Under Provision C.3 of the Municipal Regional Stormwater NPDES Permit, development projects that create, add, or replace 10,000 square feet or more of impervious surface area are required to control post-development stormwater runoff through source control, site design, and treatment control BMPs. For special land use categories (e.g., auto services facilities, gas stations, restaurants, parking lots), the impervious surface threshold is 5,000 square feet. Most regulated projects have to treat stormwater runoff using Low Impact Development (LID) measures such as bio-treatment, harvesting and re-use of runoff on-site, infiltration, and evapotranspiration.[46]

The Municipal Regional Stormwater NPDES Permit also includes a Trash Load Reduction provision (C.10) that requires annual clean up of 32 creek Trash Hot Spots and establishes phased goals to dramatically reduce trash loads from the storm sewer system. Provision C.11. establishes "Mercury Controls", including the requirement for permittees to promote, facilitate, and/or participate in collection and recycling of mercury containing devices and equipment at the consumer level (e.g., thermometers, thermostats, switches, bulbs).

Hydromodification

In addition to water quality controls, the Regional Municipal NPDES permit has controls for hydromodification, which is defined as a change in stormwater runoff characteristics of a watershed resulting from changes in land use conditions (i.e., urbanization). For example, increasing impervious surfaces on a development site could increase peak runoff flow, volume, and duration,

[45] The current permit is effective for five years, until October 14, 2014.

[46] LID is a stormwater management strategy designed to manage runoff as close to its source as possible by incorporating a variety of natural and built features to reduce the rate of surface water runoff, filter pollutants out of runoff, facilitate infiltration of water into the ground surface, and reuse the water on-site.

which can cause increased erosion, silt pollutant generation, or other impacts to beneficial uses of local rivers, streams, and creeks.

4.9.2.5 *Basin Plan*

The San Francisco Bay RWQCB regulates water quality in the Bay Area in accordance with the Water Quality Control Plan or "Basin Plan". The Basin Plan lists the beneficial uses which the RWQCB has identified for local aquifers, streams, marshes, rivers, and the Bay, as well as the water quality objectives, and criteria that must be met to protect these uses. The RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for "non-point sources" such as the urban runoff discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

4.9.2.6 *City of San José Policies*

Post-Construction Urban Runoff Management Policy 6-29

The City of San José's Post-Construction Urban Runoff Management Policy 6-29 was adopted to establish an implementation framework, consistent with Provision C.3 of the Municipal Regional Stormwater NPDES Permit. This policy requires all new and redevelopment projects to implement post-construction BMPs and Treatment Control Measures (TCMs). This policy also established specific design standards for post-construction TCMs for projects that create, add, or replace 10,000 square feet or more of impervious surfaces. Policy 6-29 will need to be updated as changes to the City's NPDES Municipal Permit requirements are made.

Post-Construction Hydromodification Management Policy 8-14

The City of San José's Post-Construction Hydromodification Management Policy 8-14 establishes an implementation framework for projects that are subject to hydromodification controls in the Municipal Regional Stormwater NPDES permit. Policy 8-14 may change based on future permit requirements.

Floodplain Ordinance – Municipal Code 17.08

City of San José Municipal Code 17.08 covers the requirements for building in various types of flood zones. This includes requirements for elevation, fill, flood passage, flood-proofing, maximum flow velocities, and utility placement for development within a floodplain, based on land use type.

Storm Drain Standards Improvement Process

The City does not have a level of service measure for the storm drainage system. It is City policy, however, for stormwater mains to have a minimum pipe size of 15 inches and to convey a storm event that has a 10 percent chance of occurring each year (often referred to as the "ten-year storm"). Up until about 15 years ago, the City's design standard for storm drains was the three-year storm event, which conformed to locally accepted standards at the time. As a result, it is estimated that only five percent of the City's storm drain system meet the current 10-year storm event standard. Storm pump stations (or lift stations) must be designed to accommodate the 100-year storm event.

The standard design life of the mechanical and electrical components of a storm pump station is 10-25 years, although the average age of the City's pump stations is over 36 years. Due to undersized pipes and/or inefficient pump station performance, localized flooding and ponding are fairly common occurrences throughout San José.

In general, rehabilitation of the existing system is implemented through the City's Storm Sewer Capital Improvement Program (CIP). Current financing mechanisms for the Storm Sewer CIP include developer impact fees and storm sewer use fees. Developer impact fees are assessed on new projects to allow connection to the system. These "one-time" fees can only be used for capital improvements. Storm sewer use fees are assessed annually on properties and can be used for capital improvements or operation and maintenance activities.

The Storm Sewer CIP mainly addresses minor neighborhood drainage problems. To determine system-wide infrastructure needs to accommodate planned development based on regulatory requirements and design standards, the City is initiating a Storm Master Plan effort. The Storm Master Plan will include an implementation/priority plan and a financing plan. In the interim, the City will evaluate system capacity as future development is proposed. Although private developers are required to design the on-site storm drain system to meet the 10-year standard, they are only required to upgrade the downstream system if existing capacity is lacking *and* a capital improvement project has not been identified and/or funded for the area within the project timeline.

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating hydrology and water quality impacts resulting from planned development within the City. All future development addressed by this SEIR for the project site will be subject to the hydrology and water quality policies listed in the City's 2040 General Plan, including the following listed below.

FLOODING AND STORMWATER RUNOFF

Policy EC-5.1: The City shall require evaluation of flood hazards prior to approval of development projects within a Federal Emergency Management Agency (FEMA) designated floodplain. Review new development and substantial improvements to existing structures to ensure it is designed to provide protection from flooding with a one percent annual chance of occurrence, commonly referred to as the "100-year" flood or whatever designated benchmark FEMA may adopt in the future. New development should also provide protection for less frequent flood events when required by the State.

Policy EC-5.7: Allow new urban development only when mitigation measures are incorporated into the project design to ensure that new urban runoff does not increase flood risks elsewhere.

Policy IN-3.7: Design new projects to minimize potential damage due to storm waters and flooding to the site and other properties.

GROUNDWATER RECHARGE AND GROUNDWATER QUALITY

Policy ER-8.4: Assess the potential for surface water and groundwater contamination and require appropriate preventative measures when new development is proposed in areas where storm runoff will be directed into creeks upstream from groundwater recharge facilities.

Policy MS-20.3: Protect groundwater as a water supply source through flood protection measures and the use of stormwater infiltration practices that protect groundwater quality. In the event percolation facilities are modified for infrastructure projects, replacement percolation capacity will be provided.

SURFACE WATER QUALITY

Policy ER-8.1: Manage stormwater runoff in compliance with the City's Post-Construction Urban Runoff (6-29) and Hydromodification Management (8-14) Policies.

Policy ER-8.3: Ensure that private development in San José includes adequate measures to treat stormwater runoff.

4.9.3 Hydrology and Water Quality Impacts

4.9.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a hydrology and water quality impact is significant if implementation of the proposed project would:

- Violate any water quality standards or waste discharge requirements;
- Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
- Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- Otherwise substantially degrade water quality;
- 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;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- 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; or
- Result in inundation by seiche, tsunami, or mudflow.

4.9.3.2 *Hydrology and Drainage Impacts*

As an urban development with impervious surfaces and vehicular and pedestrian uses, the project may contribute both point and non-point source pollution to receiving waters. Both point sources and nonpoint sources of water pollution are usually discharged via separate storm drains to "waters of the U.S." and are thus regulated under the CWA. The State Board and Regional Board policies regulating any receiving waters would also apply since development of the project would potentially impact the quality of runoff and other pollutant loadings to receiving waters. Water quality impacts may also be significantly greater during the region's rainy season (i.e., winter through spring).

Non-point source pollution is generally handled via stormwater BMPs, including site design BMPs, source control BMPs, and treatment control BMPs. The proposed project would include water quality basins and bioretention treatment basin systems to treat the urban runoff from the impervious surfaces to conform to the treatment and HMP requirements of the RWQCB regional municipal NPDES permit.

As discussed in *Section 4.6 Hazards and Hazardous Materials*, two of the four springs and the quarry pond on the project site were sampled as part of the project site investigations. One of the springs emanates from the former main haul line portal for the mine, and the other spring is in an area north of the mine and it drains to the quarry pond. The only constituents identified at potentially elevated concentrations in the samples collected were arsenic, thallium, and nickel. The project would include a bioretention basin for stormwater treatment which would also treat dry weather nuisance flow including irrigation runoff and subdrain drainage. Available data for bioretention basins have documented over 90 percent removal of dissolved metals. Therefore, the proposed treatment system would be effective in reducing the potential discharge of metals to a less than significant level.

Water samples collected from the quarry pond identified methyl mercury concentrations that exceed the RWQCB ESLs for surface water screening levels for estuary habitats. The construction of the proposed project would fill the existing quarry pond and prevent future production of methyl mercury which could be discharged to the groundwater or surface waters. The proposed project detention basins would not include a permanent pool which may create anerobic conditions. The detention basins would drain within 48 hours to meet HMP requirements. Therefore, the project would have a less than significant impact for a release or discharge of methyl mercury. **(Less Than Significant Impact)**

Drainage Patterns

Currently, 11.6 acres of the Tuscany Hills development drains to the Mill Pond and Canoas Garden drainage system, which discharges to the Guadalupe River. This is achieved through a lifting station and force main. The proposed project would remove the lifting station and force main, and this area would now drain to the Hillsdale Avenue drainage system, restoring the natural drainage pattern of the area. As a result, the project would increase by 11.6 acres the drainage area which drains to the Hillsdale Avenue drainage system. This system discharges to Canoas Creek, a tributary of the Guadalupe River. The diversion of the drainage area to Canoas Creek may increase the potential erosion in the unlined stream channel. However, the overall drainage to the Guadalupe River watershed would remain unchanged.

The project includes a modification of the existing Tuscany Hill detention basin to increase the basin capacity and modify the outlet structure to utilize the detention basin as an HMP basin for the project's drainage area. The proposed basin would detain the runoff from the larger developed project drainage area to meet the HMP flow duration requirements for the existing condition runoff for the smaller existing drainage area. Therefore, the project would have a less than significant impact on erosion and scour in Canoas Creek or Guadalupe River.

The portion of the project site on the north side of Communications Hill is located within the Coyote Creek watershed. The project would not divert additional drainage area from the Guadalupe River watershed. However, the operation of the quarry on the project site has modified the historic drainage conditions for the area. Prior to construction of the UPRR and the quarry, runoff from the north side of the hill drained overland toward Coyote Creek to the north. The railroad originally included cross culverts to allow drainage under the railroad. During the quarry operation period, drainage from the quarry area was retained on-site, and the cross culverts were abandoned or blocked. Therefore, the historic flow pattern with drainage to Coyote Creek was interrupted. The project would restore the drainage discharge from the site and therefore would increase the runoff to Coyote Creek which may slightly increase erosion or siltation in the Creek, but not at significant levels.

Stormwater Drainage Capacity

As described above, the project would modify the existing Tuscany Hill detention basin to detain runoff from the larger drainage area to control the peak flow from the project site to be less than the undeveloped runoff condition for the 10-year and 100-year design storms for both the Tuscany Hills development and the project development.

The project would include construction of a new stormdrain connection from the site to the Umbarger Road stormdrain system to restore the drainage connection from the site to Coyote Creek. Due to piping conflicts at Monterey Road, the project would also connect approximately 32 acres of other property to the Umbarger system. These other properties currently drain to the Lewis Road stormdrain system, which also drains to Coyote Creek parallel to the Umbarger system. The overall effect of the project would be to increase the drainage area of the Umbarger system by 262 acres (230 acres from the project site and 32 acres from off-site areas). The project would increase the effective drainage area for Coyote Creek by 230 acres. Based on the an analysis of stormwater drainage capacity completed for the project (refer to Appendix J), the Umbarger stormdrain system has available capacity for the proposed project for the City of San Jose 10-year design storm.

In addition, two-dimensional surface flow modeling for the Umbarger system study area shows that the increased flows from the proposed project would increase the estimated flood depths at one node in the modeled Umbarger system. The estimated depth of flooding would increase by less than one inch. The depth of flooding in the street would be less than six inches deep under project conditions. The estimated change in the surface flow depths would not increase the potential flood risk and would not be considered significant.

The restoration of the drainage connection to Coyote Creek for the project is estimated to increase the existing condition peak discharge from the project area into Coyote Creek by approximately 40 cubic feet per second (cfs), and would increase the local contribution to the peak 100-year flood flow

in Coyote Creek by approximately 10 cfs. However, the City of San Jose, Caltrans, SCVWD, Corp of Engineers and FEMA have all included the project site in the Coyote Creek watershed. A comparison of the project contribution to Coyote Creek with a similar undeveloped project site has shown that the peak flow rate to Coyote Creek would decrease with the project due to the on-site detention basins, and the potential contribution to the peak flow in Coyote Creek would be 4.7 cfs, or approximately 0.03 percent of the peak flow in the creek. The potential effects of the increased runoff from the project site would be considered less than significant. **(Less Than Significant Impact)**

4.9.2.3 *Groundwater*

The proposed potable water supply for the project would be obtained from the San Jose Water Company (SJWC). SJWC has three different sources of water: groundwater pumped from over 100 wells in the Santa Clara Groundwater Basin, imported surface water from the SCVWD, and local mountain surface water collected from the Santa Cruz Mountains. The proposed project would not draw directly upon localized groundwater for its water supply.

The project would increase the impervious surface area of the site which could decrease infiltration of precipitation. However, the project site is unlikely to contribute significantly to groundwater recharge due to the existing geology. Communications Hill is a major bedrock outcrop within the valley floor, with very shallow surface soils and low infiltration rates. The flat land areas created by the quarry operations are predominantly exposed bedrock overlain by shallow to deep layers of quarry spoil materials. The existing on-site retention pond which collects some natural spring water has poor infiltration and holds water throughout the summer. As a result, the project would reduce the potential for groundwater recharge by a negligible amount.

Stormwater discharges from the proposed project site could potentially degrade groundwater quality. Groundwater, particularly in the so-called Shallow Aquifer of the Santa Clara Basin is particularly vulnerable to contamination from surface land uses. However, the SCVWD does not currently use the Shallow Aquifer for water supply purposes. Being within the recharge area even of the principal (i.e., lower) portion of the Santa Clara Basin, contaminants from the project could impact groundwater quality of the principal aquifer of the Santa Clara Basin. Standard project conditions, which are described below, would ensure that impacts to groundwater are less than significant. **(Less Than Significant Impact)**

4.9.2.4 *Water Quality*

Construction Impacts

Construction of the proposed project, including grading and excavation activities, may result in temporary impacts to surface water quality. Grading and construction activities would affect the water quality of stormwater surface runoff. Construction of the proposed buildings and paving of streets, trails, and parking lots would also result in a disturbance to the underlying soils, thereby increasing the potential for sedimentation and erosion. When disturbance to underlying soils occurs, the surface runoff that flows across the site may contain sediments that are ultimately discharged into the storm drainage system.

Standard Project Conditions: The project shall comply with the NPDES Permit and City Policy requirements to reduce construction impacts to surface water quality as a condition of approval as follows:

- Prior to commencement of any clearing, grading, or excavation, the project shall comply with the State Water Resources Control Board's NPDES General Construction Activities Permit, to the satisfaction of the Director of Public Works, as follows: 1) the project proponent shall develop, implement, and maintain a Storm Water Pollution Prevention Plan (SWPPP) to control the discharge of stormwater pollutants including sediments associated with construction activities; and 2) the project proponent shall file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB).

- The project proponent shall incorporate Best Management Practices (BMPs) to control the discharge of stormwater pollutants including sediments associated with construction activities. Examples of BMPs are contained in the publication *Blueprint for a Clean Bay*. Prior to the issuance of a grading permit, the project proponent may be required to submit an Erosion Control Plan to the City Project Engineer. The Erosion Control Plan may include BMPs as specified in the Association of Bay Area Governments (AGAG) *Manual of Standard Erosion & Sediment Control Measures* for reducing impacts on the City's storm drainage system from construction activities.

- The project proponent shall comply with the City of San José Grading Ordinance, including erosion and dust control during site preparation and with the City of San José Zoning Ordinance requirements for keeping adjacent streets free of dirt and mud during construction. The following specific BMPs shall be implemented to prevent stormwater pollution and minimize sedimentation during construction: 1) restriction of grading to the dry season (April 15 through October 15) or meet City requirements for grading during the rainy season; 2) utilize on-site sediment control BMPs to retain sediment on the site; 3) utilize stabilized construction entrances and/or wash racks; 4) implement damp street sweeping; 5) provide temporary cover of disturbed surfaces to help control erosion during construction; and 6) provide permanent cover to stabilize the disturbed surfaces after construction has been completed.

The proposed project, in conformance with the NPDES Permit and City policy requirements as described above, would not result in a significant impact to water quality during construction. **(Less Than Significant Impact)**

Post-Construction Water Quality Impacts

Overall, the amount of impervious surfaces on the project site, such as buildings and paved areas, would increase with implementation of the project. The amount of pollution carried by runoff from buildings and pavement would, therefore, also increase accordingly. The proposed project would increase traffic and human activity on and around the site, generating more pollutants and increasing dust, litter, and other contaminants that would be washed into the storm drain system. The project would, therefore, increase the contaminants carried downstream in stormwater runoff from paved surfaces of the site. Stormwater from urban uses contains metals, pesticides, herbicides, and other contaminants such as oil, grease, lead, and animal waste. Runoff from future development on the site

may contain oil and grease from parked vehicles, as well as sediment and chemicals (i.e., fertilizers, pesticides, etc.) from the landscaped areas.

Standard Project Conditions: The project shall comply with the NPDES Permit and City Policy requirements to reduce post-construction impacts to surface water quality through the following standard project conditions which would apply to future Planned Development permits:

- Prior to issuance of a Planned Development permit, the project proponent shall provide details of specific BMPs, including, but not limited to, bioswales, disconnected downspouts, landscaping to reduce impervious surface area, and inlets stenciled "No Dumping – Flows to Bay" to the satisfaction of the Director of PBCE.

- The project shall comply with Provision C.3 of the NPDES Permit Number CAS612008, which provides enhanced performance standards for the management of stormwater from new development.

- The project proponent shall comply with applicable provisions of the following City policies: 1) Post-Construction Urban Runoff Management (6-29) which establishes guidelines and minimum BMPs for all projects; and 2) Post-Construction Hydromodification Management Policy (8-14) which provides for numerically sized (or hydraulically sized) treatment control measures (TCMs). BMPs/TCMs to be used for the project could include, but are not limited to, site design measures (e.g., minimize land disturbed, minimize impervious surfaces, minimum-impact streets and parking lots design, and pervious pavement), source control measures (e.g., drought tolerant landscaping and pavement sweeping), and Low Impact Development (LID) treatment systems (e.g., underground detention and infiltration system, and biotreatment basins).

The proposed project, in conformance with the NPDES Permit and City policy requirements as described above, would not result in significant reduce post-construction impacts to surface water quality. **(Less Than Significant Impact)**

4.9.2.5 *Consistency with Plans and Policies*

State Water Quality Control Board
National Pollution Discharge Elimination System Permit

The Federal Clean Water Act requires local municipalities to implement measures to control construction and post-construction pollution entering local storm drainage systems to the maximum extent practicable. To comply with the requirements of the Federal Clean Water Act, the SWRCB implemented a NPDES permit for the Santa Clara Valley. Subsequent to implementation of the permit, the San Francisco RWQCB issued a Municipal Storm Water NPDES Permit to 15 co-permittees, including the City of San José. Two programs, the Nonpoint Source Pollution Program and the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP), have been implemented under the NPDES permit to regulate construction and post-construction runoff.

Nonpoint Source Pollution Program

In 1988, the SWRCB adopted the Nonpoint Source Management Plan in an effort to control nonpoint source pollution in California. In December 1999, the Plan was updated to comply with the requirements of Section 319 of the Clean Water Act and Section 6217 of the Coastal Zone Act Reauthorization Amendment of 1990. The Nonpoint Source Management Program requires individual permits to control discharge associated with construction activities. The Nonpoint Source Program is administered by the RWQCB under the NPDES General Permit for Construction Activities.

The NPDES General Permit for Construction Activities requires the project proponent to submit a Notice of Intent (NOI) to the RWQCB and to develop a Stormwater Pollution Prevention Plan (SWPPP) to control discharge associated with construction activities.

Santa Clara Valley Urban Runoff Pollution Prevention Program

The Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP) was developed by the RWQCB to assist co-permittees in implementing the provisions of the NPDES permit. This program was also designed to fulfill the requirements of Section 304(1) of the Federal Clean Water Act, which mandated that the Environmental Protection Agency develop NPDES application requirements for stormwater runoff. The Program's Municipal NPDES storm water permit includes provisions requiring regulation of storm water discharges associated with new development and development of an area-wide watershed management strategy.

Consistency: As discussed above, the project would prepare a SWPPP and NOI to the State of California Water Resource Quality Control Board to control the discharge of stormwater pollutants including sediments associated with construction activities. The project would also comply with City of San José Post-Construction Urban Runoff Management Policy 6-29 and Post-Construction Hydromodification Management Policy 8-14 to ensure compliance with SCVURPPP and the NPDES permit. The project would implement best management practices (BMPs) to improve the quality of stormwater runoff during and post construction. For these reasons, the project is consistent with the State Water Quality Control Board NPDES Permit and above mentioned programs.

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described above,

implementation of standard project conditions would ensure hydrology and water quality impacts are less than significant. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.9.3 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating hydrology and water quality impacts resulting from planned development within the City. Future development allowed by the proposed GPA shall be in conformance with adopted City plans and policies, including those listed in *Section 4.9.2.6*, resulting in less than significant hydrology and water quality impacts.

4.9.4 Cumulative Impacts

4.9.4.1 *Cumulative Hydrology and Water Quality Impacts*

Various federal, state, and local laws and regulations have been enacted for the purpose of improving/maintaining the quality of surface waters. Such legislation and regulations include, but are not limited to, the federal Clean Water Act, California Porter-Cologne Water Quality Control Act, Basin Plan, and NPDES permit. As a direct result of such legislation and regulation, development projects are required to undertake steps to avoid, minimize, and/or mitigate flooding and water quality impacts. These steps can include: 1) modifying site designs to reduce impervious surfaces; 2) constructing on-site stormwater detention facilities; and 3) incorporating best management practices (BMPs) into the construction and post-construction phases of development. In addition, these requirements are applied to projects that seek to redevelop areas that were previously urbanized, the result of which optimally is a reduction in impervious surfaces on such sites.

In view of the applicability of laws and regulations to avoid the occurrence of significant hydrological and water quality impacts, including City policies 6-29 and 8-14, the cumulative hydrology and water quality impacts would not be significant. **(Less Than Significant Cumulative Impact)**

4.9.5 Conclusion

The proposed project would not result in significant hydrology and water quality impacts, such as violating water quality standards or waste discharge requirements, depleting groundwater supplies or interfering with groundwater recharge, altering the existing drainage pattern in a manner that results in substantial erosion or a substantial increase in runoff, exceeding the capacity of stormwater drainage systems, substantially degrading water quality, placing or exposing people and structures to flood hazards, including those associated with dam failure and inundation. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.10 UTILITIES AND SERVICE SYSTEMS

4.10.1 Existing Setting

4.10.1.1 *Regulatory Framework*

Senate Bill (SB) 610

SB 610, codified at Water Code Section 10910 et. seq., requires that certain water supply and demand information be prepared for projects which are the subject of an EIR. Water Code Section 10912 defines a project as, among other things, a proposed residential development of more than 500 dwelling units. The proposed project would construct 2,200 residential units and would be subject to SB 610.

Assembly Bill (AB) 939 and Solid Waste Diversion

AB 939 required all California counties to develop integrated waste management plans and that all municipalities divert at least 25 percent of their solid waste from landfills by January 1, 1995, and 50 percent by the year 2000. AB 939 established the California Integrated Waste Management Board to oversee recycling and waste disposal in the State, but it was abolished with the passage of SB 63 in 2009 and its duties transferred to the California Department of Resources Recycling and Recovery (CalRecycle).

The City of San Jose has exceeded its diversion requirements in recent years, diverting over 60 percent of its solid waste from landfills annually. Governor Brown has tasked CalRecycle with developing strategies to reach a 75 percent waste diversion rate statewide by 2020. Similarly, the City adopted a Zero Waste Resolution in October 2007 which set a goal of 75 percent waste diversion by 2013 and zero waste by 2022.

City of San Jose 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating utilities and service systems impacts resulting from planned development within the City. All future development addressed by this SEIR for the project site will be subject to the utilities and service systems policies listed in the City's 2040 General Plan, including the following listed below.

SANITARY SEWERS/WASTEWATER TREATMENT

Policy IN-3.1: Achieve minimum level of services:

- For sanitary sewers, achieve a minimum level of service "D" or better as described in the Sanitary Sewer Level of Service Policy and determined based on the guidelines provided in the Sewer Capacity Impact Analysis (SCIA) Guidelines.
- For storm drainage, to minimize flooding on public streets and to minimize the potential for property damage from stormwater, implement a 10-year return storm design standard throughout the City, and in compliance with all local, State and Federal regulatory requirements.

Policy IN-3.3: Meet the water supply, sanitary sewer and storm drainage level of service objectives through an orderly process of ensuring that, before development occurs, there is adequate capacity.

Coordinate with water and sewer providers to prioritize service needs for approved affordable housing projects.
Policy IN-3.5: Require development which will have the potential to reduce downstream LOS to lower than "D," or development which would be served by downstream lines already operating at a LOS lower than "D," to provide mitigation measures to improve the LOS to "D" or better, either acting independently or jointly with other developments in the same area or in coordination with the City's Sanitary Sewer Capital Improvement Program.
Policy IP-15.1: Require new development to construct and dedicate to the City all public improvements directly attributable to the site. This includes neighborhood or community parks and recreation facilities, sewer extensions, sewer laterals, street improvements, sidewalks, street lighting, fire hydrants and the like. In the implementation of the level of service policies for transportation, sanitary sewers, and neighborhood and community parks, development is required to finance improvements to nearby intersections or downstream sewer mains in which capacity would be exceeded, and dedicate land, pay an in lieu fee or finance improvements for parks and recreation needs which would result from the development.
STORM DRAINAGE SYSTEM
Policy EC-5.7: Allow new urban development only when mitigation measures are incorporated into the project design to ensure that new urban runoff does not increase flood risks elsewhere.
Policy IN-3.7: Design new projects to minimize potential damage due to storm waters and flooding to the site and other properties.
Policy IN-3.9: Require developers to prepare drainage plans that define needed drainage improvements for proposed developments per City standards.
Policy IN-3.10: Incorporate appropriate stormwater treatment measures in development projects to achieve stormwater quality and quantity standards and objectives in compliance with the City's National Pollutant Discharge Elimination System (NPDES) permit.

4.10.1.2 *Existing Conditions*

Water Service

Water service to the project area is provided by San Jose Water Company (SJWC). SJWC's water supply comes from groundwater, imported treated surface water, and local surface water. Over 50 percent of SJWC's water supply is purchased under contract from SCVWD. Approximately 154 thousand acre-feet of water was supplied to SJWC in 2010.[47] The majority of the project site is currently undeveloped and therefore, no existing water lines serve most of the site. Water is provided to neighboring developments via water mains in the major roadways surrounding the site.

Recycled (reclaimed) water service is provided to the City of San José by South Bay Water Recycling (SBWR). The City and SBWR are currently preparing a Master Plan for recycled water service in the City which includes the future extension of recycled water lines to Communications Hill.

[47] San Jose Water Company, *City of San Jose 2040 General Plan Water Supply Assessment*, June 2010.

Due to the significant elevation change, the water service system on Communications Hill is divided into pressure zones to provide proper pressure to each building. Lower areas within the CHSP area can be served by SJWC's Dow Pressure Zone which extends to a maximum elevation of 224 feet. Areas above the Dow Zone are in the Batista Pressure Zone which was created during previous development on the hill. Improvements associated with the creation of the Batista Zone included a new pump station, storage tank, and pressure system.

Wastewater Treatment/Sanitary Sewer

San Jose Water Pollution Control Plant (WPCP)

Wastewater from the City of San Jose is treated at the WPCP, located near Alviso. The WPCP is a regional wastewater treatment facility serving eight tributary sewage collection agencies and is administered and operated by the City of San Jose's Department of Environmental Services. The WPCP provides primary, secondary, and tertiary treatment of wastewater and has the capacity to treat 167 million gallons of wastewater a day. The WPCP cleans an average of 110 million gallons of wastewater per day and serves 1.4 million residents.[48]

The WPCP is currently operating under a 120 million gallon per day dry weather effluent flow constraint. This requirement is based upon the State Water Resources Control Board and the Regional Water Quality Control Board concerns over the effects of additional freshwater discharges from the Facility on the saltwater marsh habitat and pollutant loading to the Bay from the WPCP. Approximately ten percent of the plant's effluent is recycled for non-potable uses. The remainder is discharged into San Francisco Bay after treatment which removes 99 percent of impurities to comply with State regulations.

The City's level of service goal for sewage treatment is to remain within the capacity of the WPCP. The City is currently meeting this goal.

Sanitary Sewer Lines

The sanitary sewer lines in the area are owned and maintained by the City of San Jose. The City's level of service (LOS) goal for sanitary sewer lines is LOS D (refer to General Plan policy IN-3.1 above), which represents a free flow of wastewater sufficient to prevent back up problems. New development is required by existing policies to avoid or minimize impacts upon any existing or anticipated LOS E sewer lines by construction or contributing to the construction of new lines or by waiting for completion of planned sewer line improvements. Sewer lines are inspected and maintained by the Department of Transportation, and are rehabilitated or replaced by the Department of Public Works. Sewage from the project area currently discharges into existing sanitary sewer systems in Monterey Road and Hillsdale Avenue.

[48] City of San Jose, San Jose-Santa Clara Regional Wastewater Facility, http://www.sanjoseca.gov/?nid=1663.

Storm Drainage System

The City of San Jose owns and maintains municipal storm drainage facilities throughout the City. The City's level of service policy for storm drainage in the City is to minimize flooding on public streets and to minimize property damage from stormwater by implementing a 10-year return storm design standard (refer to General Plan policy IN-3.1 above). Storm drain lines are inspected and maintained by the Department of Transportation and are installed, rehabilitated, or replaced by the Department of Public Works. The project site drains into two watersheds: Coyote Creek and the Guadalupe River. Stormwater in the City ultimately drains into San Francisco Bay, as described in *Section 4.9 Hydrology and Water Quality*.

Solid Waste and Recycling Services

Santa Clara County's Integrated Waste Management Plan (IWMP) was approved by the California Integrated Waste Management Board in 1996 and has since been reviewed in 2004 and 2007.[49] According to the IWMP, the County has adequate disposal capacity beyond 2022.[50] Solid waste generated within the County is landfilled at Guadalupe Mines, Kirby Canyon, Newby Island, Zanker Road Materials Processing Facility, and Zanker Road Landfills.

Residential solid waste and recycling collection services in the project area are provided by *Green Team* (solid waste and recycling collection) and *GreenWaste Recovery* (green waste collection). Commercial solid waste and recycling (including green waste) collection services are provided by *Republic Services of Santa Clara County*. The City of San Jose has an existing contract with Newby Island Sanitary Landfill (NISL) through December 31, 2020 with the option to extend the contract as long as the landfill is open. The City has an annual disposal allocation for 395,000 tons per year. As of December 2012, NISL had approximately 5.8 million cubic yards of capacity remaining.[51].

4.10.2 Utilities and Service Systems Impacts

4.10.2.1 *Thresholds of Significance*

For the purposes of this SEIR, a utilities and service systems impact is considered significant if the project would:

- Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board;
- 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;
- Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which would cause significant environmental effects;
- Have insufficient water supplies available to serve the project from existing entitlements and resources, or require new or expanded entitlements;

[49] As stated in Section 4.10.1.1, the California Integrated Waste Management Board has been abolished and its duties transferred to CalRecycle.
[50] Santa Clara County, *Five-Year CIWMP/RAIWMP Review Report*, August 2012.
[51] King, Rick, *Personal Communication with Newby Island Sanitary Landfill General Manager*, May 14, 2013.

- Result in determination by the wastewater treatment provider which serves or may serve the project that is has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or
- Fail to comply with federal, state, or local statutes and regulations related to solid waste.

4.10.2.2 *Water Service and Supply Impacts*

The CHSP is incorporated into the City's General Plan. In accordance with SB 610, the City completed a water supply assessment (WSA) for a full build-out of the General Plan, which includes a full build-out of the CHSP. In this WSA, the City concluded that future water supplies are sufficient to meet the demand of the General Plan development.[52]

No new off-site water facilities would be required to serve the project. The project would, however, require the construction of new water mains and facilities within the boundaries of the project. These new mains and water facilities would connect to the existing water mains supplying water to Communications Hill. While the project requires connections to the existing water system, it is anticipated that the connections would occur within existing rights-of-way or within the project site and would, therefore, not result in significant environmental impacts.

A third water pressure zone would be created for Communications Hill and would be situated between the Dow Pressure Zone and Batista Pressure Zone. This zone would be either a regulated zone which reduces pressure from the Batista Pressure Zone or a gravity zone and pipeline from the Batista Storage Tank located on Batista Drive.

San Jose Water Company has sufficient water supplies available to serve the proposed project. The proposed project would not require new or expanded entitlements for water supplies. Also, while the project requires new water lines and connections to the existing water system, it is anticipated that these improvements would occur within existing right-of-way and would, therefore, not result in significant environmental impacts. **(Less Than Significant Impact)**

4.10.2.3 *Wastewater Treatment/Sanitary Sewer Impacts*

Sanitary Sewer Capacity

It is estimated that the project would generate approximately 1,557,425 gallons of sewage per day.[53] The project proposes to tie into existing sewer mains in Monterey Road and Hillsdale Avenue. Approximately 1,600 residential units, public parks, retail, and the school would connect to the 54-inch sewer main in Monterey Road, linked by 1,500 feet of new sewer main. The new sewer main would require right-of-way acquisition. The remaining 600 residential units and public park facilities would connect to the existing sewer main in Hillsdale Avenue. The southern portion of the industrial area is anticipated to discharge from the project site into the existing sewer main in Old Hillsdale

[52] City of San Jose, *Water Supply Assessment for Envision San Jose 2040 General Plan Update*, September 2010.
[53] The project's estimated sewage generation is based on the following generation rates taken from a similar project in San Jose: 194 gallons per day per residential unit and 0.75 gallons per day per square foot of commercial development. Source: Ruth & Going, *Input to the EIR for the Great Oaks Mixed Use Project Memo*, May 11, 2013.

Avenue. A portion of the proposed southern residential development may also discharge into the existing sewer main in Old Hillsdale Avenue. Sewer systems in the project area have adequate capacity to serve the proposed project. **(Less Than Significant Impact)**

San Jose Water Pollution Control Plant (WPCP)

Treatment Capacity

Based on the available daily capacity at the WPCP (38.8 million gallons per day) and the project's estimated sewage generation of 566,192 gallons per day, there is sufficient capacity to process the sewage generated by the project. Additionally, wastewater generation from the proposed project was included in the estimates for a full build out of the General Plan. Full build-out of the General Plan would result in an additional 30.8 million gallons per day of wastewater, which would still be within the WPCP's capacity. The project would not require expansion or construction of wastewater treatment facilities.

Wastewater Treatment Requirements

Wastewater generators, such as the WPCP, have a permit to discharge their wastewater. Pursuant to the federal Clean Water Act and California's Porter-Cologne Water Quality Control Act, the RWQCB regulates wastewater discharges to surface waters, such as the San Francisco Bay, through the NPDES program. The RWQCB also requires waste discharge requirements (WDRs) for some discharges in addition to those subject to NPDES permits, such as wastewater recycled for reuse. Wastewater permits contain specific requirements that limit the pollutants in discharges. As required by the RWQCB, the facility monitors its wastewater to ensure that it meets all requirements. The RWQCB routinely inspects treatment facilities to ensure permit requirements are met. Sewage from the project would be treated at the WPCP in accordance with their existing NPDES permit and WDRs. It is not anticipated that the sewage generated by the project would exceed wastewater treatment requirements of the RWQCB. **(Less Than Significant Impact)**

4.10.2.4 *Storm Drainage System Impacts*

As discussed in *Section 4.9 Hydrology and Water Quality*, the proposed project would result in an increase in impervious surfaces and thereby increase peak flow rates. With the project's conformance with applicable General Plan policies, along with implementation of the standard project conditions identified in *Section 4.9 Hydrology and Water Quality*, the project would not result in significant drainage and storm drain system impacts. **(Less Than Significant Impact)**

4.10.2.5 *Solid Waste*

It is estimated that the proposed project would generate 14,327 tons of solid waste per year.[54] Given the NISL's existing capacity, the City's contract with NISL, the existing amount of waste the City disposes at the landfill, and the amount of waste the project is estimated to generate, there is sufficient capacity within the City's contract with NISL to serve the proposed project.

According to the City's *Green Vision 2010 Annual Report*, the City has achieved a 74 percent overall waste diversion rate and the nation's leading multi-family diversion rate of 80 percent.[55] The city is in compliance with AB 939's 50 percent waste diversion requirements and is close to achieving the 75 percent waste diversion goal laid out by Governor Brown and the City's Zero Waste Resolution. Solid waste produced by the proposed project would be similar in character to waste produced now, so similar diversion rates should be expected. With implementation of the existing programs, state regulations, General Plan policies, and the City's Zero Waste Strategic Plan, the proposed project would not result in significant impacts to solid waste disposal. **(Less Than Significant Impact)**

4.10.2.6 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described above, implementation of standard project conditions would ensure utilities and service systems impacts are less than significant. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

[54] The project's solid waste generation was estimated based on the following rates: 27.6 pounds per week per single family unit, 29.9 pounds per week per multi-family unit, and 0.046 pounds per square foot per day for commercial space. Source: Cal Recycle, *Waste Characterization, Estimated Solid Waste Generation and Disposal Rates*, December 21, 2010, http://www.calrecycle.ca.gov/WasteChar/WasteGenRates/.
[55] City of San Jose, *Green Vision 2010 Annual Report*, 2010, http://www.sanjoseca.gov/DocumentCenter/View/9219.

4.10.3 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating utilities and service systems impacts resulting from planned development within the City. Future development allowed by the proposed GPA shall be in conformance with adopted City plans and policies, including those listed in *Section 4.10.1.2*, resulting in less than significant utilities and service systems impacts.

4.10.4 Cumulative Impacts

4.10.4.1 *Cumulative Impacts to Storm Drainage*

The City of San José owns and maintains the existing public storm drainage system throughout the City's Urban Service Area. The underground drainage system is composed of storm lines which range in size from 12 inches to 144 inches in diameter. Flows from individual sites and surface streets are conveyed by gravity flow to storm laterals and storm mains. In most cases drainage to the Guadalupe River, Coyote Creek, or other tributary streams is by gravity flow through the system or by direct outflow, but in some areas water is pumped from storm mains into the stream system.

The cumulative projects analyzed in this section include both redevelopment and/or intensification of existing areas or new development on largely vacant sites (e.g., the project site), as well as a number of smaller infill project sites. While intensification of already developed areas will likely result in minimal increases in stormwater amounts which can be largely accommodated by the existing storm drainage network, development in new areas will require the construction of new storm drainage systems.

As discussed previously, the development of the project, in compliance with City policies 6-29 and 8-14, would not result in significant storm drainage impacts. All of the cumulative projects would be subject to the City's policies and requirements to minimize stormwater runoff, consistent with policies implemented by the Regional Water Quality Control Board. As a result of compliance with these policies, the cumulative projects would not result in significant impacts upon the nearby stream systems or from exceeding the capacity of downstream storm drainage systems.

Development of the cumulative projects, consistent with RWQCB and City policies to minimize stormwater runoff, would not result in a significant cumulative impact on the City's storm drain system.

4.10.4.2 *Cumulative Impacts to Sanitary Sewer/Wastewater Treatment Facilities*

The City's sanitary sewer/wastewater treatment system has two distinct components: 1) a network of sewer mains/pipes that conveys effluent from its source to a treatment plant, and 2) the water pollution control plant that treats the effluent, including a system of mains/pipes that recycles a portion of the treated wastewater for non-potable uses (e.g., irrigation of landscaping, agricultural irrigation, dust suppression during construction, etc.).

Sanitary Sewer System

The City of San José currently has wastewater collection infrastructure in place in all of the cumulative project areas. Generally this consists of varying levels of local connectors, laterals that range from six to eight inches in diameter, and sewer mains ranging in size from 10 to 30 inches. The network primarily relies upon gravity flow, supplemented by sewer lift stations and force mains at specific locations. The City is responsible for maintenance of the entire system.

The cumulative projects, as well as future development allowed under the adopted General Plan, will contribute wastewater to the existing system. As part of each project's approval process, the City requires appropriate upgrades and extensions to the existing system. In addition, through its Capital Improvement Program (CIP), the City undertakes upgrades to the existing system, consistent with its policy objective of maintaining LOS D in the City's sanitary sewer mains.

Water Pollution Control Plant (WPCP)

San José's WPCP, which is located at the northerly end of the City, provides wastewater treatment for the cities of San José, Santa Clara, and Milpitas, as well as five sanitary districts in Santa Clara County. The WPCP has an existing capacity to treat 167 mgd of effluent.

For the reasons discussed previously, while the capacity of the WPCP is 167 mgd, the amount of treated wastewater that can be discharged to San Francisco Bay is limited to 120 mgd (dry weather peak). This limitation has led to the development of programs to reduce the volume of wastewater generated at the source, as well as a system that recycles some of the wastewater for non-potable uses. The City can implement several strategies to reduce demand upon the WPCP including increase water conservation and use of recycled water. One of the cumulative projects is a Master Plan for the WPCP. The Master Plan provides a roadmap for the next 30 years of capital improvement projects, facilities, operations, and financing for the WPCP.

The City will not issue any entitlement for development beyond the WPCP capacity, including the flow trigger cap or other WPCP capacity limitations. Every land use permit issued by the City of San José includes this standard permit condition:

> Sewage Treatment Demand. Chapter 15.12 of Title 15 of the San José Municipal Code requires that all land development approvals and applications for such approvals in the City of San José shall provide notice to the applicant for, or recipient of, such approval that no vested right to a Building Permit shall accrue as the result of the granting of such approval when and if the City Manager makes a determination that the cumulative sewage treatment demand of the Water Pollution Control Plant represented

> by approved land uses in the area served by said Plant will cause the total sewage treatment demand to meet or exceed the capacity of the Water Pollution Control Plant to treat such sewage adequately and within the discharge standards imposed on the City by the State of California Regional Water Quality Control Board for the San Francisco Bay Region. Substantive conditions designed to decrease sanitary sewage associated with any land use approval may be imposed by the approval authority.

The City continually monitors WPCP capacity and pursues strategies for reducing water usage and discharge to the WPCP, including increasing the use of recycled water.

The City's permitting process ensures that development is only approved if it can be served by the WPCP. For this reason, the cumulative projects would not result in a significant cumulative sanitary sewer/wastewater treatment impacts.

4.10.4.3 *Cumulative Impacts to Water Service*

The City of San José has three water service providers (retailers) who each serve different regions of the City that would be affected by the cumulative impacts addressed here. The San Jose Water Company, one of the three water service providers, serves the project site. The water distribution systems for each of these retailers are independent of each other; although they all potentially draw upon the same groundwater and surface water resources administered by the Santa Clara Valley Water District (SCVWD).

The CHSP is incorporated into the City's General Plan. In accordance with SB 610, the City completed a water supply assessment (WSA) for a full build out of the General Plan, which includes a full build out of the CHSP. In this WSA, the City concluded that future water supplies are sufficient to meet the demand of the General Plan development.[56] The proposed project, therefore, would not result in a cumulatively considerable contribution to a significant cumulative water supply impact.

4.10.4.4 *Cumulative Impacts to Solid Waste Systems*

As discussed previously, the County has adequate waste disposal capacity beyond 2022.[57] Solid waste generated within the County is landfilled at Guadalupe Mines, Kirby Canyon, Newby Island, Zanker Road Materials Processing Facility, and Zanker Road landfills.

The City of San José has an existing contract with Newby Island Sanitary Landfill (NISL) through December 31, 2020 with the option to extend the contract as long as the landfill is open. The City has an annual disposal allocation for 395,000 tons per year. As of December 2012, NISL had approximately 5.8 million cubic yards of capacity remaining.[58,59] Note that one of the cumulative

[56] City of San Jose, *Water Supply Assessment for Envision San Jose 2040 General Plan Update*, September 2010.
[57] Santa Clara County. *Five-Year CIWMP/RAIWMP Review Report*. August 2012. Available at: http://www.sccgov.org/sites/iwm/Santa%20Clara%20County%20Integrated%20Waste%20Management%20Plan/Pages/Santa-Clara-County-Integrated-Waste-Management-Plan.aspx.
[58] Source: King, Rick. Personal communications with Newby Island Sanitary Landfill General Manager. May 14, 2013.

projects is the expansion of Newby Island Landfill to increase capacity at the landfill by about 15 million cubic yards.

In October 2007, the City adopted its Green Vision to provide a comprehensive approach to achieved sustainability through new technology and innovation. Of the 10 Green Vision goals the City established to achieve by 2022, Goal #5 calls for diverting 100 percent of waste from landfill and convert waste to energy. As part of implementing the Green Vision, the City adopted a Zero Waste Strategic Plan in 2008 with the specific objectives of 75 percent diversion by 2013 and zero waste by 2022. Under the Zero Waste Strategic Plan, the City is improving downstream reuse and recycling, implementing upstream strategies to reduce the volume and toxicity of discarded products, and supporting the reuse of discarded materials. The City has also redesigned the commercial solid waste management program to allow capture of more recyclables and compostables from businesses. Other specific actions by the City to reduce waste and divert solid waste from landfills include:

- Implementing program enhancements to the residential Recycle Plus program to capture more materials and compost food waste;
- Targeting increased diversion and recovery of construction debris under the City's Construction & Demolition Diversion Deposit (CDDD) Program;
- Maximizing sorting to capture food and other hard to recycle materials and supporting use of conversion technology that convert waste to energy; and
- Supporting changes to state and local policies needed to change the material flows and create incentives for diversion.

As discussed previously, the proposed project would be required to successfully participate in the City's Construction and Demolition Diversion Deposit Program, use construction products that are either made from recycled and/or salvaged materials (or can be reused and/or recycled), and include waste and recycling receptacles in public areas to reduce waste. Other cumulative projects are also required to implement waste reduction and diversion measures.

The cumulative demands upon solid waste collection services are collectively substantial, but would not constitute a significant cumulative impact. Impacts on such services are mitigated to a less than significant level with the implementation of actions and policies mentioned above. Therefore, the cumulative projects would not result in significant cumulative solid waste impacts. **(Less Than Significant Cumulative Impact)**

4.10.5 Conclusion

The project would not result in significant Utilities and Service Systems impacts, such as exceeding wastewater treatment requirements or capacity, requiring the construction of new facilities that would result in significant environmental impacts, having insufficient water supplies available to serve the project, being served by a landfill with insufficient capacity, or failing to comply with regulations related to solid waste. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

[59] Note that in 2012, the City of San José certified an EIR and approved a height expansion at Newby Island Sanitary Landfill that would add approximately 15 million cubic yards to the capacity of the landfill (file no. PDC07-071). Subsequently, a lawsuit was filed against the EIR and has yet to be resolved, therefore, the additional 15 million cubic yards of capacity is not reflected in remaining capacity stated above.

4.11 ENERGY

4.11.1 Existing and Regulatory Setting

Environmental impacts associated with energy consumption include the depletion of nonrenewable resources (oil, natural gas, coal, etc.) and emissions of pollutants during both the production and consumption phases. Energy is used in buildings to operate electronics and appliances and to provide lighting, heating, and cooling. Energy is also used for transportation and in the distribution and treatment of water and wastewater.

Energy use is typically quantified using the British Thermal Unit (BTU). A BTU is the amount of energy required to raise the temperature of one pound of water by one degree Fahrenheit. As points of reference, the approximate amount of energy contained in a gallon of gasoline, a cubic foot of natural gas, and a kilowatt hour (kWh) of electricity are 123,000 BTU's, 1,000 BTU's, and 3,400 BTU's, respectively. A therm is equal to 100,000 BTU.

4.11.1.1 *Electricity and Natural Gas*

Pacific Gas & Electric (PG&E) transmits and delivers electricity to approximately 15 million people throughout a 70,000 square-mile service area in California, including the City of San José and the Plan area. PG&E's operations are regulated by the California Public Utilities Commission. Supplies are regulated by the California Energy Commission.

Electricity is generated from various sources, including natural gas, nuclear, coal, wind, and hydroelectric generation resources in California and other western states. In addition to power supplied by PG&E, there was approximately 15 MW of solar power generation capacity in San José in 2009. Electricity is delivered to consumers in San José via an electrical grid using high voltage transmission lines (110 kV or above).

In 2008, electricity use in the City of San José across all sectors was approximately 6,274 GWh. PG&E estimates that electricity consumption for its service areas throughout the state will grow at a rate of 1.2 percent per year from 2010-2020, with peak demand projected to grow at a rate of 1.4 percent per year.

The City's natural gas supply comes from basins in California, Canada, and the Western United States via transmission mains. In 2008, City of San José natural gas consumption across all sectors was approximately 217.2 million therms. PG&E estimates that natural gas consumption for its service areas will grow at a rate of 0.5 percent per year from 2010-2018.

4.11.1.2 *Motor Vehicle Fuels*

More than 40 percent of all energy used in California is for the transportation of people and goods. Transportation fuels (including gasoline and diesel) are produced by refining crude oil. Approximately 38 percent of crude oil used in California is produced in-state, while 14 percent comes from Alaska and 48 percent from foreign sources.

In recent years, Californians consumed approximately 16 billion gallons of gasoline and four billion gallons of diesel annually. Overall, California is experiencing a downward trend in sales for gasoline, diesel, and jet fuel. It is anticipated that this downward trend will continue due to high fuel prices, efficiency gains, competing fuel technologies, and mandated increases of alternative fuel use.

Based on the City's average daily vehicle miles traveled (VMT) of 19,806,977 and an average fuel economy of 20 miles per gallon, approximately 360,000,000 gallons of gasoline (approximately 44.5 trillion BTUs) are consumed for motor vehicle travel in San José each year.

4.11.2 Regulatory Framework

Energy conservation is embodied in many federal, state and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the state level, rebates/tax credits are provided for installation of renewable energy systems and the Flex Your Power program promotes conservation in multiple areas. Additional laws, regulations, and programs are summarized below.

4.11.2.1 *California 2007 Energy Action Plan Update*

The 2007 Energy Action Plan II is the State's principal energy planning and policy document. The plan describes a coordinated implementation strategy to ensure that California's energy resources are adequate, affordable, technologically advanced, and environmentally sound. In accordance with this plan, the state and its electricity providers would invest first in energy efficiency and demand-side resources, followed by renewable resources, and only then in clean conventional electricity supply to meet its energy needs.

4.11.2.2 *Renewable Portfolio Standard Program*

With the adoption of SB 1078 in 2002, California established its Renewable Portfolio Standard (RPS) program to provide a flexible, market-driven policy to ensure that the public benefits of wind, solar, biomass, and geothermal energy continue to be realized as electricity markets become more competitive. Under SB 107 and Executive Order S-14-08, the state's goal is to increase the percentage of renewable energy in the State's electricity mix to 33 percent by 2020.

The CPUC and CEC are jointly responsible for implementing the RPS program. Local land use planning processes can facilitate or hinder the ability of providers to establish the additional renewable energy projects and transmission line connections that will be necessary to meet the requirements of this legislation.

4.11.2.3 *Building Energy Efficiency Standards (Title 24)*

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6, of the California Code of Regulations, were established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The current version of the standards was adopted on April 23, 2008 and took effect

August 1, 2009. Compliance with these standards is mandatory at the time new building permits are issued by City and County governments.

4.11.2.4 *California Utility Efficiency Programs (Senate Bill 1037 and Assembly Bill 2021)*

SB 1037 and AB 2021 require electric utilities to meet their resource needs first with energy efficiency. California Utility Efficiency Programs have also set new targets for statewide annual energy demand reductions.

4.11.2.5 *California Green Building Standards Code*

In January 2010, the State of California adopted the California Green Building Standards Code (CALGreen) that establishes mandatory green building standards for new construction (new buildings and expansions) in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and indoor environmental quality. These standards include a mandatory set of minimum guidelines, as well as more rigorous voluntary measures, for new construction projects to achieve specific green building performance levels. Local communities may institute more stringent versions of the code if they choose. The code went into effect as part of the City's building code on January 1, 2011.

4.11.2.6 *City of San José Policies*

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating energy impacts resulting from planned development within the City. All future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed below.

GREEN BUILDING POLICY LEADERSHIP
Policy MS-1.1: Demonstrate leadership in the development and implementation of green building policies and practices. Ensure that all projects are consistent with or exceed the City's Green Building Ordinance and City Council Policies as well as State and/or regional policies which require that projects incorporate various green building principles into their design and construction.
ENERGY CONSERVATION AND RENEWABLE ENERGY USE
Policy MS-2.2: Encourage maximized use of on-site generation of renewable energy for all new and existing buildings.
Policy MS-2.3: Utilize solar orientation, (i.e., building placement), landscaping, design, and construction techniques for new construction to minimize energy consumption.
Action MS-2.8: Develop policies which promote energy reduction for energy-intensive industries. For facilities such as data centers, which have high energy demand and indirect greenhouse gas emissions, require evaluation of operational energy efficiency and inclusion of operational design measures as part of development review consistent with benchmarks such as those in EPA's EnergyStar Program for new data centers.

Action MS-2.11: Require new development to incorporate green building practices, including those required by the Green Building Ordinance. Specifically target reduced energy use through construction techniques (e.g., design of building envelopes and systems to maximize energy performance), through architectural design (e.g. design to maximize cross ventilation and interior daylight) and through site design techniques (e.g. orienting buildings on sites to maximize the effectiveness of passive solar design).

REDUCE CONSUMPTION AND INCREASE EFFICIENCY

Policy MS-14.1: Promote job and housing growth in areas served by public transit and that have community amenities within a 20-minute walking distance.

Policy MS-14.2: Enhance existing neighborhoods by adding a mix of uses that facilitate biking, walking, or transit ridership through improved access to shopping, employment, community services, and gathering places.

Policy MS-14.4: Implement the City's Green Building Policies (see Green Building Section) so that new construction and rehabilitation of existing buildings fully implements industry best practices, including the use of optimized energy systems, selection of materials and resources, water efficiency, sustainable site selection, and passive solar building design and planting of trees and other landscape materials to reduce energy consumption.

Municipal Code

The City's Municipal Code includes regulations associated with energy efficiency and energy use. City regulations include a Green Building Ordinance (Chapter 17.84) to foster practices to minimize the use and waste of energy, water and other resources in the City of San José, Water Efficient Landscape Standards for New and Rehabilitated Landscaping (Chapter 15.10), requirements for Transportation Demand Programs for employers with more than 100 employees (Chapter 11.105), a Construction and Demolition Diversion Deposit Program that fosters recycling of construction and demolition materials (Chapter 9.10), and a wood burning ordinance, which includes prohibitions on appliance types and fuel (Chapter 9.10).

San José Green Vision

In October 2007, the City Council adopted the *San José Green Vision*. The *Green Vision* is a 15-year plan to transform San José into a world center of Clean Technology, promote cutting-edge sustainable practices, and demonstrate that the goals of economic growth, environmental stewardship and fiscal responsibility are inextricably linked. The 10 goals of the *Green Vision* are as follows:

1. Create 25,000 Clean Tech jobs as the World Center of Clean Tech Innovation;
2. Reduce per capita energy use by 50 percent;
3. Receive 100 percent of our electrical power from clean renewable sources;
4. Build or retrofit 50 million square feet of green buildings;
5. Divert 100 percent of the waste from our landfill and convert waste to energy;
6. Recycle or beneficially reuse 100 percent of our wastewater (100 million gallons per day);
7. Adopt a General Plan with measurable standards for sustainable development;
8. Ensure that 100 percent of public fleet vehicles run on alternative fuels;
9. Plant 100,000 new trees and replace 100 percent of our streetlights with smart, zero-emission lighting; and

10. Create 100 miles of interconnected trails.

Achieving the above goals would reduce the City's energy use and promote renewable energy sources, promote alternative fuels, and encourage automobile-alternative modes of transportation.

Private Sector Green Building Policy (6-32)

In October 2008, the City adopted the Private Sector Green Building Policy (6-32) that establishes baseline green building standards for private sector new construction and provides a framework for the implementation of these standards. This policy requires that applicable projects achieve minimum green building performance levels using the Council adopted standards. The proposed project would be subject to this policy. The commercial and industrial park development would be required to achieve LEED Silver rating and the proposed residential development would be required to achieve GreenPoint Rated 50 points or LEED Certified rating.

Greenhouse Gas Reduction Strategy

The Envision San José 2040 General Plan includes a Greenhouse Gas Reduction Strategy embedded in its policies and programs that are designed to help the City sustain its natural resources, grow efficiently, and meet state legal requirements for greenhouse gas emissions reduction. Multiple policies and actions in the General Plan have greenhouse gas implications, including land use, housing, transportation, water usage, solid waste generation and recycling, and reuse of historic buildings (refer to policies above). The City's Green Vision, as reflected in these policies, also has a monitoring component that allows for adaptation and adjustment of City programs and initiatives related to sustainability and associated reductions in greenhouse gas emissions. The Greenhouse Gas Reduction Strategy is intended to meet the mandates as outlined in the CEQA Guidelines and the recent standards for "qualified plans" as set forth by BAAQMD, as described in *Section 4.12 Greenhouse Gas Emissions*.

4.11.3 Energy Impacts

4.11.3.1 *Thresholds of Significance*

For the purposes of this SEIR, an energy impact is significant if implementation of the proposed project would:

- Use fuel or energy in a wasteful manner;
- Result in a substantial increase in demand upon energy resources in relation to projected supplies; or
- Result in longer overall distances between jobs and housing.

4.11.3.2 *Project Energy Consumption*

Energy would be consumed during both the construction and operational phases of development for the project. The construction phase would require energy for the manufacture and transportation of building materials, preparation of the project sites (e.g., grading), and the actual construction of the buildings and infrastructure. The operational phase would consume energy for multiple purposes

including, but not limited to, building heating and cooling, lighting, appliances, and electronics. Operational energy would also be consumed during each vehicle trip associated with the proposed uses.

The project would be subject to the City's Private Sector Green Building Policy (6-32). Per the Policy, the commercial and office development would be required to achieve LEED Silver rating and the proposed residential development would be required to achieve GreenPoint Rated 50 points or LEED Certified rating. The project's compliance with Policy 6-32 would entail energy efficiency performance in excess of the standard California Code of Regulations Title 24 energy requirements.

Given the infill location of the project site, the existing pedestrian, bicycle, and transit services in the project area, the higher density of residential uses proposed on the project site, and the pedestrian, bicycle, and transit improvements included in the project (see Sections *4.2 Transportation* and *4.4 Air Quality*), the proposed project would not use fuel or energy in a wasteful manner.

The project is also required to conform to applicable regulations and policies, including the City's Greenhouse Gas Reduction Strategy and Private Sector Green Building Policy (6-32), which would entail energy efficiency performance in excess of the standard California Code of Regulations Title 24 energy requirements.

Per Policy 6-32, the commercial and office development in the industrial area would be required to achieve LEED Silver rating and the proposed residential development would be required to achieve GreenPoint Rated 50 points or LEED Certified rating. To achieve these ratings, the project components could incorporate measures that address water efficiency, energy use, construction materials, indoor environmental quality, and design that reduce energy consumption including, but not limited to, passive solar design[60] and cool roofs.[61]

The proposed project, in conformance with applicable regulations and policies including the City's Private Sector Green Building Policy (6-32), would not use fuel or energy in a wasteful manner. The development of the existing entitlements was accounted for the in the General Plan and it was concluded that the buildout of the General Plan would increase the overall consumption of energy compared to existing levels, but in conformance with applicable General Plan policies, Title 24, CALGreen requirements, and the City's Greenhouse Gas Reduction Strategy, would not consume energy in a manner that is wasteful, inefficient, or unnecessary. **(Less Than Significant Impact)**

[60] Passive solar design is the technology of heating, cooling, and lighting a building naturally with sunlight rather than mechanical systems because the building itself is the system. Basic design principals are large south-facing windows with proper overhangs, as well as tile, brick, or other thermal mass material used in flooring or walls to store the sun's heat during the day and release it back into the building at night or when the temperature drops. Passive solar also takes advantage of energy efficient materials, improved insulation, airtight construction, natural landscaping, and proper building orientation to take advantage of sun, shade, and wind.

[61] Cool roofs decrease roofing maintenance and replacement costs, improve building comfort, reduce impact on surrounding air temperatures, reduce peak electricity demand, and reduce waste stream of roofing debris.

4.11.3.3 *Project Demand Upon Energy Resources*

According to the *2011 Integrated Energy Policy Report*, in order to meet future energy demand, the state needs sufficient, reliable, and safe energy infrastructure. This involves:

- Improving forecasting of demand for electricity, natural gas, and transportation fuels;
- Promoting energy efficiency, demand response, distributed generation, and combined heat and power to reduce the need for additional generation and transmission infrastructure;
- Modernizing the electricity transmission and distribution system;
- Evaluating the need for and developing new electricity, natural gas, and transportation fuel infrastructure to maintain energy reliability and support clean energy polices;
- Streamlining and improving power plant licensing processes; and
- Addressing safety and reliability issues associated with natural gas pipelines and nuclear power plants.

The project would result in an increase in demand on existing energy resources; however, the project is required to comply with applicable regulations and City policies that would entail energy efficiency performance in excess of the standard California Code of Regulations Title 24 energy requirements. Also, the project proposes to implement pedestrian, bicycle, and transit improvements, along with waste reduction measures to reduce fuel consumption and waste generation.

For this reason, the proposed project is not anticipated to result in a substantial increase in demand on energy resources in relation to existing supplies. **(Less Than Significant Impact)**

4.11.3.4 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described above, implementation of standard project conditions would ensure energy impacts are less than significant. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.11.4 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating energy impacts resulting from planned development within the City. Future development allowed by the proposed GPA shall be in conformance with adopted City plans and policies, resulting in less than significant energy impacts.

4.11.5 Cumulative Impacts

The cumulative projects are located in infill areas and are required to meet applicable state and federal requirements for energy efficiency (e.g., National Energy Policy, Federal EnergyStar™ Program, Title 24 of the California Administrative Code as it pertains to energy efficiency, and California Green Building Standards Code). The cumulative projects are also required to comply with applicable General Plan policies regarding energy efficiency, the City's Greenhouse Gas Reduction Strategy, and the City's Private Sector Green Building Policy. Projects' compliance with the City's Greenhouse Gas Reduction Strategy and Private Sector Green Building Policy would result in greater energy efficiency than what would be achieved with the standard Title 24 requirements. The cumulative projects, in conformance with General Plan policies and existing regulations and adopted plans and policies, would not consume energy in a manner that is wasteful, inefficient, or unnecessary.

Because the project would place housing and jobs on an infill site near public transit, the project would not result in a cumulatively considerable contribution to longer overall distances between jobs and housing. **(Less Than Significant Cumulative Impact)**

4.11.6 Conclusion

The project would not result in significant energy impacts, including using fuel or energy in a wasteful manner, resulting in a substantial increase in demand upon energy resources, or resulting in longer overall distances between jobs and housing. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.12 GREENHOUSE GAS EMISSIONS

4.12.1 Existing Setting

4.12.1.1 *Background Information*

Unlike emissions of criteria and toxic air pollutants, which have local or regional impacts, emissions of greenhouse gases have a broader, global impact. Global warming associated with the "greenhouse effect" is a process where greenhouse gases accumulating in the atmosphere contribute to an increase in the temperature of the earth's atmosphere. The principal greenhouse gases contributing to global warming and associated climate change are carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated compounds. Emissions of greenhouse gases contributing to global climate change are attributable in large part to human activities associated with the transportation, industrial/manufacturing, utility, residential, commercial, and agricultural sectors.

4.12.1.2 *Regulatory Framework*

State of California

AB 32 and Related Executive Orders and Regulations

The Global Warming Solutions Act (also known as "Assembly Bill (AB) 32") sets the state of California's 2020 greenhouse gas emissions reduction goal into law. The Act requires that the greenhouse gas emissions in California be reduced to 1990 levels by 2020. Prior to adoption of AB 32, the Governor of California also signed Executive Order S-3-05 which identified CalEPA as the lead coordinating state agency for establishing climate change emission reduction targets in California. Under Executive Order S-3-05, the state plans to reduce greenhouse gas emissions to 80 percent below 1990 levels by 2050 and Executive Order B-16-2012 established benchmarks for increased use of zero emission vehicles and zero emission vehicle infrastructure by 2020 and 2025. Additional state law and regulations related to the reduction of greenhouse gas emissions includes SB 375, the Sustainable Communities and Climate Protection Act (see discussion below), the state's Renewables Portfolio Standard for Energy Standard (Senate Bill 2X) and fleet-wide passenger car standards (Pavley Regulations).

In December 2008, the CARB approved the Climate Change Scoping Plan, which proposes a comprehensive set of actions designed to reduce California's dependence on oil, diversify energy sources, save energy, and enhance public health, among other goals. Per AB 32, the Scoping Plan must be updated every five years to evaluate the mix of AB 32 policies to ensure that California is on track to achieve the 2020 greenhouse gas reduction goal. In late-September 2013, CARB expects to release a preliminary draft of the 2013 update to the AB 32 Scoping Plan report for public review and comment. CARB will provide a status update to the Board in October 2013 and will hold a Board meeting discussion with opportunities for public comment on the update in December 2013. The 2013 Update will define CARB's climate change priorities for the next five years and lay the groundwork to start the transition to the post-2020 goals set forth in Executive Orders S-3-05 and B-16-2012 (see below). The 2013 Update will highlight California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the 2008 Scoping Plan and evaluate how

to align the State's longer-term greenhouse gas reduction strategies with other State policy priorities, such as for water, waste, natural resources, agriculture, clean energy, and transportation and land use.

CEQA

The California Natural Resources Agency, as required under state law (Public Resources Code Section 21083.05), amended the state CEQA Guidelines to address the analysis and mitigation of greenhouse gas emissions. In these changes to the CEQA Guidelines, Lead Agencies, such as the City of San José, retain discretion to determine the significance of impacts from greenhouse gas emissions based upon individual circumstances. A Lead Agency may describe, calculate or estimate greenhouse gas emissions resulting from a project and use a model and/or qualitative analysis or performance based standards to assess impacts. As outlined in Section 15183.5 of the CEQA Guidelines (Tiering and Streamlining the Analysis of Greenhouse Gas Emissions), public agencies also may analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions that has been adopted in a public process following environmental review. The City of San José adopted a Greenhouse Gas Reduction Strategy in 2011 as a part of the recent General Plan Update.

Senate Bill 375

Senate Bill 375 (SB 375), also known as the Sustainable Communities and Climate Protection Act of 2008, requires regional transportation plans to include a Sustainable Communities Strategy (SCS) that links transportation and land use planning together into a more comprehensive, integrated process. The SCS is a mechanism for more effectively linking a land use pattern and a transportation system together to make travel more efficient and communities more livable. The primary strategy is to plan for more people living near their jobs and other essential services, in tandem with better access to mass transit and other transportation choices, so residents need not drive as much and tailpipe emissions are reduced.

In 2010, the CARB adopted greenhouse gas reduction targets for regions across California, as mandated by SB 375. The target for the San Francisco Bay Area is a seven (7) percent per capita reduction in greenhouse gas emissions attributable to automobiles and light trucks by 2020 and a 15 percent per capita reduction by 2035. The base year for comparison of emission reductions is 2005.

An integrated land use and transportation plan, *Plan Bay Area*, was prepared to meet the regional planning requirements under SB 375. This integrated plan includes Association of Bay Area Government's (ABAG) Projections and Regional Housing Needs Allocation (RHNA) and Metropolitan Transportation Commission's (MTC) Regional Transportation Plan (RTP) with a SCS. The 2013 RTP is the Bay Area's first plan that is subject to SB 375.[62]

[62] One Bay Area. *One Bay Area Fact Sheet. SB 375 (Steinberg): Linking Regional Transportation Plans to State Greenhouse Gas Reduction Goals*. Available at: http://www.onebayarea.org/pdf/SB375_OneBayArea-Fact_Sheet2.pdf. Accessed August 13, 2012.

Regional and Local Plans

Bay Area 2010 Clean Air Plan

The 2010 CAP is a multi-pollutant plan that addresses greenhouse gas emissions along with other air emissions in the San Francisco Bay Area Air Basin. One of the key objectives in the 2010 CAP is climate protection. The 2010 CAP includes emission control measures in five categories: Stationary Source Measures, Mobile Source Measures, Transportation Control Measures, Land Use and Local Impact Measures, and Energy and Climate Measures. Consistency of a project with current control measures is one measure of its consistency with the 2010 CAP. The current 2010 CAP also includes performance objectives, consistent with the state's climate protection goals under AB 32 and SB 375, designed to reduce emissions of greenhouse gas to 1990 levels by 2020 and 40 percent below 1990 levels by 2035.

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating greenhouse gas emissions impacts resulting from planned development within the City. All future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed below. .

BUILT ENVIRONMENT
Policy MS-1.1: Continue to demonstrate leadership in the development and implementation of green building policies and practices. Ensure that all projects are consistent with and/or exceed the City's Green Building Ordinance and City Council Policies as well as State or regional policies which require that projects incorporate various green building principles into their design and construction.
Policy MS-1.2: Continually increase the number and proportion of buildings within San José that make use of green building practices by incorporating those practices into both new construction and retrofit of existing structures.
Policy MS-14.4: Implement the City's Green Building Policies so that new construction and rehabilitation of existing buildings fully implements industry best practices, including the use of optimized energy systems, selection of materials and resources, water efficiency, sustainable site selection, passive solar building design, and planting of trees and other landscape materials to reduce energy consumption.
Policy MS-17.2: Ensure that development within San José is planned and built in a manner consistent with sustainable use of current and future water supplies by encouraging sustainable development practices, including low-impact development, water-efficient development and green building techniques. Support the location of new development within the vicinity of the recycled water system and promote expansion of the SBWR system to areas planned for new development. Residential development outside of the Urban Service Area will only be approved at minimal levels and only allowed to use non-recycled water at urban intensities. For residential development outside of the Urban Service Area, restrict water usage to well water, rainwater collection or other similar sustainable practice. Non-residential development may use the same sources and potentially make use of recycled water, provided that its use will not result in conflicts with other General Plan policies, including geologic or habitat impacts. To maximize the efficient and environmentally beneficial use of water, outside of the Urban Service Area, limit water consumption for new development so that it does not diminish the water supply available for projected development within San José 's urbanized areas.

Policy MS-19.4: Require the use of recycled water wherever feasible and cost-effective to serve existing and new development.
Policy MS-21.3: Ensure that San José's Community Forest is comprised of species that have low water requirements and are well adapted to its Mediterranean climate. Select and plant diverse species to prevent monocultures that are vulnerable to pest invasions. Furthermore, consider the appropriate placement of tree species and their lifespan to ensure the perpetuation of the Community Forest.
TRANSPORTATION (AND LAND USE)
Policy CD-2.5: Integrate Green Building Goals and Policies of this Plan into site design to create healthful environments. Consider factors such as shaded parking areas, pedestrian connections, minimization of impervious surfaces, incorporation of stormwater treatment measures, appropriate building orientations, etc.
Policy CD-2.10: Recognize that finite land area exists for development and that density supports retail vitality and transit ridership. Use land regulations to require compact, low-impact development that efficiently uses land planned for growth, particularly for residential development which tends to have a long life-span. Strongly discourage small-lot and single-family detached residential product types in growth areas.
LU-2.1: Provide significant job and housing growth capacity within strategically identified "Growth Areas" in order to maximize use of existing or planned infrastructure (including fixed transit facilities), minimize the environmental impacts of new development, provide for more efficient delivery of City services, and foster the development of more vibrant, walkable urban settings.
Policy LU-16.2: Evaluate the materials and energy resource consumption implications of new construction to encourage preservation of historic resources.

The Envision San José 2040 General Plan includes a Greenhouse Gas Reduction Strategy embedded in its policies and programs that are designed to help the City sustain its natural resources, grow efficiently, and meet state legal requirements for greenhouse gas emissions reduction. Multiple policies and actions in the General Plan have greenhouse gas implications, including land use, housing, transportation, water usage, solid waste generation and recycling, and reuse of historic buildings (refer to policies above). The City's Green Vision, as reflected in these policies, also has a monitoring component that allows for adaptation and adjustment of City programs and initiatives related to sustainability and associated reductions in greenhouse gas emissions. The Greenhouse Gas Reduction Strategy is intended to meet the mandates as outlined in the CEQA Guidelines and the recent standards for "qualified plans" as set forth by BAAQMD.

The purposes of the City's Greenhouse Gas Reduction Strategy are to:

- Capture and consolidate greenhouse gas reduction efforts already underway by the City of San José;
- Distill policy direction on greenhouse gas reduction from the Envision San José 2040 General Plan Update;
- Quantify greenhouse gas reductions that could result from land use changes incorporated in the Envision General Plan Land Use/Transportation diagram;
- Create a framework for the ongoing monitoring and revision of the Greenhouse Gas Reduction Strategy;

- Achieve General Plan-level environmental clearance for future development activities (through the year 2020) occurring within the City of San José.

City of San José Private Sector Green Building Policy (6-32)

In October 2008, the City adopted the Private Sector Green Building Policy (6-32) that establishes baseline green building standards for private sector new construction and provides a framework for the implementation of these standards. This policy requires that applicable projects achieve minimum green building performance levels using the Council adopted standards. The proposed project would be subject to this policy. The commercial and office development would be required to achieve LEED Silver rating and the proposed residential development would be required to achieve GreenPoint Rated 50 points or LEED Certified rating.

4.12.1.3 *Existing Conditions*

Other than an existing concrete recycling operation in the northeast portion of the proposed industrial area, the project site is unoccupied. The only GHG emissions currently generated on the site are associated with the concrete recycling operation.

4.12.2 Greenhouse Gas Emissions Impacts

4.12.2.1 *Thresholds of Significance*

For the purposes of this SEIR, a greenhouse gas emissions impact is significant if implementation of the proposed project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Greenhouse gas emissions worldwide contribute, on a cumulative basis, to the significant adverse environmental impacts of global climate change. No single land use project could generate sufficient greenhouse gas emissions on its own to noticeably change the global average temperature. The combination of greenhouse gas emissions from past, present, and future projects in San José, the entire state of California, and across the nation and around the world, contribute cumulatively to the phenomenon of global climate change and its associated environmental impacts.

Per the CEQA Guidelines, a lead agency may analyze and mitigate significant greenhouse gas emissions in a plan for the reduction of greenhouse gas emissions that has been adopted in a public process following environmental review. The City of San José adopted a Greenhouse Gas Reduction Strategy in 2011 as a part of its most recent General Plan Update. The City's projected emissions and the Greenhouse Gas Reduction Strategy are consistent with measures necessary to meet statewide 2020 goals established by AB 32 and addressed in the Climate Change Scoping Plan.

The following discussion focuses on whether project emissions represent a cumulatively considerable contribution to climate change as determined by consistency with City of San José and statewide efforts to curb GHG emissions.

4.12.2.2 *Greenhouse Gas Emissions*

Greenhouse Gas Reduction Strategy

As described previously, the City of San José adopted the Envision San José 2040 General Plan FPEIR in 2011, which included the Greenhouse Gas Reduction Strategy. The GHG Reduction Strategy in the Envision San José 2040 General Plan FPEIR identifies a series of GHG emissions reduction measures to be implemented by development projects that would allow the City to achieve its GHG reduction goals. The measures center around five strategies: energy, waste, water, transportation, and carbon sequestration. Some measures would be considered mandatory for all proposed development projects, while others would be considered voluntary. Voluntary measures could be incorporated as mitigation measures for proposed projects, at the discretion of the City.

Compliance with the mandatory measures and any voluntary measures required by the City would ensure an individual project's consistency with the GHG Reduction Strategy. Projects that are consistent with the GHG Reduction Strategy would then be considered to have a less than significant impact related to GHG emissions. Below is a listing of the mandatory and voluntary criteria provided by the City of San José.

Mandatory Criteria

1. Consistency with the Land Use/Transportation Diagram (General Plan Goals/Policies IP-1, LU-10)

2. Implementation of Green Building Measures (GP Goals: MS-1, MS-2, MS-14)
   - Solar Site Orientation
   - Site Design
   - Architectural Design
   - Construction Techniques
   - Consistency with City Green Building Ordinance and Policies
   - Consistency with GHGRS Policies: MS-1.1, MS-1.2, MC-2.3, MS-2.11, and MS-14.4)

3. Pedestrian/Bicycle Site Design Measures
   - Consistency with Zoning Ordinance
   - Consistency with GHGRS Policies: CD-2.1, CD-3.2, CD-3.3, Cd-3.4, CD-3.6, CD-3.8, CD-3.10, CD-5.1, LU-5.4, LU-5.5, LU-9.1, TR-2.8, TR-2.11, TR-2.18, TR-3.3, TR-6.7)

4. Salvage building materials and architectural elements from historic structures to be demolished to allow re-use (General Plan Policy LU-16.4), if applicable;

5. Complete an evaluation of operational energy efficiency and design measures for energy-intensive industries (e.g. data centers) (General Plan Policy MS-2.8), if applicable;

6. Preparation and implementation of the Transportation Demand Management (TDM) Program at large employers (General Plan Policy TR-7.1), if applicable; and

7. Limits on drive-through and vehicle serving uses; all new uses that serve the occupants of vehicles (e.g. drive-through windows, car washes, service stations) must not disrupt pedestrian flow. (General Plan Policy LU-3.6), if applicable.

Although the project proposes minor changes to the Land Use/Transportation Diagram, the amount of residential, commercial, and industrial development proposed by the project is consistent with the assumptions in the General Plan for future uses on the site. Therefore, it is consistent with the assumptions used to develop the GHG Reduction Strategy. For this reason, the project is considered consistent with Mandatory Criteria 1.

The project would include green building measures in compliance with the City's Private Sector Green Building Strategy and would therefore be consistent with Mandatory Criteria 2.

As discussed in *Section 2.3*, the project proposes a series of pedestrian and bicycle facility enhancements in the project area, and would therefore meet Mandatory Criterion 3. As discussed in *Section 4.4 Air Quality*, future uses in the industrial area would be required to implement a TDM program; therefore, the proposed project is also consistent with Mandatory Criterion 6. Criteria 4, 5, and 7 are not applicable to the proposed project, because there are no historic structures on the site, the project is not currently proposing an energy-intensive use such as a data center, and the site does not propose drive-through uses.

Voluntary Criteria

Table 4.12-1 provides a summary of the voluntary criteria and describes the proposed project's compliance with each criterion.

Table 4.12-1:
Voluntary Greenhouse Gas Reduction Strategy Criteria

Policies	Description of Project Measure	Project Conformance/ Applicability
BUILT ENVIRONMENT AND RECYCLING		
Installation of solar panels or other clean energy power generation sources on development sites, especially over parking areas MS-2.7, MS-15.3, MS-16.2	The proposed project does not include installation of solar panels.	☐ Proposed ☒ Not Proposed or ☐ Not Applicable
Use of Recycled Water Use recycled water wherever feasible and cost-effective (including non-residential uses outside of the Urban Service Area) MS-17.2, MS-19.4	The City is developing a Master Plan for the use of recycled water. It is anticipated that recycled water will eventually be extended onto the site and will be used for landscape irrigation.	☒ Proposed ☐ Not Proposed or ☐ Not Applicable
TRANSPORTATION AND LAND USE		
Car share programs Promote car share programs to minimize the need for parking spaces TR-8.5	Although it is not proposed at this time, future commercial uses in the industrial portion of the site could utilize car share programs as part of a TDM program.	☐ Proposed ☒ Not Proposed or ☐ Not Applicable
Limit parking above code requirements TR-8.4	The project would include roughly 4,350 covered parking spaces for residential units, which is more than the 3,954 spaces required by the Municipal Code. It is possible that future commercial uses in the industrial portion of the site could provide parking below Code requirements as part of a TDM program.	☐ Project is Parked at or below Code Requirements ☒ Project is Parked above Code Requirements or ☐ Not Applicable

Table 4.12-1: Voluntary Greenhouse Gas Reduction Strategy Criteria		
Policies	**Description of Project Measure**	**Project Conformance/ Applicability**
Consider opportunities for reducing parking spaces (including measures such as shared parking, TDM, and parking pricing to reduce demand) TR-8.12	A TDM program will be prepared for the future uses in the industrial portion of the site.	☒ Proposed ☐ Project Does Not Propose or ☐ Not Applicable

The proposed project is consistent with all of the mandatory criteria that are applicable to the project, and proposes multiple voluntary criteria included in the Greenhouse Gas Reduction Strategy in the 2011 Envision San José 2040 General Plan FPEIR. **(Less Than Significant Impact)**

4.12.2.3 *Consistency with Applicable Plans, Policies, and Regulations*

Climate Change Scoping Plan

As previously discussed, most of the measures identified in the Climate Change Scoping Plan will be regulated at a statewide, rather than a local level. These measures include Pavley regulations for vehicle emissions and the California cap-and trade program. Statewide measures are not discussed further as they are outside the City's control.

Consistency: City policies and programs that address energy efficiency in buildings, use of alternative modes of travel, reducing vehicle miles traveled, waste reduction, and water use efficiency are consistent with elements of the Climate Change Scoping Plan. The proposed project is consistent with General Plan policies and would not conflict with policies designed to reduce greenhouse gas emissions.

Bay Area 2010 Clean Air Plan

Consistency: As discussed in *Section 4.4 Air Quality*, the project would be consistent with the 2010 CAP by not increasing VMT more than the projected population increase and being consistent with applicable control measures including the implementation of a TDM program to reduce vehicle trips to and from the industrial portion of the project site.

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in

Section 2.5 General Plan and Specific Plan Text Amendments, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described above, the project is consistent with the City's Greenhouse Gas Reduction Strategy and would not result in significant greenhouse gas emissions. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.12.3 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating greenhouse gas emissions impacts resulting from planned development within the City. Future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed in *Section 4.12.1.2*, resulting in less than significant greenhouse gas emissions impacts.

4.12.4 Cumulative Impacts

As described previously, because greenhouse gas emissions impacts are cumulative by nature, the discussion above focused on whether project emissions represent a cumulatively considerable contribution to climate change as determined by consistency with City of San José and statewide efforts to curb GHG emissions. No additional cumulative analysis is necessary. **(Less Than Significant Cumulative Impact)**

4.12.5 Conclusion

The proposed project would be consistent with the City's GHG Reduction Strategy, and therefore, would not result in a significant impact related to greenhouse gas emissions through 2020. The proposed project would not make a considerable contribution to the significant unavoidable cumulative impact to global climate change identified in the Envision PEIR. **(Less than Significant Impact) (Less Than Significant Cumulative Impact)**

4.13 AGRICULTURAL AND FOREST RESOURCES

4.13.1 Existing Setting

4.13.1.1 *Agricultural Resources*

According to the *2010 Santa Clara County Farmland Map*, the majority of the project site is designated as Other Land, which is land not included in any other mapping category. Common examples include low density rural developments, brush, timber, wetland, and riparian areas not suitable for livestock grazing, confined livestock, poultry, or aquaculture facilities, strip mines, borrow pits, and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land. Small portions of the project site are designated as Urban and Built-up Land.[63] There are no properties within the site that are designated as Prime Farmland by the California State Department of Agriculture or the subject of a Williamson Act contract.

4.13.1.2 *Forest Resources*

According to Section 12220 (g) of the Public Resources Code, forest land is defined as "land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits." Based on this definition, no forest resources are located on the project site.

4.13.1.3 *City of San José Policies*

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating agricultural and forest resources impacts resulting from planned development within the City. All future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed below.

URBAN AGRICULTURE

Policy LU-12.3: Protect and preserve the remaining farmlands within San José's sphere of influence that are not planned for urbanization in the timeframe of the Envision General Plan through the following means:

- Limit residential uses in agricultural areas to those which are incidental to agriculture.
- Restrict and discourage subdivision of agricultural lands.
- Encourage contractual protection for agricultural lands, such as Williamson Act contracts, agricultural conservation easements, and transfers of development rights.
- Prohibit land uses within or adjacent to agricultural lands that would compromise the viability of these lands for agricultural uses.
- Strictly maintain the Urban Growth Boundary in accordance with other goals and policies of this Plan.

[63] California Department of Conservation. *2010 Important Farmland Map for Santa Clara County*. Map. 2011.

4.13.2 Agricultural and Forest Resources Impacts

4.13.2.1 *Thresholds of Significance*

For the purposes of this SEIR, an agricultural, forest, or mineral resources impact is significant if implementation of the proposed project would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use;
- Conflict with existing zoning for agricultural use, or a Williamson Act contract;
- Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g); or
- Result in the loss of forest land or conversion of forest land to non-forest use.

4.13.2.2 *Impacts to Agricultural Resources*

The project site is not used for agricultural purposes, under a Williamson Act contract, or designated as important farmland. The proposed project would not impact agricultural resources. **(No Impact)**

4.13.2.3 *Impacts to Forest Resources*

The proposed project would not result in the loss of forest land or conversion of forest land to non-forest use. **(No Impact)**

4.13.2.4 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed project would not result in impacts to agricultural and forest resources. The project is consistent with the uses planned for the site, and is therefore consistent with the 2040 Envision San José General Plan.

4.13.3 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating agricultural and forest resources impacts resulting from planned development within the City. Future development allowed by the proposed project is in conformance with adopted City plans and policies, including those listed in *Section 4.13.1.3*, resulting in less than significant agricultural and forest resources impacts.

4.13.4 Cumulative Impacts

Because the project would not result in impacts to agricultural and forest resources, the project would not contribute to cumulative agricultural and forest resources impacts. **(No Cumulative Impact)**

4.13.5 Conclusion

The proposed project would not impact agricultural resources or forest resources, nor would it contribute to cumulative agricultural and forest resources impacts. **(No Impact) (No Cumulative Impact)**

4.14 POPULATION AND HOUSING

4.14.1 Background and Existing Setting

Changes in population, housing, and employment in and of themselves are generally characterized as social and economic effects. While increased population does not necessarily cause direct effects on the physical environment, it could cause indirect environmental effects such as increased vehicle trips and air pollutant emissions. Therefore, this discussion focuses on the relationship between the locations of jobs and housing, based upon the analysis in the Envision PEIR.

Table 4.14-1 below summarizes the existing and projected population and employment data for San José. Since 2000, the total population of San José has increased by an average of 12,795 residents per year, reaching 1,023,083 at the beginning of 2010. Over half of the city's housing stock consists of single-family detached units, although multi-family development (i.e., apartments, condominiums, and townhouses) has been the fastest growing housing type in recent years, accounting for 75 percent of all residential construction since 2000. The average household size is expected to decrease from the current rate of 3.2 people to about 3.06 people by 2035.

Table 4.14-1:
Population and Employment in San José

	Existing (2008)	ABAG Projections for 2035	2040 General Plan
Population	985,307	1,380,900	1,313,811
Households/ Dwelling Units	309,350	435,110	429,350
Employed Residents	460,443	774,320	665,493
Jobs	369,450	708,980	839,450

Source: Envision PEIR, Tables 3.14-4 and 3.14-5. Association of Bay Area Governments (ABAG) data is based on the *2009 Projections* report.

4.14.1.1 *Jobs/Housing Balance*

The term "jobs/housing balance" refers to the ratio of employed residents to jobs in a given community or area. It is used to indicate the general distance between residences and employment locations. A well-balanced ratio (close to 1:1) can minimize commute distances and the number of vehicle miles traveled (VMT).[64] As described throughout this SEIR, VMT is linked to a variety of environmental impacts (i.e., traffic flows, air quality, energy consumption, etc.).

Important to the analysis of the jobs/housing balance is whether housing is affordable to local employees and whether employment opportunities match the skills and educational characteristics of the local labor force. When considering these factors, sizeable levels of in-commuting and out-

[64] Paradoxically, a balanced ratio of jobs and housing could result in increased VMT by dispersing vehicle travel in such a way as to facilitate a greater overall utilization of existing roadways, while concentrating jobs in a single location may force more commuters to divert from congested roadways to alternative modes of transportation, such as the regional transit system.

commuting may occur, even if a jurisdiction has a statistical balance between jobs and housing. Improving the availability of housing that is suitable for those holding jobs in the community can allow employees to live in proximity to their place of work. It is assumed that at least 15% of the project's proposed housing would be affordable to low- and moderate-income households, consistent with City policies and goals.

The City of San José has historically provided a higher than average proportion of housing in Santa Clara County. The City's current jobs/housing ratio is 1.194 jobs per household.[65] The concentration of housing in San José and employment in other jurisdictions has created a well-established commute pattern (southeast to northwest). It has become apparent that the physical relationship between jobs and housing significantly contributes to several of the primary environmental impacts of concern in the Bay Area, particularly air pollution and the excessive consumption of energy resulting from an inefficient sprawling land-use pattern.

4.14.2 Regulatory Framework

The Association of Bay Area Governments (ABAG) allocates regional housing needs to each city and county within the nine-county Bay Area, based on statewide goals. California's Housing Element Law requires all cities to: 1) zone adequate lands to accommodate its Regional Housing Needs Allocation (RHNA); 2) produce an inventory of sites that can accommodate its share of the regional housing need; 3) identify governmental and non-governmental constraints to residential development; 4) develop strategies and work plan to mitigate or eliminate those constraints; and 5) adopt a housing element that is to be updated on a regular recurring basis.

4.14.2.1 *City of San José Policies and Programs*

The City of San José has developed a wide range of programs designed to address state and regional housing goals, create housing opportunities for all income levels, provide assistance to homeless shelter service providers, and encourage the revitalization of neighborhoods and development of higher density housing near transit. In light of pending litigation, recent court cases, dissolution of redevelopment agencies, and reductions in federal funding, the City is developing implementation strategies to increase the availability of affordable housing in the City. Strategies may include development agreements, public benefit agreements, public-private partnerships, tax increment financing, assessment districts, and other planning and market-based tools. However, as stated previously, it is assumed that at least 15% of the project's proposed housing would be affordable to low- and moderate-income households, consistent with City policies and goals.

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating population and housing impacts resulting from planned development within the City. All future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed below.

GENERAL PLAN ANNUAL REVIEW AND MEASURABLE SUSTAINABILITY

[65] *Envision San José 2040 General Plan Integrated Final Program EIR.* September 2011. Page 772.

Policy IP-3.2: As part of the General Plan Annual Review, carefully monitor the jobs-to-employed resident ratio and, as a minimum, consider the following current development trends:

- Vacant land absorption;
- Amount of residential and economic development;
- Amount and value of non-residential construction;
- Number and types of housing units authorized by building permit, including number of affordable units, and development activity level in zonings, development permits, annexations and building permits;
- Status and current capacity of major infrastructure systems which are addressed in General Plan Level of Service policies (transportation, sanitary sewers and sewage treatment);
- Transit-ridership statistics and other measures of peak-hour diversion from single occupant vehicles;
- Status and implementation of Green Vision, General Plan policies, and other greenhouse gas reduction strategy measures, including greenhouse gas emission reductions compared to baseline and/or business-as-usual; and
- Levels of police, fire, parks and library services being provided by the City.

HOUSING DEVELOPMENT

Policy IP-19.1: Through a Major General Plan Review or, as needed, through the Annual General Plan review process, evaluate the Plan's consistency with housing development goals as determined by the State and regional agencies and take actions as necessary to address their requirements.

4.14.3 Population and Housing Impacts

4.14.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a population and housing impact is considered significant if implementation of the proposed project would:

- Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure); or
- Displace substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere.

4.14.3.2 *Induce Substantial Population Growth*

Examples of ways in which a project can induce substantial population growth include:

- proposing new housing beyond projected or planned development levels;
- generating demand for housing as a result of new businesses;
- extending roads or other infrastructure to previously undeveloped areas; or
- removing obstacles to population growth (i.e., expanding capacity of a wastewater treatment plant beyond that necessary to serve planned growth).

The Envision PEIR concluded that the potential for direct growth-inducing impacts from the 2040 General Plan is minimal because growth planned and proposed as part of the General Plan will consist entirely of development within the City's existing Urban Growth Boundary and Urban Service Area. The 2040 General Plan includes policies and actions that address orderly growth

within the City and are aimed at balancing housing supply with job growth. (Refer to Section 4.14.3.5 below for a discussion of the potential for indirect growth inducement to occur outside of San José under cumulative conditions.)

The project proposes 2,200 residential units on the site, along with 67,500 square feet of retail uses and 1.44 million square feet of industrial park uses. Based on the current rate of 3.2 people per household in San José, the proposed new residential development would result in a population of approximately 7,040 people.

As described in *Section 4.1 Land Use*, the development levels proposed by the project are consistent with the combined jobs and housing capacities established in the 2040 General Plan. Therefore, the proposed project would not *indirectly* induce population growth in San José by proposing new housing or economic development beyond levels in the 2040 General Plan. The project would not directly induce population growth by extending or expanding infrastructure beyond what is required to serve the planned growth capacity. **(Less Than Significant Impact)**

4.14.3.3 *Displace Housing Units or People*

The Envision PEIR determined that nearly all existing housing units could be retained under the 2040 General Plan, because growth would be focused in existing commercial, industrial, and vacant areas within the City's Urban Growth Boundary. The intensification of employment lands and the construction of infrastructure and public facilities necessary to serve future growth would not displace substantial amounts of existing housing or people. Therefore, the 2040 General Plan would not result in significant impact in terms of housing or population displacement.

There are currently no residences on the project site. Build out of the proposed project would not displace housing units or people. **(Less Than Significant Impact)**

4.14.3.4 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described above, the project would not result in significant populations and housing impacts. It is assumed that at least 15% of the residential units proposed would be affordable to households of low- and moderate-incomes, consistent with City policies and goals. The proposed project is the construction of jobs

and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.14.4 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating population and housing impacts resulting from planned development within the City. Future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed in *Section 4.14.2.1* resulting in less than significant population and housing impacts.

4.14.4 Cumulative Impacts

The 2040 General Plan provides capacity for 120,000 net new dwelling units and an additional 470,000 jobs in San José by 2035. According to the Envision PEIR, development under the 2040 General Plan would meet the City's currently identified fair-share housing obligation and would not induce growth beyond that anticipated in ABAG projections in the near term. The 2040 General Plan would, however, allow for a substantial increase in jobs above ABAG's projection for 2035 to support the City's goals of economic sustainability.

Given that San José is currently housing rich, the proposed excess of new jobs in relation to new residents that would result from the 67,500 square feet of retail use and 1.44 million square feet of industrial uses proposed for the site, compared to just 2,200 residential units, would help the City achieve a jobs/housing balance in the near term. However, by 2035, San José could have 1.3 jobs per employed resident. The new jobs/housing imbalance would have the secondary effect of inducing population growth outside of San José by creating demand for new housing to serve the new workers in San José.[66] For traffic modeling purposes, the Envision PEIR assumed more housing growth and less job growth in other jurisdictions than projected by ABAG, in order to maintain the overall total for the region. Since the City cannot predict exactly where the housing growth will occur outside of San José, the Envision PEIR evaluated a worst-case scenario in which all of the new workers in excess of the number projected by ABAG were assumed to live outside of Santa Clara County, even though some new workers will probably live in the county. As a result of increased commuting from other jurisdictions, the Envision PEIR concluded that implementation of the 2040 General Plan would substantially increase VMT per service population in the Bay area region.[67]

As described throughout the Envision PEIR, the projected increase in VMT due to jobs and housing growth would result in significant environmental impacts, including traffic congestion, air pollution, noise, greenhouse gas emissions, and biological resources (nitrogen deposition). By intensifying development in proximity to Caltrain and VTA light rail facilities, the project supports use of the regional transit system for commuting. In addition, the intensification of residential development adjacent to industrial park development can reduce the distances between jobs and housing, supporting alternative transportation modes over vehicle use for commuting. However, despite these

[66] It is estimated that approximately 109,000 additional housing units would be needed elsewhere in the region to provide adequate housing opportunities for future workers. In the Bay Area, commute distance includes all of the nine counties in the Bay Area and the central San Joaquin Valley.
[67] Using a less conservative assumption would have generated a lower VMT per capita.

reductions in VMT, because the project would contribute to an increase in jobs over residential units within the City over the long term, the project would contribute to the significant unavoidable impact identified in the Envision PEIR.

Impact C-PH-1: Future development under the proposed project would make a substantial contribution to the significant unavoidable impact related to the jobs/housing imbalance. This same impact was identified previously in the certified 2011 Envision San José 2040 General Plan Final EIR (SCH#2009072096). . **(Significant Unavoidable Cumulative Impact)**

4.14.5 Conclusion

The proposed project would not induce substantial population growth in San José, nor would it displace substantial amounts of existing housing or people. **(Less than Significant Impact)**

Impact C-PH-1: The proposed project would make a substantial contribution to the significant unavoidable impact related to the jobs/housing imbalance. This same impact was identified previously in the certified 2011 Envision San José 2040 General Plan Final EIR (SCH#2009072096). **(Significant Unavoidable Cumulative Impact)**

4.15 PUBLIC FACILITIES AND SERVICES

4.15.1 Existing Setting

Public facilities and services are provided to the community as a whole, usually from a central location or from a defined set of nodes. The resource base for delivery of these services, including the physical service delivery mechanisms, is finances on a community-wide basis, usually from a unified or integrated financial system. The service delivery agency can be a city, county, service or special district. Usually, new development will create an incremental increase in the demand for these services; the amount of demand will vary widely, depending on both the nature of the development (residential vs. commercial, for instance) and the type of services, as well as on the specific characteristics of the development (such as senior housing vs. family housing).

A project's impact on public facility services is generally a fiscal impact. By increasing the demand for a type of service, a group of projects could cause an eventual increase in the cost of providing the service, a group of projects could cause an eventual increase in the cost of providing the service (more personnel hours to patrol an area, additional fire equipment needed to service a tall building, etc.). That is a fiscal impact, not an environmental one. CEQA does not require an analysis of fiscal impacts.

CEQA analysis is, however, required if the increased demand is of sufficient size to trigger the need for a new facility (such as a school or fire station), since the new facility would have a physical impact on the environment. CEQA requires than an EIR then identify and evaluate the physical impacts on the environment that such a facility would have. To reiterate, the impact that must be analyzed in an EIR is the impact that would result from constructing a new public facility (should one be required), not the fiscal impact of a development on the capacity of a public service system.

4.15.1.1 *Regulatory Framework*

Government Code Section 65996

State law (Government Code Section 65996) specifies an acceptable method of offsetting a project's effect on the adequacy of school facilities as the payment of a school impact fee prior to issuance of a building permit. California Government Code Sections 65996-65998, sets forth provisions for the payment of school impact fees by new development as exclusive means of "considering and mitigating impacts on school facilities that occur or might occur as a result of any legislative or adjudicative act, or both, by any state or local agency involving, but not limited to, the planning, use, or development of real property" [§65996(a)]. The legislation goes on to say that the payment of school impact fees "are hereby deemed to provide full and complete school facilities mitigation" under CEQA [§65996(b)]. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code. The school impact fees and the school districts' methods of implementing measures specified by Government Code 65996 would mitigate project-related increases in student enrollment.

Quimby Act

The Quimby Act (California Government Code Sections 66475-66478) was approved by the California legislature to preserve open space and parkland in the State. This legislation was in response to California's increased rate of urbanization and the need to preserve open space and provide parks and recreation facilities for California's growing communities. The Quimby Act authorizes local governments to establish ordinances requiring developers of new subdivisions to dedicate parks, pay an in-lieu fee, or preform a combination of the two.

As described below, the City has adopted a Parkland Dedication Ordinance and a Park Impact Ordinance, consistent with the Quimby Act.

Envision San Jose 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating public services impacts resulting from planned development in the City. Major Strategy #10 of the General Plan promotes access to San José's natural environment by building a world-class trail network. All future development addressed by this SEIR for the project site will be subject to the public services policies listed in the City's 2040 General Plan, including the following listed below.

COMMUNITY SAFETY

Policy ES-3.1: Provide rapid and timely Level of Service response time to all emergencies:

a. For police protection, achieve a response time of six minutes or less for 60 percent of all Priority 1 calls, and of eleven minutes or less for 60 percent of all Priority 2 calls.

b. For fire protection, achieve a total response time (reflex) of eight minutes and a total travel time of four minutes for 80 percent of emergency incidents.

c. Enhance service delivery through the adoption and effective use of innovative, emerging techniques, technologies and operating models.

d. Measure service delivery to identify the degree to which services are meeting the needs of San José's community.

e. Ensure that development of police and fire service facilities and delivery of services keeps pace with development and growth in the city.

Policy ES-3.11: Ensure that adequate water supplies are available for fire-suppression throughout the City. Require development to construct and include all fire suppression infrastructure and equipment needed for their projects.

SCHOOLS

Policy ES-1.9: Provide all pertinent information on General Plan amendments, rezoning and other development proposals to all affected school districts in a timely manner.

PARKS, TRAILS, OPEN SPACE AND RECREATION AMENITIES

Policy PR-2.6: Locate all new residential developments over 200 units in size within 1/3 of a mile walking distance of an existing or new park, trail, open space or recreational school grounds open to the public after normal school hours or shall include one or more of these elements in its project design.

PARKS, TRAILS, OPEN SPACE, AND RECREATION
Policy PR-1.1: Provide 3.5 acres per 1,000 population of neighborhood/community serving parkland through a combination of 1.5 acres of public park and 2.0 acres of recreational school grounds open to the public per 1,000 San José residents.
Policy PR-1.2: Provide 7.5 acres per 1,000 population of citywide/regional park and open space lands through a combination of facilities provided by the City of San José and other public land agencies.
Policy PR-1.3: Provide 500 square feet per 1,000 population of community center space.
Policy PR-2.6: Locate all new residential developments over 200 units in size ~~s~~ within 1/3 of a mile walking distance of an existing or new park, trail, open space or recreational school grounds open to the public after normal school hours or shall include one or more of these elements in its project design.

City of San Jose Parkland Dedication Ordinance and the Park Impact Ordinance

The City of San Jose has adopted the Parkland Dedication Ordinance (PDO, Municipal Code Chapter 19.38) and Park Impact Ordinance (PIO, Municipal Code Chapter 14.25) requiring new residential development to either dedicate sufficient land to serve new residents, or pay fees to offset the increased costs of providing new park facilities for new development. These ordinances are intended to reduce the extent to which new development would exacerbate the existing shortfall of park and recreational facilities.

In order to fulfill the requirements of the PDO or the PIO, the project must provide the equivalent of 3.0 acres of parkland per 1,000 residents anticipated to live in the proposed development. This is accomplished in one or more of the following ways: dedicate land, construct a "turnkey" park, construct qualifying private recreational facilities, or pay an in-lieu fee as established by the terms and conditions of an approved parkland agreement. Under the PDO and PIO, a project can satisfy up to half of its total parkland obligation by providing private recreational facilities on-site. For projects over 50 units, it is the City's decision as to whether the project will dedicate land for a new public park site or accept a fee in-lieu of land dedication. Affordable housing including low, very-low, and extremely-low income units are subject to the PDO and PIO at a 50 percent rate of a unit obligation.

4.15.1.2 *Existing Conditions*

Fire Protection

Fire protection in the project area is provided by the San Jose Fire Department (SJFD). The SJFD responds to all fires, hazardous materials spills, and medical emergencies (including injury accidents). The SJFD consists of 665 authorized sworn personnel, over 40 non-sworn uniformed Fire Communication Dispatchers, and 61 civilian personnel. The nearest active fire station to the project site is Station 18 located at 4430 South Monterey Road. Station 33 is located within the project boundary at 2933 St. Florian Way, but has been closed since 2011 due to budget cuts.

For an initial first alarm fire, the SJFD would send two fire engines, one truck/Urban Search and Rescue (USAR), and one battalion Chief. Should additional units be necessary, the SJFD would send a third fire engine, a second truck/USAR, and an additional battalion Chief.

The SJFD employs two standards to measure service performance: travel time and total reflex time. Travel time is a measure of the period of time when a responding emergency fire vehicle leaves the fire station until it arrives at the scene of the emergency. Total reflex time refers to the amount of time that passes from receipt of the emergency call by the Emergency Communications Dispatching Center to the arrival of the responding unit to the emergency scene.

Per General Plan policy ES-3.1, the City's level of service standard for emergency medical services and fire protection services establishes a maximum travel time performance standard of four minutes for first engine response, and six minutes for the second engine and first truck/USAR responses. The four minute response is expected to be achieved 80 percent of the time. The performance standard for total reflex time is eight minutes for the first-due vehicle, 80 percent of the time. Table 4.15-1 shows the standards for travel and total reflex times. Travel times and total reflex times, evaluated both individually and together, represent a more accurate measure of the level of service being provided to the community.

Table 4.15-1:
Standards for Travel and Total Reflex Times

Unit	Travel Time (minutes)	Total Reflex Time (minutes)
1st Engine	4	8
2nd Engine	6	10
1st Truck/USAR	6	10
1st Battalion Chief	9	13
3rd Engine	6	10
2nd Truck/USAR	11	15
2nd Battalion Chief	11	15

Note: Response and reflex times are for fires in buildings less than four stories. Source: City of San Jose Fire Department, Bureau of Support Services, *Standards for Travel Times and Total Reflex Times for Buildings of Less Than Four Stories*, November 17, 2003.

The City participates in the Automatic Air and Mutual Aid programs. San Jose, Santa Clara, Milpitas, and the Santa Clara County Fire Department are all members of the Automatic Aid program. This program allows the station closest to the scene of the fire, when available, to respond to the scene first. Therefore, neighboring departments can work in conjunction to reduce reflex and response times. The Mutual Aid program is a countywide program. When a developing fire overburdens one department, other departments will send the necessary task force to reduce the burden.

Police Protection

Police protection is provided by the City of San Jose Police Department (SJPD). Officers patrolling the project area are dispatched from police headquarters, located at 201 West Mission Street. The City has four patrol divisions, which consist of 16 patrol districts. The patrol districts consist of 83 patrol beats, and the patrol beats consist of 357 patrol beat building blocks. The SJPD employs more than 1,000 sworn officers. The project site is located in the Southern Division, District L.

Schools

The project site is located in the Franklin-McKinley School District and the East Side Union High School District. Franklin-McKinley is comprised of 14 elementary schools, three intermediate (middle) schools, and three charter schools. The district has a total of 9,679 enrolled students.[68] East Side Union High School District is comprised of 11 high schools and has a total of 13,375 enrolled students.[69]

Parks

The City manages a total of 3,435 acres of regional and neighborhood/community serving parkland.[70] Other recreational facilities within the City include community centers, senior centers, youth centers, skate parks, and trails along with other open space facilities provided by the County, Open Space Authority, and Don Edwards National Wildlife Refuge.

The City's General Plan has established level of service benchmarks for parks and community centers. The City's General Plan policy PR-1.1 identifies a service level goal of 3.5 acres of neighborhood/community serving parkland per 1,000 residents through a combination of 1.5 acres of public park and 2.0 acres of recreational school grounds open to the public per 1,000 San Jose residents. As summarized in Table 4.15-2, the City is meeting its level of service goal for neighborhood/community serving parkland but is deficient in recreational school grounds. Therefore, the overall service level goal of 3.5 acres of neighborhood/community serving parkland per 1,000 residents is not currently being met.

Table 4.15-2:
General Plan Parkland Requirements and Existing Parkland

Description	**Service Level Goal** (acres/ 1,000 population)	**Existing Conditions**	
		Service Level (acres/ 1,000 population)	**Area** (acres)
Neighborhood/Community Serving Parkland (City-owned)	1.5	1.6	1,586.9
Recreational School Grounds	2.0	1.4	1,334.2
Citywide/Regional Parkland (City-owned)	7.5	1.9	1,848.5

Note: Service level is based on a population of 985,307 in the City.
Source: *Greenprint 2009 Update for Parks, Recreation Facilities and Trails*. June 2009.

[68] Franklin-McKinley School District, *2012 Developer Fee Justification Study*, May 22, 2012.
[69] *Envision San Jose 2040 General Plan Final Program EIR*. Table 3.9-2. September 2011. Pages 614-615.
[70] Only existing parks are included in the above acreage. Secured or potential parks, which total approximately 118 acres, are not included in the acreage total. Source: *Greenprint 2009 Update for Parks, Recreation Facilities, and Trails*, December 2009.

In addition, the City seeks to provide 7.5 acres per 1,000 residents through a combination of facilities provided by the City and other public land agencies (General Plan Policy PR-1.2). The City currently includes roughly 1,848 acres of regional parkland and other agencies provide about 5,706 acres. Therefore, approximately 7.7 acres of citywide/regional parkland and open space per 1,000 residents is currently being provided. The City, in conjunction with other public land agencies, currently meets its level of service goal for citywide/regionally serving parkland and open space within the City limits.

The City also has a service goal of 500 square feet of community center space per 1,000 residents (General Plan policy PR-1.3). The City currently has approximately 584,900 square feet of community center facilities. Therefore, the City is providing over 590 square feet of community center space per 1,000 residents and is meeting its level of service goal.

Two parks are located within 0.5 miles of the project site. Vieira Park located at the corner of Grassina Street and Adeline Avenue in the Tuscany Hills development is a small 1.3 acre neighborhood park with a playground, picnic tables, and benches. Waterford Park located at the corner of Vistapark Drive and Sandpebble Drive is a 2.8 acre neighborhood park with playgrounds, picnic tables, barbecue pits, and an exercise area.

Libraries

The San Jose Public Library System consists of one main library and 18 open branch libraries. The Dr. Martin Luther King Jr. Main Library, a joint San Jose State Library and San Jose Public Library, is located at the corner of San Fernando and Fourth Streets in downtown San Jose. The libraries nearest the project site include Seven Trees Library located at 3590 Cas Drive and Pearl Avenue Branch Library located at 4270 Pearl Avenue.

Per General Plan policy ES-2.2, the City aims to provide at least 0.59 square feet of library space per capita. Based on the City's population of 971,372, the City has approximately 0.90 square feet of library space per capita. Once the Southeast Library, which would be located in the Evergreen area of San Jose, is constructed and opened, the City will have approximately 0.91 square feet of library space per capita.[71]

4.15.2 Public Services Impacts

4.15.2.1 *Thresholds of Significance*

For purposes of this SEIR, a public services impact is considered significant if the project would:

- Result in substantial adverse physical impacts associated with new or physically altered governmental facilities needed to maintain acceptable service ratios, response times, or other performance objectives for the public services described above;
- Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or,

[71] Sources: 1) *Envision San Jose 2040 General Plan Final Program EIR*, September 2011. Page 620. 2) San Jose Public Library. "Locations." Accessed: August 16, 2013. Available at www.sjpl.org.

- Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.15.2.2 *Fire Protection Impacts*

According to the Envision PEIR, development allowed under the General Plan is not anticipated to require the construction of new fire stations, other than those currently planned. The expansion of existing facilities may be required to accommodate additional equipment and employees. In the event expanded or additional facilities are determined to be necessary, it is assumed that the adherence to General Plan policies such as ES-3.4 would reduce the physical impacts from development of fire department facilities to a less than significant level, although supplemental environmental review would be required. Implementation of General Plan policies and actions would ensure adequate long-term provision of services throughout the city. Therefore, planned growth would not result in a significant impact related to fire protection.

In the event the proposed development requires additional fire protection services, SJFD Station 33 located at 2933 St. Florian Way within the Tuscany Hills development could be reopened. The station is intact and currently used for community meetings and storage. Reopening the existing station could eliminate the need to construct a new fire station elsewhere. **(Less Than Significant Impact)**

4.15.2.3 *Police Protection Impacts*

The amount of development resulting from the project would increase calls for service and could require additional staffing or other resources. However, while the proposed project would incrementally increase the need for police services in the area, it would not require construction of new police facilities.

The project design, including landscaping, surveillance, access control, and lighting would be reviewed by the SJPD to ensure that the design does not adversely affect the SJPD's ability to provide adequate service to the project site. **(Less Than Significant Impact)**

4.15.2.4 *Schools Impacts*

Based on the student generation rates provided by Franklin-McKinley School District, the project would generate approximately 293 new elementary and middle school students.[72] The school district has sufficient district wide capacity to meet the demand, but the need for a new elementary school in the Communications Hill area has been identified. The proposed project includes land set aside for future development of this school, but there are currently no plans and no funding for the school, so analysis of the school is limited to program-level review in this SEIR.

The exact method in which the school district would accommodate the project-generated students in the near term is unknown at this time, however, it is anticipated that they would need to add portable classrooms/buildings, adjust district boundary lines, and/or provide additional bus transportation

[72] The student generation rates for Franklin-McKinley School District are as follows: 0.2 students/single-family detached unit and 0.1 students/single-family attached unit. Source: Franklin-McKinley School District, *2012 Developer Fee Justification Study*, May 22, 2012.

services. It is assumed that the addition of portable classrooms/buildings would occur on existing school sites and that environmental impacts associated with the construction, while requiring separate environmental review, could be mitigated to a less than significant level.

Based on the student generation rates provided by East Side Union High School District, the project would generate approximately 83 new high school students.[73] There is currently sufficient capacity at Andrew P. Hill High School to accommodate the increased demand from the project.[74] In addition, as described below, the project would be required to pay school impact fees to offset its impact to local schools, resulting in a less than significant impact. **(Less Than Significant Impact)**

Standard Project Conditions: As required by state law (Government Code Section 65996) the project shall implement the following standard measure to offset its impact to local schools:

- In accordance with California Government Code Section 65996, the project proponent shall pay the appropriate school impact fees to Franklin-McKinley School District and East Side Union High School District to offset the increased demands on school facilities caused by the project.

4.15.2.5 *Parks Impacts*

The project proposes to construct the remaining 2,200 residential units allowed under the CHSP and provide private open space for development in accordance with the City's Residential Design Guidelines. The project would be required to comply with the Parkland Dedication Ordinance and Park Impact Ordinance, which requires new residential development to either dedicate sufficient land to serve new residents, or pay fees to offset the increased costs of providing new park facilities for new development.

The future residences from the project would incrementally increase the use of existing park facilities in the area. It is not anticipated that the use of existing park facilities in the project area by future residents of the project would substantially deteriorate the facilities. The proposed project also includes 11.9 acres of parks and 7.5 acres (approximately 4.6 miles) of trails and roughly 126 acres of open space, predominately consisting of hillside slopes. Staircases and water quality features are included in the open space areas, consistent with the Specific Plan. This parkland and open space would meet the anticipated recreational demand.

The environmental impacts of developing the proposed project, including the on-site open space/parkland and off-site trails (part of the CHSPADP), are evaluated in this SEIR. **(Less Than Significant Impact)**

[73] The student generation rates for East Side Union High School District are as follows: 0.089 students/single-family detached unit, 0.014 students/single-family attached unit. Source: Battle, Marcus, Personal communications with East Side Union High School District, Associate Superintendent of Business Services, April 30, 3013.
[74] Bjorn Berg, Associate Principal. Andrew Hill High School. Personal Communication. May 28, 2014.

4.15.3.4 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described above, implementation of standard project conditions would ensure public facilities and services impacts are less than significant. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. The construction of on- and off-site trails is consistent with *Major Strategy #10* of the General Plan. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.15.4 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating public facilities and services impacts resulting from planned development within the City. Future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed in *Section 4.15.1.1*, resulting in less than significant public facilities and services impacts.

4.15.5 Cumulative Impacts

The cumulative impact of a group of projects, as with a particular project, on public facility services is generally a fiscal impact. By increasing the demand for a type of service, a group of projects could cause an eventual increase in the cost of providing the service (more personnel hours to patrol an area, additional fire equipment needed to service a tall building, etc.). That is a fiscal impact, not an environmental one. CEQA does not require an analysis of fiscal impacts.

CEQA analysis is, however, required if the increased demand is of sufficient size to trigger the need for a new facility (such as a school or fire station), since the new facility would have a physical impact on the environment. CEQA requires that an EIR then identify and evaluate the physical impacts on the environment that such a facility would have.

Fire Service and Police Protection

Cumulative projects, such as the Valley Christian Schools Expansion and Hitachi Campus and Mixed Use Transit Village projects, would intensify the use of land in the City. The development of all of the cumulative projects would likely increase the demand for fire and police service. However, it is not anticipated that new fire or police facilities would need to be constructed to serve the additional demand.

The cumulative projects, including the proposed project, would not result in a significant cumulative significant impact to fire and police services.

Schools

If the school districts affected by the cumulative projects are unable to accommodate the students generated, it is anticipated that they could add portable classrooms/buildings, adjust district boundary lines, and/or provide additional bus transportation services. As concluded in the certified 2011 Envision San José 2040 General Plan Final EIR, new development and redevelopment under the General Plan would increase the number of students attending local schools. Implementation of General Plan policies and programs would ensure that additional school facilities are sited to serve new residential development. Construction and/or expansion of schools that are fully consistent with General Plan policies and existing regulations would reduce any physical impacts from development or expansion of school facilities to a less than significant level.

In accordance with California Government Code Section 65996, the developer may be required to pay a school impact fee to the school districts to offset the increased demands on school facilities caused by the cumulative projects. Therefore, in conformance with state law (Government Code Section 65996), the project would not contribute towards a significant cumulative impact.

Cumulative Park Impacts

The cumulative projects are required to comply with the City's Parkland Dedication Ordinance (PDO) and Park Impact Ordinance (PIO) which requires new residential development to either dedicate sufficient recreational space to serve new residents or pay fees to offset the increased costs of providing new park facilities for new development. The proposed project would comply with the PDO and PIO. For these reasons, the cumulative projects would not result in a significant cumulative impact to parks and recreational facilities.

Cumulative Library Service Impacts

The General Plan identifies a goal of providing at least 0.59 square feet of library space per capita. The City has been expanding and constructing new library facilities over the last decade to meet the needs of current residents. Currently, the City is exceeding its goal and providing 0.90 square feet of library space per capita.

Development and redevelopment allowed under the General Plan would increase the City's residential population. The General Plan PEIR concluded that the City's existing and planned facilities would provide 0.68 square feet of library space for the anticipated population under the

General Plan. The cumulative projects, including the proposed project, would not increase the City's population beyond what is already anticipated in the General Plan.

The additional demand for library service resulting from growth allowed by the cumulative projects will impact individual neighborhood branches in the areas where growth would occur, and the Martin Luther King, Jr. Main Library. However, it is not anticipated that the cumulative projects would trigger the need for a new library in the City. **(Less Than Significant Cumulative Impact)**

4.15.6 Conclusion

The project would not result in significant public services impacts, including adverse physical impacts associated with new or physically altered governmental facilities (ie, schools, fire stations, police facilities, etc.), increasing the use of parks such that physical deterioration would occur, or requiring the construction of recreational facilities which might have an adverse physical effect on the environment. The project would not result in significant cumulative impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.16 MINERAL RESOURCES

4.16.1 Existing Setting

Extractive resources known to exist in and near the Santa Clara Valley include cement, sand, gravel, crushed rock, clay, and limestone. Santa Clara County has also supplied a significant portion of the nation's mercury over the past century. Pursuant to the mandate of the Surface Mining and Reclamation Act of 1975 (SMARA), the State Mining and Geology Board has designated an area of Communications Hill, bounded generally by the Union Pacific Railroad (which also serves Caltrain), Curtner Avenue, State Route 87, and Hillsdale Avenue as containing mineral deposits which are of regional significance as a source of construction aggregate materials. This is the only area in the City of San Jose designated by either the State Geologist or State Mining and Geology Board as containing mineral deposits which are either of statewide significance or requiring further evaluation to determine significance.

4.16.1.1 *Mineral Extraction on Communications Hill*

Mining operations in the project area began shortly after the discovery of mercury (cinnabar) in the San Juan Batista Hills in 1847. Mercury mines operated continuously from 1847 through 1874. Production peaked in 1871 with the mine producing between 30 and 40 flasks of mercury per month. For comparison, the New Almaden Mines produced nearly 4,000 flasks of mercury per month during the same period, so mining operations at the project site were always a minor part of mercury production in the area. The mines operated intermittently from 1874 through 1918, but never again produced enough ore to justify full scale mining operations. The mines were abandoned and most of the entrances were filled in when quarry operations began at the site in the 1950's. The last entrance was filled in by 1987.

The former Azevedo Quarry is located within the project site. The quarry was operational from 1971 through 2006. Reclamation activities were occurring on the site consistent with a reclamation plan approved by the County of Santa Clara until the parent company of the quarry went out of business in 2010. Most of the land within the Azevedo Quarry is fully reclaimed; a minimal amount of reclamation work is needed on the remainder of the property. Since the quarry owners are no longer in business, County staff have taken over responsibility for the reclamation of the site.[75] Rather than commence reclamation of the final disturbed area, the County is monitoring the progress of the development proposal associated with the proposed project. If the development is approved on the site, the County would deem the Quarry fully reclaimed.[76]

In 1992, the Communications Hill Specific Plan, which allows for construction of the proposed project, was approved. The Specific Plan area includes the area designated by SMARA and land within the City Limits as well as unincorporated Santa Clara County. Housing and streets have been developed in the portion of the mineral resource area within the City of San Jose. The proposed project would complete the build out of the Communications Hill Specific Plan, including the remaining area designated as significant under SMARA.

[75] Reclamation is expected to be complete by the end of 2013. Source: County of Santa Clara, *Surface Mine and Reclamation Act (SMARA) Program Update*, March 21, 2013, http://sccgov.iqm2.com/Citizens/Detail_LegiFile.aspx?ID=66507.
[76] County of Santa Clara. 2013 SMARA Inspection Report for the Azevedo Quarry. October 25, 2013.

4.16.1.2 *City of San José Policies*

Envision San José 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating mineral resources impacts resulting from planned development within the City. All future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed below.

EXTRACTIVE RESOURCES
Policy ER-11.1: When urban development is proposed on lands which have been identified as containing commercially usable extractive resources, consider the value of those resources.
Policy ER-11.2: Encourage the conservation and development of SMARA-designated mineral deposits wherever economically feasible.
Policy ER-11.3: When making land use decisions involving areas which have a SMARA designation of regional significance, balance mineral values against alternative land uses and consider the importance of these minerals to their market region as a whole and not just their importance to San José.

4.16.2 Mineral Resources Impacts

4.16.2.1 *Thresholds of Significance*

For the purposes of this SEIR, a mineral resources impact is significant if construction of the proposed project would:

- Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state; or,
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan.

4.16.2.2 *Impacts to Mineral Resources*

The proposed project would permanently develop the remaining portion of Communications Hill, which has been designated as containing mineral deposits which are of regional significance under SMARA. Development of the proposed project would be consistent with the Communications Hill Specific Plan. In the CHSP FEIR, the loss of access to the mineral resources on site was discussed. Though the Azevedo Quarry was still operational at that time, and seeking to extend its license and expand its excavation area at the time, the FEIR concluded:

> "Considering the abundance and accessibility of rock, aggregate, and mercury materials throughout California, as well as the coordination between the Specific Plan and the proposed quarry extension and modification process, the development of

> Communications Hill as proposed would not represent a significant impact to the extraction of mineral resources."[77]

As noted earlier, the quarry ceased operations in 2006 and the quarry site is nearly fully reclaimed. Mercury mines which were formerly located on the project site have been inactive since 1918 and the openings were sealed by 1987. Though the project site is still designated by the State Mining and Geology Board as containing mineral deposits which are of regional significance, mineral extraction no longer takes place on Communications Hill. The proposed project would not result in a significant impact mineral resources of regional or statewide significance. **(Less Than Significant Impact)**

4.16.2.3 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: The proposed amendments to the General Plan would not result in additional impacts when compared to construction of the proposed project, as the amount and intensity of the proposed development is consistent with the uses planned for the site in the General Plan. As described above, the project would not significantly impact mineral resources. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.16.3 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating mineral resources impacts resulting from planned development within the City. Future development allowed by the proposed GPA shall be in conformance with adopted City plans and policies, including those listed in *Section 4.16.1.2*, resulting in less than significant mineral resources impacts.

4.16.4 Cumulative Impacts

As described previously, the project site is identified under SMARA as containing mineral deposits which are of regional significance as a source of construction aggregate materials, and a quarry operated on the site from 1971 through 2006. Most of the land within the former quarry is now fully

[77] City of San Jose, *Final Environmental Impact Report, General Plan Amendment, Communications Hill Specific Plan*, October 1991.

reclaimed. As a result, no future mineral extraction is proposed on the site. Additionally, the project site has been planned for development with urban uses since adoption of the Communications Hill Specific Plan in 1992. For these reasons, build-out of the proposed project would not affect the availability of mineral resources in the region, and would not have a considerable contribution to a cumulative mineral resources impact. **(Less Than Significant Cumulative Impact)**

4.16.5 Conclusion

The proposed project would not result in significant impacts to mineral resources of regional or statewide significance, nor would it make a considerable contribution to a cumulative mineral resources impact. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**

4.17 AESTHETICS

4.17.1 Existing Setting

4.17.1.1 *Visual Character of the Project Site and Surrounding Area*

Communications Hill rises approximately 300 feet above the valley floor (up to 430 feet above sea level), and is the dominant topographic feature in the mostly flat area of south-central San Jose. The project site comprises approximately 331.6 acres of the Communications Hill area, including upland ridgetop areas, sloping hillside areas, and level areas at the base of the hill. The upper portion of the site is consists of gently-sloping ridgetops, with slopes ranging from 10 percent to over 35 percent. The primary ridge runs for approximately one mile from the southeast section of Communications Hill to the northwest, where it declines in elevation to a series of lower knolls. The remainder of the project site consists mainly of undeveloped, rounded hillside areas. The vegetative cover of the site consists primarily of open grassland with sparse trees and shrubs. The 115-foot high AT&T tower is located on the upland portion of the site. A paved access road, with a gate off Mill Pond Avenue, provides access to the AT&T communications tower.

The existing 765-unit Tuscany Hills residential development is located on the southwestern side of the main ridge. The development consists of dense, attached multi-family residences that range from two to four stories in height. The remainder of Communications Hill is mostly undeveloped, with the exception of public communication facilities and some single family residences. The level areas at the base of Communications Hill, which surround the mainly undeveloped ridge, consist of a variety of existing land uses, including mainly residential uses, a church, the Oak Hill Memorial Park Cemetery, and heavy industrial uses.

4.17.1.2 *Views of the Project Site from the Surrounding Area*

Views of the ridgetop portions of the project site are available from numerous surrounding areas of the City. Motorists and Light Rail Transit (LRT) passengers traveling along Curtner Avenue, Almaden Expressway, SR 87, Capitol Expressway, and Monterey Road can view the slopes and ridgetop areas of the higher elevations on the hill. Views of the project site area from the surrounding areas and roadways are dominated by the existing Tuscany Hills development, the 115-foot high AT&T tower, and the County Communication Center, which have been erected at the highest elevations of Communications Hill. The County Communication Center consists of a fenced area with numerous antennae, as well as a parking lot and single-story support building.

4.17.2 Regulatory Framework

4.17.2.1 *State Designated Scenic Routes*

The California Department of Transportation designates state scenic highways, based upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent that development modifies traveler's enjoyment of the view. There are no highways that are

eligible for designation as scenic highways or have been officially designated within the City of San José.[78]

4.17.2.2 *City of San José Policies*

Communications Hill Specific Plan

As previously described, the proposed project site is within the boundaries of the Communications Hill Specific Plan area. The vision for the Specific Plan area is for a very urban, high density, pedestrian-oriented community with 4,700 residential units atop the very visible Communications Hill in central San José. The Specific Plan includes a grid street pattern to accentuate the hill and maximize high density residential development and community facilities with the lower sides reserved for substantial swaths of grassy open space hillsides. The Plan also calls for construction of parks, an elementary school and civic use area, fire station, and neighborhood-serving commercial uses. Medium- to high-density residential uses, a fire station, and some parks and trails were constructed previously at the top of the hill as part of the Tuscany Hills project.

The CHSP includes design standards for all components of development, including topography and grading, stairs, trails, parks, streets, and residential, commercial, and industrial development. Design standards for infrastructure and utilities such as storm drainage, water storage, sanitary sewer, and parking are also included. The overall intent of the design standards is to create not just residential development, but a neighborhood with a sense of social interaction much like older successful neighborhoods. The Specific Plan directs growth by integrating uses and establishing a specific urban structure.

Envision San Jose 2040 General Plan

Various policies in the City's General Plan have been adopted for the purpose of avoiding or mitigating visual and aesthetics impacts resulting from planned development within the City. All future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed below.

SCENIC VISTAS AND THE BUILT ENVIRONMENT
Policy CD-1.24: Further the Community Forest Goals and Policies in this Plan by requiring new development to plant and maintain trees at appropriate locations on private property and along public street frontages. Use trees to help soften the appearance of the built environment, help provide transitions between land uses, and shade pedestrian and bicycle areas.
Policy CD-1.25: Within new development projects, include preservation of ordinance-sized and other significant trees, particularly natives. Avoid any adverse affect on the health and longevity of such trees through design measures, construction, and best maintenance practices. When tree preservation is not feasible, include replacements or alternative mitigation measures in the project to maintain and enhance our Community Forest.
Policy CD-1.28: Locate utilities to be as visually unobtrusive as possible, by placing them underground or

[78] California Department of Transportation. "California Scenic Highway Program". Accessed May 5, 2012. <http://www.dot.ca.gov/hq/LandArch/scenic_highways/scenic_hwy.htm>.

within buildings. When above-ground or outside placement is necessary, screen utilities with art or landscaping.
Policy CD-1.29: When approving new construction, require the undergrounding of distribution utility lines serving the development. Encourage programs for undergrounding existing overhead distribution lines. Overhead lines providing electrical power to light rail transit vehicles and high tension electrical transmission lines are exempt from this policy**.**
GATEWAYS AND VISIBILITY FROM FREEWAYS
Policy CD-10.3: Require that development visible from freeways (including 101, 880, 680, 280, 17, 85, 237, and 87) is designed to preserve and enhance attractive natural and man-made vistas.

Municipal Code

The City's Municipal Code includes several regulations associated with protection of the City's visual character and control of light and glare. For example, Chapter 13.32 (Tree Removal Controls) regulates the removal of trees on private property within the City, in part to promote scenic beauty of the city.

Several sections of the Municipal Code include controls for lighting of signs and development adjacent to residential properties. These requirements call for floodlighting to have no glare and lighting facilities to be reflected away from residential use so that there will be no glare.

The City's Zoning Ordinance (Title 20 of the Municipal Code) includes design standards, maximum building height, and setback requirements. The *Open Space (OS)* district can be applied to protect areas with scenic values.

City Council Policy 4-2: Lighting

This policy calls for dimmable, programmable lighting for new streetlights, which would control the amount and color of light shining on streets and sidewalks. Light is to be directed downward and outward. New and replacement streetlights should also offer the ability to change the color of the light from full spectrum (appearing white or near white) in the early evening to a monochromatic light in the later hours of the night and early morning. At a minimum, full-spectrum lights should be able to be dimmed by at least 50 percent in late night hours.

City Council Policy 4-3: Private Outdoor Lighting on Private Developments

This calls for private development to use energy-efficient outdoor lighting that is fully shielded and not directed skyward. Low-pressure sodium lighting is required unless a photometric study is done and the proposed lighting referred to Lick Observatory for review and comment. One of the purposes of this policy is to provide for the continued enjoyment of the night sky and for continuing operation of Lick Observatory, by reducing light pollution and sky glow.

Design Guidelines and Review Process

The San José City Council has adopted design guidelines for various land use types: residential, industrial, commercial, Downtown/historic, and Downtown. The guidelines generally seek to provide a common understanding of the minimum design standards to be applied to various land uses, development types, and sometimes, specific locations. The design review process evaluates projects for conformance with City ordinances and requirements of previous entitlements such as Planned Development zoning approvals or concurrent processes such as subdivisions.

4.17.3 Visual and Aesthetic Impacts

4.17.3.1 *Thresholds of Significance*

For the purposes of this SEIR, a visual and aesthetic impact is considered significant if the project would:

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

The assessment of a project's visual impact is depended on an evaluation of the size, character, and design of the proposed development, and the degree to which the project is visually compatible with the surrounding community. The primary criteria that are considered in this assessment include: 1) the spatial relationship of the proposed structures within the site and to neighboring land uses; 2) the mass, scale, and height of the proposed structures and their visibility from the surrounding area; 3) the degree to which the project would contrast with the surrounding development in design and materials; and 4) whether the project is likely to result in visual impacts including glare, nighttime lighting, or provide elevated views to nearby residences.

4.17.3.2 *Change in Visual Character*

The visual changes resulting from development of the project would be particularly noticeable to existing residences within or adjacent to the Communications Hill area, including residents of the Helzer Ranch residences, the Carol Drive subdivision, the Millpond Mobile Home Park, the Chateau La Salle Mobile Home Park, and the residences across Hillsdale Avenue. The addition of multi-family residential structures on the ridgetop areas of the site, along with roadways, would be visible to existing residents.

With development of the proposed project, motorists on regional arterials, such as SR 87, Capitol Expressway, Hillsdale Avenue, and Curtner Avenue, along with residents with long-range views of the ridgetop and upper slopes, would experience views of a dense urban residential development on and around the top of Communications Hill, with a band of open space on the side slopes. Views of the site would be substantially altered as the open space of the existing hillside and visible ridgetop

would be replaced with multi-family residential uses. While a portion of the site would remain as open space, the residential structures, urban roadways, cut and fill slopes, and landscaped areas would significantly alter the appearance of the site. Motorists and LRT passengers, as well as residents in the project vicinity, would be aware of this substantial change in the character of the hillside and ridgetop areas.

To illustrate the change in visual character, photo simulations were prepared for the proposed project. The simulations, which show existing and future views of the project site from several surrounding locations, are shown in Figures 4.17-1 through 4.17-9.

To minimize impacts from the intensification of development on adjoining neighborhoods, the Communications Hill Specific Plan contains Design Standards related to all components of development including grading, building interfaces, open spaces, streets and streetscapes, and landscaping. The Design Standards are intended to create a unique urban structure with an integrated mix of uses with a focus on a mix of housing types which makes an architecturally diverse neighborhood. Consistent with the Specific Plan, building and unit types and density would be more urban than suburban with townhouses with tuck-under (podium) parking, stacked walk-up flats, small podium apartment houses, and mid-rise apartment buildings.

The Design Standards include requirements and policies for building massing, height, and articulation, architectural elements, setbacks, parking ratios, and private driveways and alleys, among others. For example, a minimum front or side setback of five feet from the public right-of-way is required for all multi-family residential blocks. Encroachments into this setback are encouraged but limited to 65 percent of the street frontage. Building with breaks in the overall massing give residential scale to the street frontage. Buildings must be modulated or stepped back every 30 feet. The maximum length of a building is limited to 130 feet. All parking garages much be enclosed to secure access.

In addition to the CHSP Design Standards, future development would be subject to General Plan policies intended to reduce and avoid conflicts between various land uses. For example, new development would be required to use a combination of building setbacks, building step-backs, materials, building orientation, landscaping, and other design techniques to provide a consistent streetscape that buffers lower-intensity areas from higher-intensity areas. Potential shade, shadow, massing, viewshed, or other land use compatibility concerns (GP Policy CD-4.5) would be reduced. In accordance with GP Policy CD-4.9, the final design of new structures shall be consistent with or complementary to the surrounding neighborhood fabric on the hill(including but not limited to prevalent building scale, building materials, and orientation of structures to the street).

In the 1992 Final EIR prepared for the CHSP, impacts to visual and aesthetic resources were identified as significant and unavoidable. These impacts were identified, in part, as the result of development of new residences and construction of a water tank that are currently in place as part of the Tuscany Hills development. Although the area surrounding and within the Specific Plan area is not a pristine area or part of an adjacent and connected mountain range, build-out of the proposed project would introduce additional development on grassy hillsides visible from valley floor areas. Development of this area would result in a significant impact to a scenic vista from portions of the central, eastern and southern areas of San José.

PHOTO SIMULATION - LOCATIONS MAP

FIGURE 4.17

Existing View Angle

Proposed View Angle

PHOTO SIMULATION - VIEW 1

FIGURE 4.17-1

Existing View Angle

Proposed View Angle

PHOTO SIMULATION - VIEW 2

FIGURE 4.17-2

Existing View Angle

Proposed View Angle

PHOTO SIMULATION - VIEW 3

FIGURE 4.17-3

Existing View Angle

Proposed View Angle

PHOTO SIMULATION - VIEW 4

FIGURE 4.17-4

Existing View Angle

Proposed View Angle

PHOTO SIMULATION - VIEW 5

FIGURE 4.17-5

Existing View Angle

Proposed View Angle

PHOTO SIMULATION - VIEW 6

FIGURE 4.17-6

Existing View Angle

Proposed View Angle

PHOTO SIMULATION - VIEW 7

FIGURE 4.17-7

Existing View Angle

Proposed View Angle

PHOTO SIMULATION - VIEW 8

FIGURE 4.17-8

Existing View Angle

Proposed View Angle

PHOTO SIMULATION - VIEW 9

FIGURE 4.17-9

While the proposed project would be designed consistent with the City's design guidelines and applicable General Plan policies to reduce visual impacts, the implementation of the proposed project would result in the development of a mostly undeveloped hillside and would significantly change the visual character and quality of the site.

Impact AES-1: While the proposed project would be designed consistent with the City's design guidelines and applicable General Plan policies to reduce visual impacts, the development of the project would significantly change and degrade the existing visual character and quality of the site as compared to existing conditions. This same impact was identified previously in the certified Envision San José 2040 General Plan Final EIR (SCH#2009072096). **(Significant Impact)**

The project would be subject to City and CHSP design guidelines, and General Plan policies intended to mitigate aesthetics impacts. Conformance with these policies would reduce impacts, but not to a less than significant level.

Shade and Shadow Impacts

The proposed project includes the construction of up to six podium buildings up to 85 feet in height, which would be approximately 45-55 feet taller than most of the other residential structures on the hill. As shown on Figure 1.0-4 (Conceptual Land Use Plan), two of these buildings would be located within the Village Center (central portion of the site). The other four would be located in the central/eastern portion of the site. The Specific Plan included the construction of a total of nine podium structures, one of which was constructed as part of the Tuscany Hills project. With development of the proposed project, two less podium buildings than originally envisioned in the approved Specific Plan would be constructed.

Given the locations of the proposed podium structures and the directionality of the sun, the proposed podium structures would only shade the future proposed development. The existing Tuscany Hills development would not be affected by shade and shadow from the podium structures. Similarly, future park uses near the central portion of the site may be shaded for short periods of time during the winter months by one or two podium structures when the sun is lowest in the southern sky. **(Less Than Significant Impact)**

Light and Glare Impacts

The proposed project would have outdoor security night lighting on the site along walkways and roadways. Low-pressure sodium lighting would be used, consistent with City policy. The City's *Outdoor Lighting on Private Developments Policy* requires that light fixtures be oriented downward and designed to preclude spillover light. This outside lighting would generally increase the level of illumination in the area, but would not cause significant glare or light spillover into adjacent properties. For these reasons, the proposed project would not result in significant light and glare impacts. **(Less Than Significant Impact)**

4.17.3.3 *Consistency with Plans and Policies*

Envision San Jose 2040 General Plan

As previously described, the CHSP was incorporated into the 2040 General Plan, and the development of 2,200 residential units and 1.44 million square feet of industrial park uses was included in the assumptions of future development in the General Plan PEIR. As described in *Section 2.5 General Plan and Specific Plan Text Amendments*, the project proposes several minor amendments to the General Plan. These changes are partially proposed to make the Specific Plan, which was approved in 1992, more consistent with the Envision San José 2040 land use designations. The overall intent, vision, and amount of development for the CHSP is not substantially changed due to these revisions, as previously described.

Consistency: Build-out of the CHSP was identified as having significant unavoidable aesthetic impacts in both the 1992 Final EIR prepared for the CHSP and the 2011 Envision San José 2040 General Plan Final EIR. Policies were included in both the CHSP and the Envision 2040 General Plan to mitigate visual and aesthetic impacts. The proposed project would be required to adhere to these policies to the maximum extent feasible. The proposed project is the construction of jobs and housing in an identified Growth Area of the City, consistent with General Plan goals and policies, and would adhere to relevant General Plan policies to reduce visual and aesthetic impacts to the greatest extent feasible. For these reasons, the project is consistent with the 2040 Envision San José General Plan.

4.17.4 Program-Level Mitigation and/or Avoidance Measures

The City's General Plan policies have been adopted for the purpose of avoiding or mitigating aesthetics and visual resources impacts resulting from planned development within the City. Future development allowed by the proposed project shall be in conformance with adopted City plans and policies, including those listed in *Section 4.17.2.2*. Conformance with these policies would reduce aesthetics impacts, but not to a less than significant level.

4.17.5 Cumulative Impacts

Change in Visual Character

Individually, the proposed project would substantially change the visual character of the site because the project would develop a site that is mostly undeveloped.

The cumulative projects, including the proposed project, would result in the loss of ordinance size trees; however, each project would be required to mitigate impacts to ordinance size trees by planting replacement trees. Therefore, the cumulative projects would not result in a significant cumulative impact to ordinance size trees.

The cumulative projects, including the proposed project, could incrementally increase the amount of lighting in the City; however, the cumulative projects would be required to comply with the City's Outdoor Lighting Policy, which requires the use of low-pressure sodium lighting that is directed

downward and shielded in a manner to prevent and/or reduce light pollution. For this reason, the cumulative projects would not result in significant light or glare impacts.

For each cumulative project, visual and aesthetic effects (such as the change in visual character of a project site area) would be lessened by complying with the City's design guidelines and incorporating parks and open space, using aesthetically-pleasing architectural features in building designs, and/or installing landscaping.

Although the project would individually result in a significant aesthetic impact, the 2011 Envision San José 2040 General Plan Final EIR concluded that build-out of the General Plan would result in a less than significant cumulative impact to visual resources. The proposed project, therefore, would not contribute towards a significant cumulative impact regarding the degradation of the visual character of the area. **(Less Than Significant Cumulative Impact)**

4.17.6 Conclusion

Impact AES-1: While the proposed project would be designed consistent with the City's design guidelines and applicable General Plan policies to reduce visual impacts, the development of the project would significantly change and degrade the existing visual character and quality of the site as compared to existing conditions on-site. This same impact was identified previously in the certified Envision San José 2040 General Plan Final EIR (SCH#2009072096). **(Significant and Unavoidable Impact)**

The project would not result in other significant visual and aesthetic impacts, such as having a substantial adverse effect on a scenic vista, substantially damaging scenic resources, or creating a new source of light or glare which would adversely affect day or nighttime views in the area. The proposed project would not have a considerable contribution to other significant cumulative aesthetic impacts. **(Less Than Significant Impact) (Less Than Significant Cumulative Impact)**