

5.0 OTHER CEQA CONSIDERATIONS

5.1 EFFECTS FOUND NOT TO BE SIGNIFICANT

Environmental issues presented under the Significance Criteria sub-section of all environmental topics in Chapter 4 of this SEIR were derived from environmental issues and topics identified in Appendix G of the *CEQA Guidelines*. The only environmental issues in Appendix G not presented in Chapter 4 were those where the Project either had no impact or a less-than-significant impact under all issues under an environmental topic, and they are as follows:

Agriculture and Forestry Resources. Based on criteria derived from Appendix G to the *CEQA Guidelines*, a project would have a significant impact on agriculture or forestry resources if the proposed Project would:

- Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the 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 in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g));
- Result in the loss of forest land or conversion of forest land to non-forest use; or
- Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.

The Project site is not in agricultural use and has no agricultural potential due to its small size, location, and currently developed condition. Therefore, the Project would not adversely affect any existing agricultural resources or operations. The property does not contain any forest land or support forestry services. Since the properties surrounding the Project site are developed with office/light industrial, residential, and commercial uses, the proposed Project would not adversely affect other agricultural properties or result in the conversion of farmland to non-agricultural use or forest land to a non-forestry use.

The Project site is currently developed with office buildings. The site's agricultural timberland production potential is low due to existing on-site development as well as surrounding development. State farmland mapping shows the Project site as "Urban and Built-Up Land," indicating that this land has already been

converted to non-agricultural use.¹ There are no existing agricultural or forestry uses/operations at or adjacent to the site. The Project site is not zoned for agriculture or timberland uses or subject to a Williamson Act contract.

Mineral Resources. Based on criteria derived from Appendix G to the State *CEQA Guidelines*, a project would normally have a significant impact on mineral resources if the proposed Project would:

- Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; or
- Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan.

The City of Sunnyvale General Plan does not identify any regionally or locally important mineral resources on the Project site. The proposed Project would not remove any locally or regionally important mineral resources from production or preclude access to important mineral resources.

Population and Housing. Based on criteria derived from Appendix G to the State *CEQA Guidelines*, a project would normally have a significant impact on population or housing if 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);
- Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

An extensive evaluation of potential growth in population for the City of Sunnyvale was recently completed as a part of the City's General Plan update process. The environmental effects of anticipated population growth and housing demand were assessed in the General Plan EIR. The General Plan was adopted July 2011 after certification of its final EIR.

The City of Sunnyvale General Plan Figure 2-17 Potential Growth Areas, designates 8,730,000 square feet of new office/industrial floor area to the Moffett Park area of the City. The proposed Project would result in an increase in approximately 1,107,610 square feet of office space from existing conditions. As the proposed Project would not exceed projected growth rates for the area, the Project would not induce substantial population growth to the area and no impacts were identified.

¹ California Department of Conservation, Division of Land Resources Protection, 2003. *Santa Clara County Important Farmland 2002*. July.

The Project site presently contains office buildings and provides no residential uses. Project implementation would entail the demolition of existing office buildings on the Project site, and no housing or residents would be displaced.

5.2 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Section 15126 (b) of the *CEQA Guidelines* requires that an EIR describe any significant impacts that cannot be avoided, even with the implementation of feasible mitigation measures. The environmental effects of the proposed Project on various aspects of the environment are discussed in detail in Chapter 4 of this Draft SEIR.

All significant and potentially significant impacts for the proposed Project would be mitigated to a less-than-significant level with implementation of mitigation measures included in this SEIR. No significant and unavoidable adverse impacts would occur as the result of the proposed Project.

5.3 GROWTH-INDUCING IMPACTS

As required by Section 15126.2(d), an EIR must discuss ways in which a proposed Project could foster economic or population growth or the construction of additional housing, either directly or indirectly, in the surrounding environment. The EIR must also discuss the characteristics of the Project that could encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. Growth can be induced in a number of ways, such as through the elimination of obstacles to growth, through the stimulation of economic activity within the region, or through the establishment of policies or precedents that directly or indirectly encourage additional growth.

In general, a project may foster growth in a geographic area if the project removes an impediment to growth (e.g., the establishment of an essential public service, the provision of new access to an area, a change in zoning or general plan approval) or economic expansion occurs in response to the project (e.g., changes in revenue base, employment expansion etc.). These circumstances are further described below:

- **Elimination of Obstacles to Growth:** This refers to the extent to which a proposed Project removes infrastructure limitations or provides infrastructure capacity, or removes regulatory constraints that could result in growth unforeseen at the time of Project approval.
- **Economic Effects:** This refers to the extent to which a proposed Project could cause increased activity in the local or regional economy. Economic effects can include such effects as the Multiplier Effect. A “multiplier” is an economic term used to describe inter-relationships among various sectors of the economy. The Multiplier Effect provides a quantitative description of the direct employment effect of a project, as well as indirect and induced employment growth. The multiplier effect acknowledges that the on-site employment and population growth resulting from each project is not the complete picture of growth caused by the project.

The Project would involve the replacement of existing buildings with new buildings on the site and the Project would not extend new roads or infrastructure to any adjacent properties where such facilities are

not currently present. The Project would not remove any barriers to growth or development that have previously limited development in the surrounding area.

EMPLOYMENT GROWTH

After completion of Project construction, the research and development/office buildings would provide opportunities for businesses to locate in the City of Sunnyvale. Attracting and retaining quality jobs and development, and preserving the local economy are key policies in the City's General Plan and the Moffett Park Specific Plan (MPSP). These businesses would provide jobs for Sunnyvale residents and individuals residing in the surrounding region. The exact number of jobs offered by these businesses would depend on a number of factors, including the type of businesses (e.g., tenant mix) and the state of the local and regional economy.

The proposed Project would construct approximately 1.8 million square feet of research and development/office space, including 50,000 square feet of employee amenity space. Using the assumptions of the certified MPSP EIR, on average, one job can be accommodated in 340 square feet of industrial/office space; therefore, the proposed research and development/office uses could generate approximately 5,145 new jobs.

In addition, construction of the proposed Project would generate employment opportunities for construction workers, heavy equipment operators, engineers, surveyors, building inspectors, and several other types of workers related to construction activities.

FOSTER POPULATION AND HOUSING GROWTH

Population and housing growth is directly affected by the construction of new housing units. The proposed Project would not directly increase population growth through the construction of new housing units. However, the jobs generated by the proposed Project would be anticipated to increase the demand for housing in the City of Sunnyvale, which could indirectly result in population growth for the City and the region.

INDIRECT POPULATION GROWTH

A number of factors would determine how the proposed Project would affect demand for housing in the region. These factors include, but are not limited to, the following:

- The number of future employees that would relocate to the City (it is assumed that employees that relocate to the City would increase the demand for new housing);
- The number of future employees who currently live and work in the City (it is assumed that these employees would not increase the demand for new housing because they would already be living in the City); and, the future economic prosperity and unemployment rate of the City.

To assess the proposed Project's indirect effect on population growth within the region, a *worst-case* scenario approach is utilized. The worst-case scenario assumes that all of the jobs generated by the

proposed Project would be filled by employees that relocate to the region. In reality, persons who already live in the City of Sunnyvale and within the region would fill many of the generated jobs. Nonetheless, to determine the worst-case population growth that would be expected to occur in the region, the number of employees generated by the Project is multiplied by the labor force participation rate (i.e. the number of residents per employee). This calculation is done in order to take into account the number of persons that would be supported by the employee, but that do not work (i.e. children, stay at home parents, college students living at home, etc).

Based on calculations from ABAG's *Projections 2009*, the County of Santa Clara would have a labor force participation rate of 2.08 residents per 1 employee in the year 2030. The proposed Project would generate approximately 5,145 new jobs (including jobs generated by the proposed research and development, office, and amenity uses). Based on a labor force participation rate of 2.08, the 5,145 new generated by the proposed Project would result in a regional population increase of approximately 10,701 persons.

It is assumed that the majority of the anticipated population increase (as driven by anticipated employment) would prefer to live within the region, near the City of Sunnyvale. Given the complex characteristics and relationships between the location of employment and where people chose to live, it would be difficult to specifically determine where future employees of the proposed Project would chose to live within the greater region. Factors that influence where employee households chose to live include, but are not limited to the following:

- Whether the employment is full or part-time.
- The salary of employment.
- The location of employment for primary and secondary wage earners within the same household.
- The availability of affordable housing within a reasonable commute distance to the location of employment.
- An individual's tolerance to the amount of time spent commuting to and from work.
- The location of high-quality schools in the region.
- The overall quality of life of the community as perceived by individuals and families.

Based on the complex factors noted above, the process of determining the specific location of population and housing growth would be speculative and based on several assumptions that may or may not be true in the future. Therefore, the population and housing growth that would indirectly occur as a result of the proposed Project was not determined for specific cities and communities within the region. However, a regional analysis is addressed below with the intent of estimating potential impacts to Santa Clara County.

According to ABAG's *Projections 2009*, the average household size of Santa Clara County is projected to be 2.9 persons per household in the year 2035. Therefore, a population increase of approximately 10,701

persons would be anticipated to result in the demand for approximately 3,690 new housing units in the County. The construction of new housing would indirectly result in the population growth of the County.

According to ABAG's *Projections 2009*, the population of Santa Clara County is projected to increase from 1,682,585 to 2,431,400 persons (an increase of 748,815 persons) between the years 2000 and 2035. The population growth that would be anticipated as a result of implementation of the proposed Project (10,701 persons - using a worst-case scenario) would be 1.4 percent of the projected population increase for the County between the years 2000 and 2035. A percentage of the employees that would work in the proposed Project area would also live outside of Santa Clara County (i.e. in San Francisco, San Mateo, Alameda, etc.). Therefore, the population growth that would be anticipated to occur in Santa Clara County would be less than 1.4 percent in reality. The amount of population growth indirectly generated as a result of the proposed Project would be within the range of, and consistent with, the growth assumed by ABAG (*Projections 2009*) for Santa Clara County in the year 2035.

According to ABAG's *Projections 2009*, the local potential for housing growth between the years 2000 and 2035 in Santa Clara County is 261,467 units. The amount of housing unit growth anticipated as a result of the proposed Project (3,690 units - using a worst case scenario) would be approximately 1.4 percent of the projected housing growth between 2000 and 2035. Therefore, the amount of housing growth indirectly generated by the proposed Project would be within the range and consistent with the housing allocations assumed by ABAG for Santa Clara County in the year 2035.

REMOVE OBSTACLES TO POPULATION GROWTH

Several types of projects can induce population growth by removing obstacles that prevent growth. An example of this type of project would be the expansion of a wastewater treatment plant, which would accommodate additional sewer connections within the service area, and therefore would allow future construction and growth. The proposed Project would not result in or require the construction or expansion of such public facilities. In addition, the proposed Project is an infill project in a developed, urban area, which, if implemented, would not remove any other obstacles that could encourage growth in an adjacent, undeveloped area.

TAX EXISTING COMMUNITY SERVICES OR FACILITIES

Substantial increases in population growth may result in the taxing of existing community services and facilities, thus requiring the construction of new facilities that could cause significant environmental effects. The construction of new facilities may also result in the need to expand the service capacity, which would then allow for future population growth.

The MPSP identifies the major infrastructure and utility improvements that would be required to accommodate future development within the MPSP area. The MPSP EIR identifies that future development projects facilitated by the MPSP would be required to individually contribute funds, as conditions of project approval, to the City of Sunnyvale to finance their proportional fair share of these

improvements. Therefore, the incremental impacts of future development projects in the *MPSP* area would mitigate potentially significant impacts to a less than significant level.

As the proposed Project is within the *MPSP* area, it would be required to contribute funds, as a condition of project approval, to the City of Sunnyvale to finance its proportional fair share of infrastructure and utility improvements. Therefore, the proposed Project would not directly substantially tax existing public services and utilities.

The population growth that would occur from future employment generated by the proposed Project would likely be dispersed throughout the region. Therefore, the potential public services and facilities impacts from future residential development would be distributed to several districts or agencies rather than effecting just one service district or agency. Future housing projects that would be developed to accommodate the regional population growth would also be reviewed in accordance with local regulations and the continued requirements under CEQA. This process would allow public service and utility agencies the opportunity to determine if there is adequate capacity to serve future residential projects at the time the project is submitted for review and consideration. Therefore, based on the criteria stated above, the proposed Project may indirectly tax existing services and facilities, but potentially significant impacts would be mitigated on a project-by-project basis.

ENCOURAGE AND FACILITATE OTHER ACTIVITIES THAT COULD SIGNIFICANTLY AFFECT THE ENVIRONMENT

The individual environmental effects of the proposed Project are discussed in Chapter 3 (Existing Conditions, Environmental Impacts and Mitigation Measures). The cumulative effects of the proposed Project in combination with the environmental effects of the other potential projects in the area are discussed in Chapter 4 (Cumulative Impacts). In addition, the proposed Project employment generation would be anticipated to increase the demand for housing in the City and region. If housing projects are constructed as an indirect result of the Project's employment generation, various environmental effects could occur that would contribute to local and regional environmental problems related to air quality, traffic, water quality, public services, utilities and natural resources. These environmental effects would be analyzed and considered in accordance with the requirements of local regulation and CEQA prior to the approval and construction of future residential projects throughout the region.

CONCLUSION

The proposed Project would indirectly induce population and housing growth in the region as a result of economic development. The anticipated increase in population would not be considered substantial because it would be within the range of employment and population growth projected for the City of Sunnyvale and the County of Santa Clara. In addition, the population growth generated by the proposed Project would not remove obstacles to growth, tax existing public facilities and services, or encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively.

The moderate growth that may be induced by the implementation of the proposed Project, either directly or indirectly, is anticipated to be only a portion of the buildout of the projects currently under consideration or review for the surrounding area, including the buildout of the MPSP area and, would be consistent with adopted growth projections for the region.

5.4 CUMULATIVE IMPACTS

5.4.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REQUIREMENTS

This section of the SEIR analyzes potential impacts of reasonably foreseeable growth, including the proposed CEQA Project. The State CEQA Guidelines § 15355 defines cumulative impacts as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts ...” The State CEQA Guidelines § 15130, as amended, state that the discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great a detail as is provided for the effects attributable to the Project alone. The discussion should be guided by the standards of practicality and reasonableness and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact. The following elements are necessary in an adequate discussion of cumulative impacts:

(1) Either:

- a. A list of relevant past, present and probable future projects, producing related or cumulative impacts, including, if necessary, those projects outside the control of the Agency, or
- b. A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area-wide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency. When utilizing a list, as suggested in paragraph (1) of subdivision (b), factors to consider when determining whether to include a related project should include the nature of each environmental resource being examined, the location of the project and its type.

“Probable future projects” may be limited to those projects requiring an agency approval for an application which has been received at the time the notice of preparation is released, unless abandoned by the applicant; projects included in an adopted capital improvements program, general plan, regional transportation plan, or other similar plan; projects included in a summary of projections or projects (or development areas designated) in a previously approved project (e.g., a subdivision); or those public agency projects for which money has been budgeted. Lead agencies should define the geographic scope of the area affected by the cumulative effect and provide a reasonable explanation for the geographic limitation used.

- (2) A summary of the expected environmental effects to be produced by those projects with specific reference to additional information stating where that information is available.
- (3) A reasonable analysis of the cumulative impacts of the relevant projects. An EIR shall examine reasonable, feasible options for mitigation or avoiding the project's contribution to any significant cumulative effects.
- (4) With some projects, the only feasible mitigation for cumulative impacts may involve the adoption of ordinance or regulations rather than the imposition of conditions on a project-by-project basis.

Cumulative impacts may be discussed in terms of Project impacts, in combination with impacts anticipated for future development (including approved and planned development within the Project area and surrounding affected area). The geographic area for each impact varies, depending on the nature of the impact, whether it is regional, such as air quality, or local, such as noise.

Quantification can be difficult for cumulative impacts, as it requires speculative estimates of impacts including, but not limited to, the following: the geographic diversity of impacts (impacts of future development may affect different areas); variations in time of impacts (many of the Project's and future development impacts, particularly those that are short-term, would occur at different times, and would be reduced or removed before other short-term impacts occurred); and data for future development may change following subsequent approvals. However, every attempt has been made herein to make sound qualitative judgments of the combined effects of, and relationship between, land uses and potential impacts.

5.4.2 CUMULATIVE PROJECTS

An assessment of cumulative impacts takes into consideration existing conditions plus the proposed Project, in combination with projects currently under construction, approved (unbuilt) projects, projects in review, and reasonably foreseeable projects in the Project area. The projects listed in Table 5.4-1, *Cumulative Project List*, are being considered as related approved/pending and reasonably foreseeable development proposals, as reflected in the City record. These projects are also shown graphically in Figure 5.4-1, *Cumulative Projects*.

5.4.3 CUMULATIVE ANALYSIS

Pursuant to § 15355(b) of the State CEQA Guidelines, "The cumulative impact... is the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future project." Potential cumulative impacts of the proposed Project, in combination with cumulative development projects are discussed below. The precise site-specific impacts of future development have been or would be discussed in appropriate environmental documentation at the time the project is submitted to city staff for approval consideration.

The purpose of this section is to examine the cumulative environmental impacts that would result from future development that would be facilitated by the proposed Project, as well as other probable future projects, which when considered together with the Project, could increase the severity or significance of environmental effects. Based on the following analysis, cumulative development associated with the proposed Project and future growth in the City of Sunnyvale would result in potentially significant impacts to traffic, noise, and air quality.

LAND USE AND PLANNING

With regard to cumulative impacts, the projects identified in Table 5.4-1, *Cumulative Project List*, above, include 22 existing or approved projects. Construction of currently approved and pending projects in the Project vicinity would permanently alter the nature and appearance of the area as future development occurs over upcoming years. Gradual buildout of the projects considered in the cumulative analysis would result in a change in the existing conditions; however, it is not anticipated that the change would result in a significant cumulative land use impact as it would not substantially or adversely alter the overall land use setting of the community. Future construction activities within the cumulative study area would occur on various sites and at varied times, when an application for development is made. Such construction-related impacts would be short-term and would cease upon completion.

In addition, all new development projects within the cumulative study area would be subject to additional environmental and design review on a site-specific, project-by-project basis to ensure potential land use conflicts are limited to the extent possible during the construction process. All future construction activities would be required to be consistent with the City's regulatory requirements and applicable conditions of approval to reduce potential cumulative effects of construction to a less than significant level.

AESTHETICS

The geographic scope of the cumulative analysis for aesthetics is limited to the public areas from which the proposed Project is visible and would have the potential to visibly change the existing visual character of the Project area, as described in Section 4.2, Aesthetics. This area is defined as the area generally bounded by office development to the north, Moffett Park Drive and State Route 237 (SR-237) to the south, Borregas Avenue to the east, and North Mathilda Avenue to the west. The subject property is developed with 12 buildings and approximately 600,000 square feet of existing office space and a technical college along with associated driveways, parking areas, and landscaping. The Project would develop a corporate campus within the Moffett Park Specific Plan (MPSP) area of the City. Development surrounding the Project site consists of older, obsolete low-rise business parks with some newer corporate campus development nearby. While the construction of the proposed Project may initially result in the juxtaposition of a newer corporate campus constructed to design standards that are not consistent with the structures currently existing in the Project area, as the MPSP area redevelops as directed by the MPSP, a more uniform business park setting will be established in the Project area, as evidenced by nearby properties that are constructed to design standards similar to those used by the proposed Project.

**TABLE 5.4-1.
CUMULATIVE PROJECT LIST**

Address	Land Use	Description
1010 Sunnyvale Saratoga Road	Commercial	14,673 sf drug store/pharmacy w/ drive-thru
1165 E. Arques Avenue	Commercial	Use Permit for new fitness center
927 E. Arques Avenue	Commercial	New multi-tenant commercial building/site improvements
1100 Enterprise Way	Industrial	Major Moffett Park design review application for modification of building D in Moffett towers campus project (80% FAR); building increase from 200,000 to 325,000 sf
111 Java Drive	Industrial	3 new Office/R&D buildings totaling 387,196 sf
1152 Bordeaux Drive	Industrial	Moffett Park Major Design Review application for the demolition of several structures over several parcels and the construction of 9 office buildings with 1.9 million sf office space, amenities building, onsite parking and parking structure
1221 Crossman Avenue	Industrial	Redevelopment of existing office park with two new 7-story office buildings and one parking structure
1240 Crossman Avenue	Industrial	NETAPP campus expansion (site 2) utilizing the green building bonus to enable 75.8% FAR; total of 525,057 sf two 4-story buildings and a 4-level parking garage
307-309 N. Pastoria Avenue	Industrial	New 71,715 sf 3-story office building on vacant site (approx. 45% FAR)
433 N. Mathilda Avenue	Industrial	Preliminary Review for demolition and new construction of a new 2 story building approximately 210,000 sf and 52% FAR
495 E. Java Drive	Industrial	NETAPP campus expansion (site 1) 76.4% FAR/total of 1,496,971 sf previously approved buildings 5 and 6 will increase by 120,996 sf including a fifth story; new 4-level parking garage
495 Java Drive	Industrial	Master Plan for 5 new R&D buildings, 1 amenity (café & fitness) building, and 3 multi-level parking structures; 1,375,978 sf

TABLE 5.4-1, CONTINUED

Address	Land Use	Description
505-599 N. Mathilda Avenue/550 Del Rey/683 W. Maude/510 N. Pastoria Avenue	Industrial	Rezone of multiple properties to MS-100% FAR and Design Review to allow redevelopment with a 612,072 sf R&D campus, w/ two six-story buildings, one four-story building, and a five-story parking garage. Project modified, per 2012-7711, to allow for additional floor area for a total of 643,897 and 96% FAR. Modified permit adds an additional parcel and a fifth story to Building "D."
589 W. Java Drive	Industrial	Yahoo! campus expansion to add a new, 6-story 315,000 sf office building, 24,000 sf special use amenities building and one parking structure
815 Eleventh Avenue	Industrial	Major Moffett Park design review application for new 200,000 sf building (5th) at the Ariba campus (80% FAR) (Moffett Towers)
Eleventh Avenue	Industrial	Development of 50 acres of land with 7 buildings plus an amenity building and 3 parking structures (Moffett Towers)
Innovation Way	Industrial	New 2.43 million sf office campus with 70% FAR (Juniper Networks)
560 S. Mathilda Avenue	Mixed Use	Special Development Permit to allow a three-story mixed use development with 15 condominiums and 1,577 sf of office/retail. (svb future office); vesting tentative map to create lots 15 residential condominium lots and one commercial condominium lot
915 De Guigne Drive	Mixed Use	GP Amendment and rezone from Industry to ITR Medium Density
1044 E. Duane Avenue	Residential	Construct 132 Townhome-Style Condominium Units
455 Mathilda Avenue	Residential	Preliminary Review for 105 residential dwelling unit building (rental)
1080 Innovation Way	Industrial/ Commercial/ Educational	Onizuka Air Force Station Redevelopment Plan, 52,000 sf office space, 70,000 sf R&D, and community college for 1,000 students.



LEGEND

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|-------------------------------|---|---|
| 1 1165 E Arques Avenue | 8 307-309 N Pastoria Avenue | 15 Eleventh Avenue |
| 2 927 E. Arques Avenue | 9 433 N Mathilda Avenue | 16 Innovation Way |
| 3 1100 Enterprise Way | 10 495 E Java Drive | 17 560 S Mathilda Avenue (off the map) |
| 4 111 Java Drive | 11 495 W Java Drive | 18 915 De Guigne Drive |
| 5 1152 Bordeaux Drive | 12 505 -599 N Mathilda, 550 Del Rey, 683 W. Maude, 510 N. Pastoria | 19 1044 E. Duane Avenue |
| 6 1221 Crossman Avenue | 13 589 W. Java Drive | 20 455 Mathilda Avenue (off the map) |
| 7 1240 Crossman Avenue | 14 815 Eleventh Avenue | 21 1080 Innovation Way |

FIGURE 5.4-1

Cumulative Projects

MOFFETT PLACE EIR

Future development at the Project site and of surrounding cumulative projects in the area would be subject to a formal development review process including site and architectural plan review. Such discretionary review would recognize the interdependence of land values and aesthetics, and ensure that the design of future proposed projects would maintain and enhance the character/quality within the area. As a result, the proposed Project in combination with future proposed projects would result in views from surrounding areas that are consistent with existing views, and a less than significant cumulative aesthetic impact would occur.

With regard to cumulative light and glare impacts, implementation of the proposed Project and future proposed projects would increase the amount of light and glare in the surrounding area, as it would increase the amount of development compared to existing conditions. It is anticipated that lighting would include exterior wall-mounted light fixtures and lighting within the onsite surface parking areas to ensure public safety and safe pedestrian and vehicular circulation. To ensure that cumulative light and glare impacts are reduced to levels considered less than significant, future proposed projects, including the proposed Project, would be required adhere to existing City policies for community design and aesthetics. The proposed Project would implement mitigation measures which require all exterior windows and glass used on building surfaces be non-reflective or treated with a non-reflective coating, and which require the required lighting plan to locate all lighting in such a manner that it cannot be mistaken for airport approach or runway lights by pilots. Therefore, the Project would not result in cumulatively considerable light and glare impacts since impacts would be reduced to a less than significant level with implementation of mitigation.

BIOLOGICAL RESOURCES

The cumulative impacts analysis for biological resources considered the proposed Project site and the City of Sunnyvale, particularly the land surrounding the site, and relied upon on MPSP buildout projections. The City of Sunnyvale is primarily developed and urbanized, and most project sites in the City would not likely support significant wildlife habitats or species. Nonetheless, cumulatively, MPSP buildout could result in incremental encroachment impacts to biological resources. However, site-specific mitigation would likely reduce most of these impacts to less than significant levels.

The Project site is currently developed as buildings and paved parking areas, with an urban character, surrounded by commercial and residential development. The site encompasses areas roughly between North Mathilda Avenue on the west, Borregas Avenue on the east, Moffett Park Drive on the south and a water canal on the north. Biological resources in proximity to the proposed Project site include riparian marsh habitat and the San Francisco Bay, which provide habitat to fish, wildlife and vegetation. In addition, the Sunnyvale West Channel, approximately three miles long and stretching from just south of U.S. 101 to Guadalupe Slough traverses the Project site. However, as discussed in Section 4.3, *Biological Resources*, the Project would not directly affect any native habitat, wildlife, wetlands, or sensitive biological resources, nor is there suitable habitat for burrowing owls onsite.

Decorative street trees provide a rich dense canopy that shades the Project area. All trees within the planting strip or public Right of Way (ROW) are subject to the policies of the Parks, Golf and Street Trees Division of the Department of Public Works. Removal of any street trees or other protected trees as noted in Chapter 13.16, *City Trees*, and Chapter 19.94, *Tree Preservation*, of the municipal code, respectively, would result in potentially significant impacts. Therefore, future projects including the proposed Project would be required to implement mitigation to reduce potentially significant impacts to city trees. Cumulative biological resource impacts would be less than significant, and the Project's contribution to this impact would be less than cumulatively considerable.

GEOLOGY AND SOILS

The geographic scope of potential cumulative geologic and seismic impacts encompasses the Project site and its immediate vicinity. These types of impacts are generally site-specific and depend on local geologic and soil conditions. The site is not located within a currently designated Alquist-Priolo Earthquake Fault Zone (formerly known as a Special Studies Zone), or a Santa Clara County Fault Rupture Hazard Zone. Since no known surface expression of active faults is believed to cross the site, fault rupture through the site is not anticipated, and the potential impact from fault rupture would be considered less than significant. Therefore, the cumulative exposure of people or structures to geologic or seismic hazards would be less than significant. All future proposed projects within the City, including the proposed Project, would be required to comply with the California Building Code requirements regarding seismic safety. Therefore, the Project's contribution to this cumulative impact would not be cumulatively considerable.

HYDROLOGY AND WATER QUALITY

The geographic scope of potential cumulative hydrology and water quality impacts encompasses the Sunnyvale West watershed. The Sunnyvale West Channel watershed is almost entirely urbanized with mostly public/institutional development (31 percent), as well as industrial (25 percent) and residential (23 percent) areas. The only open space in the watershed is the Sunnyvale Baylands along the San Francisco Bay shoreline and several smaller city-owned parks in Sunnyvale. No fish species are known to occur upstream of the tidally influenced area in the watershed.

Cumulative development in the Project area may increase the quantities of urban pollutants that enter the local drainage system. Because all stormwater in the City of Sunnyvale ultimately enters the San Francisco Bay, the cumulative effect of new development in the City of Sunnyvale and the Bay Area may have a significant adverse effect on water quality in the Bay. Mitigation measures have been proposed to reduce potential water quality impacts to less than significant levels; refer to Section 4.5, *Hydrology and Water Quality*. Assuming successful implementation of the proposed mitigation measures identified in Section 4.5, the proposed Project's incremental impact would not contribute to cumulatively significant regional water quality impacts.

In addition, the above-listed cumulative projects located within this watershed will be required to implement stormwater Best Management Practices (BMPs) to treat water to State and regional standards

to ensure that surface water pollutants will be treated before leaving those respective sites. With required implementation of BMPs in all cumulative projects, cumulative water quality impacts would be less than significant.

Cumulative development in the Project area would also result in alterations to the drainage pattern and flow rates in the Project vicinity. Impacts would be mitigated on a project-by-project basis because each project would be required to be designed to minimize both the volume and velocity of surface runoff through the proper design of subsurface drains, onsite retention, appropriate grading and construction best management practices, and landscaping programs. Also, with the implementation of City and regional drainage plans, cumulative impacts to drainage and flood control are not anticipated to be significant. As such, the proposed Project's incremental contribution to potential hydrologic impacts would be considered less than significant.

TRANSPORTATION AND TRAFFIC

The cumulative analysis provides a long-term projection (Year 2035) of the traffic operations within the project study area and summarizes the potential long-term transportation related impacts associated with the proposed project. Intersection level of service calculations and results are provided for cumulative conditions with and without the project. There are currently no funded transportation network improvements within the project study area. Therefore, the existing roadway network was used for the cumulative analysis.

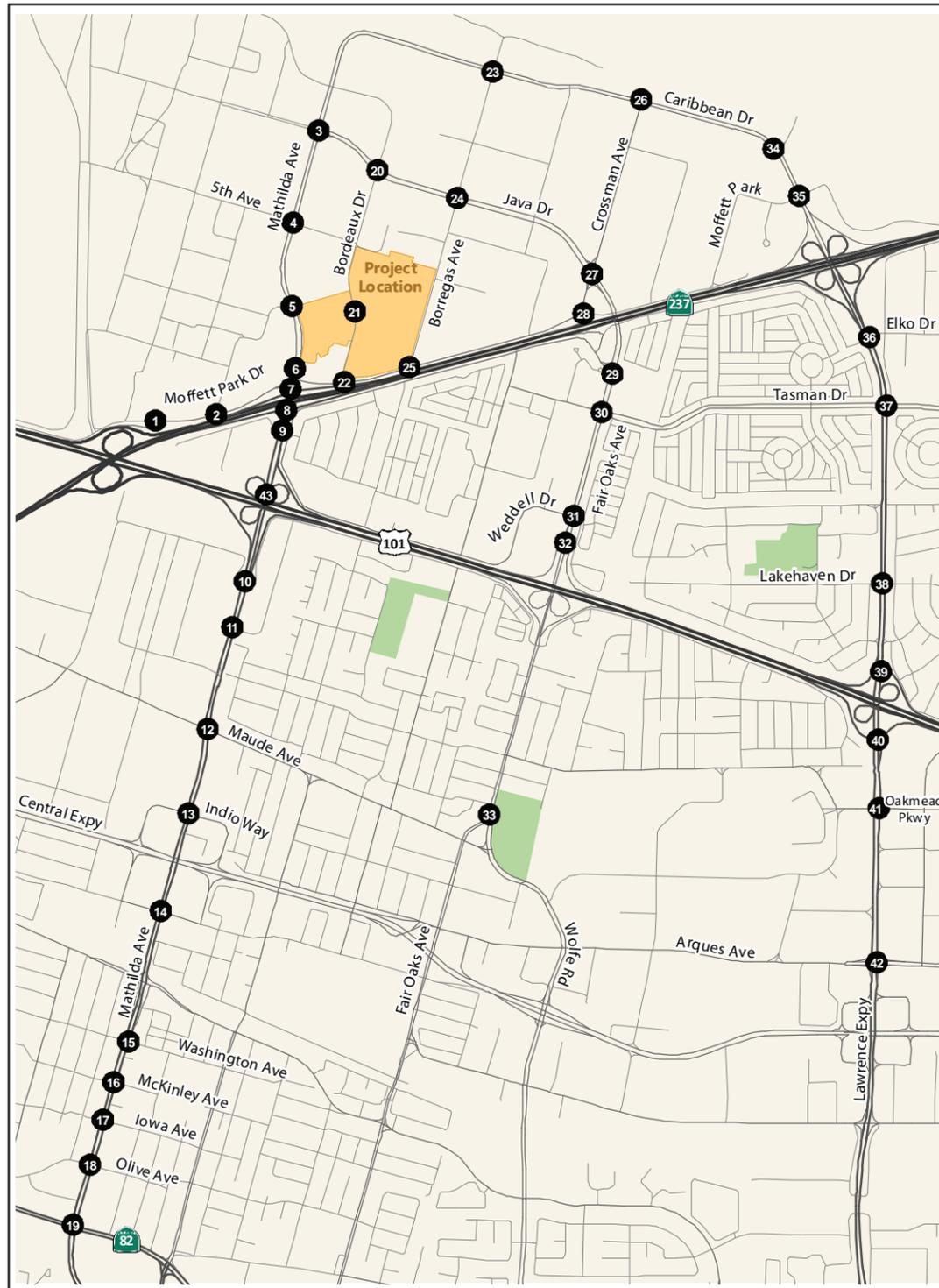
Cumulative No Project Conditions

Traffic volumes under Cumulative No Project Conditions are based on peak hour forecasts generated by the City's Year 2035 Transportation Demand Model (TDM), assuming the planned land uses contained in the current General Plan. Forecast volumes were then manually adjusted based on the projected traffic and development patterns observed under both Existing and Background Conditions. Figures 5.4-2(a) – (c) illustrate the projected Cumulative No Project traffic volumes.

Cumulative Plus Project Traffic Volumes

Trips generated from the proposed project were added to the Cumulative No Project volumes on Figure 5.4-2(a) – (c). The results are shown on Figures 5.4-3(a) – (c).

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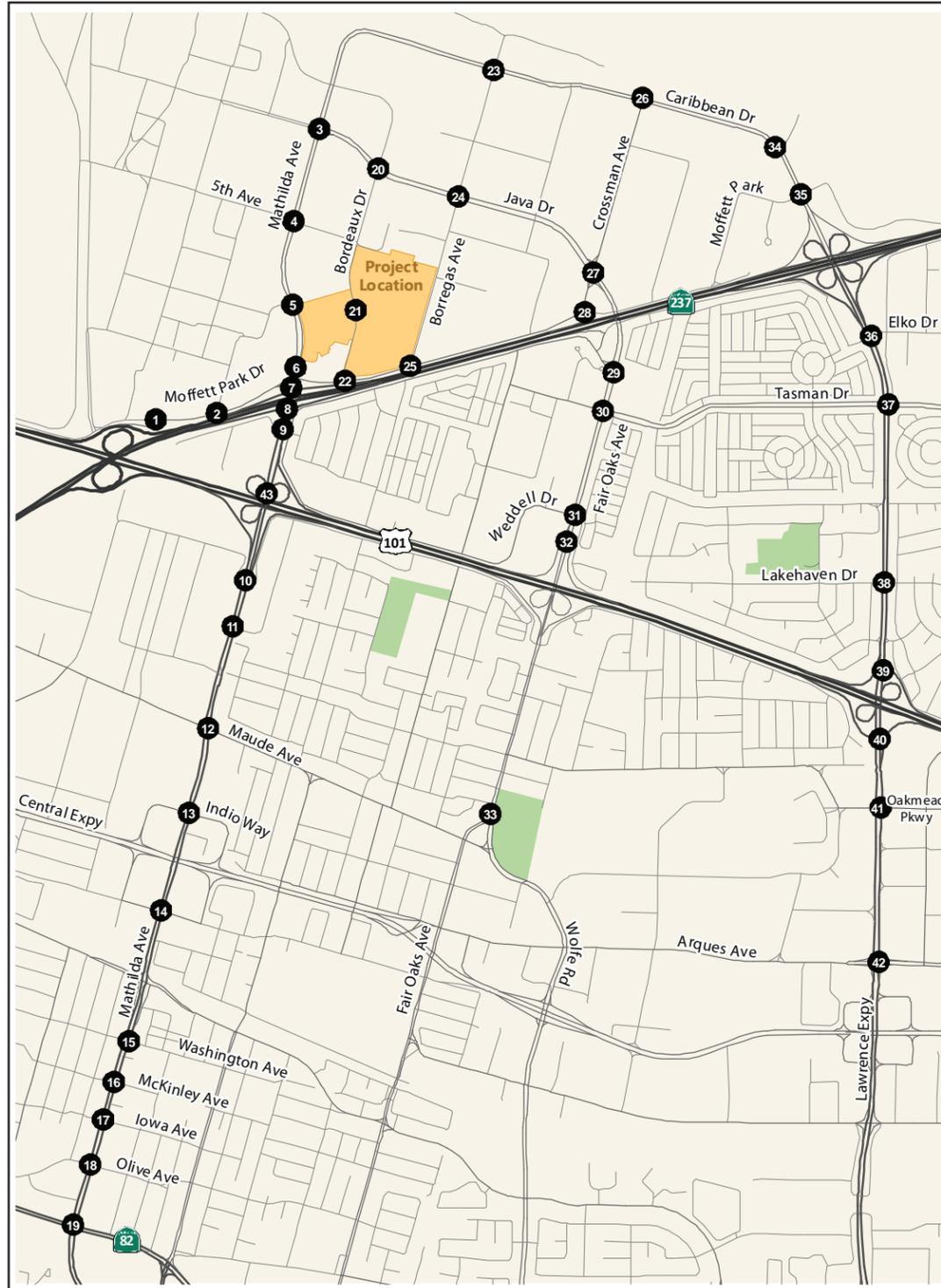


1. 101 NB Ramps & Moffett Park Dr	2. Lockheed M Wy & Moffett Park Dr	3. Mathilda Ave & Java Dr	4. Mathilda Ave & 5th Ave	5. Mathilda Ave & Innovations Wy																														
<p>Moffett Park Dr</p> <p>US-101 NB Ramps</p> <p>1,284 (120) 11 (0)</p> <p>104 (564) 1 (53)</p>	<p>Moffett Park Dr</p> <p>Lockheed Martin Wy</p> <p>16 (77) 0 (0) 110 (122)</p> <p>977 (0) 1,280 (0)</p> <p>21 (0) 222 (511)</p>	<p>Java Dr</p> <p>Mathilda Ave</p> <p>222 (7) 110 (423) 1 (16)</p> <p>7 (6) 144 (15) 125 (360)</p> <p>9 (154) 15 (179) 99 (1,019)</p> <p>945 (135) 289 (119) 274 (117)</p>	<p>5th Ave</p> <p>Mathilda Ave</p> <p>19 (13) 294 (2,275) 8 (4)</p> <p>27 (300) 3 (4) 6 (5)</p> <p>8 (15) 7 (3) 61 (375)</p> <p>437 (175) 1,777 (495) 129 (25)</p>	<p>Innovations Wy</p> <p>Mathilda Ave</p> <p>39 (48) 329 (2,632) 0 (3)</p> <p>0 (0) 0 (0) 0 (0)</p> <p>21 (61) 33 (407)</p> <p>462 (76) 2,304 (529) 0 (0)</p>	6. Mathilda Ave & Moffett Park Dr	7. Mathilda Ave & SR-237 WB Ramps	8. Mathilda Ave & SR-237 EB Ramps	9. Mathilda Ave & Ross Dr	10. Mathilda Ave & Ahwanee Ave	<p>Moffett Park Dr</p> <p>Mathilda Ave</p> <p>68 (96) 287 (2,898) 6 (46)</p> <p>36 (27) 405 (279) 83 (312)</p> <p>25 (42) 69 (245) 0 (1,251)</p> <p>1,575 (219) 2,705 (536) 737 (135)</p>	<p>SR-237 WB Ramps</p> <p>Mathilda Ave</p> <p>137 (1,063) 379 (3,480)</p> <p>453 (83) 20 (0) 862 (1,214)</p> <p>69 (140) 4,565 (824)</p>	<p>SR-237 EB Ramps</p> <p>Mathilda Ave</p> <p>1,147 (3,888) 95 (714)</p> <p>1,584 (321) 0 (2) 62 (189)</p> <p>3,050 (625) 847 (1,024)</p>	<p>Ross Dr</p> <p>Mathilda Ave</p> <p>35 (88) 1,126 (3,856) 48 (133)</p> <p>224 (105) 23 (50) 87 (189)</p> <p>71 (41) 56 (150) 15 (30)</p> <p>48 (91) 3,645 (1,554) 95 (265)</p>	<p>Ahwanee Ave</p> <p>Mathilda Ave</p> <p>267 (89) 1,958 (4,303) 139 (163)</p> <p>161 (127) 28 (6) 74 (38)</p> <p>71 (344) 12 (51) 22 (82)</p> <p>104 (41) 3,226 (2,390) 44 (38)</p>	11. Mathilda Ave & San Aleso Ave	12. Mathilda Ave & Maude Ave	13. Mathilda Ave & Indio Wy	14. Mathilda Ave & California Ave	15. Mathilda Ave & Washington Ave	<p>San Aleso Ave</p> <p>Mathilda Ave</p> <p>35 (8) 1,853 (4,423) 65 (100)</p> <p>17 (45) 0 (0) 28 (50)</p> <p>8 (24) 1 (0) 2 (36)</p> <p>25 (11) 3,348 (2,469) 71 (45)</p>	<p>Maude Ave</p> <p>Mathilda Ave</p> <p>219 (261) 1,458 (3,751) 169 (463)</p> <p>329 (188) 332 (175) 203 (183)</p> <p>289 (233) 105 (440) 63 (345)</p> <p>368 (126) 2,892 (1,834) 96 (186)</p>	<p>Indio Wy</p> <p>Mathilda Ave</p> <p>110 (140) 1,592 (4,159) 64 (63)</p> <p>164 (57) 29 (2) 66 (53)</p> <p>36 (49) 34 (0) 228 (333)</p> <p>121 (91) 2,850 (1,941) 255 (236)</p>	<p>California Ave</p> <p>Mathilda Ave</p> <p>209 (297) 1,612 (3,968) 57 (188)</p> <p>152 (121) 69 (33) 54 (43)</p> <p>80 (104) 24 (61) 161 (364)</p> <p>98 (63) 2,995 (2,136) 211 (227)</p>	<p>Washington Ave</p> <p>Mathilda Ave</p> <p>102 (253) 1,115 (2,946) 182 (233)</p> <p>67 (137) 35 (35) 11 (121)</p> <p>176 (107) 36 (47) 23 (35)</p> <p>37 (44) 2,876 (1,176) 27 (64)</p>	16. Mathilda Ave & W McKinley Ave	17. Mathilda Ave & Iowa Ave	18. Mathilda Ave & Olive Dr	19. Mathilda Ave & El Camino Real	20. Bordeaux Dr & Java Dr	<p>W McKinley Ave</p> <p>Mathilda Ave</p> <p>51 (45) 1,057 (3,069) 44 (61)</p> <p>47 (68) 21 (90)</p> <p>68 (77) 20 (19) 22 (48)</p> <p>41 (43) 2,873 (1,090) 83 (49)</p>	<p>Iowa Ave</p> <p>Mathilda Ave</p> <p>64 (20) 1,000 (3,082) 36 (99)</p> <p>33 (49) 33 (55) 21 (68)</p> <p>49 (30) 41 (57) 22 (38)</p> <p>16 (39) 2,893 (1,096) 40 (37)</p>	<p>Olive Dr</p> <p>Mathilda Ave</p> <p>75 (76) 916 (3,035) 27 (90)</p> <p>47 (58) 46 (53) 19 (43)</p> <p>38 (70) 28 (61) 23 (81)</p> <p>62 (40) 2,947 (1,045) 17 (23)</p>	<p>El Camino Real</p> <p>Mathilda Ave</p> <p>196 (406) 571 (2,211) 206 (542)</p> <p>323 (218) 1,120 (793) 266 (82)</p> <p>351 (229) 548 (1,369) 90 (205)</p> <p>359 (183) 2,326 (669) 21 (46)</p>	<p>Java Dr</p> <p>Bordeaux Dr</p> <p>4 (102) 70 (61) 24 (6)</p> <p>154 (19) 69 (165) 227 (16)</p> <p>13 (1) 16 (0) 19 (10)</p> <p>2 (6) 89 (11) 0 (0)</p>
6. Mathilda Ave & Moffett Park Dr	7. Mathilda Ave & SR-237 WB Ramps	8. Mathilda Ave & SR-237 EB Ramps	9. Mathilda Ave & Ross Dr	10. Mathilda Ave & Ahwanee Ave																														
<p>Moffett Park Dr</p> <p>Mathilda Ave</p> <p>68 (96) 287 (2,898) 6 (46)</p> <p>36 (27) 405 (279) 83 (312)</p> <p>25 (42) 69 (245) 0 (1,251)</p> <p>1,575 (219) 2,705 (536) 737 (135)</p>	<p>SR-237 WB Ramps</p> <p>Mathilda Ave</p> <p>137 (1,063) 379 (3,480)</p> <p>453 (83) 20 (0) 862 (1,214)</p> <p>69 (140) 4,565 (824)</p>	<p>SR-237 EB Ramps</p> <p>Mathilda Ave</p> <p>1,147 (3,888) 95 (714)</p> <p>1,584 (321) 0 (2) 62 (189)</p> <p>3,050 (625) 847 (1,024)</p>	<p>Ross Dr</p> <p>Mathilda Ave</p> <p>35 (88) 1,126 (3,856) 48 (133)</p> <p>224 (105) 23 (50) 87 (189)</p> <p>71 (41) 56 (150) 15 (30)</p> <p>48 (91) 3,645 (1,554) 95 (265)</p>	<p>Ahwanee Ave</p> <p>Mathilda Ave</p> <p>267 (89) 1,958 (4,303) 139 (163)</p> <p>161 (127) 28 (6) 74 (38)</p> <p>71 (344) 12 (51) 22 (82)</p> <p>104 (41) 3,226 (2,390) 44 (38)</p>	11. Mathilda Ave & San Aleso Ave	12. Mathilda Ave & Maude Ave	13. Mathilda Ave & Indio Wy	14. Mathilda Ave & California Ave	15. Mathilda Ave & Washington Ave	<p>San Aleso Ave</p> <p>Mathilda Ave</p> <p>35 (8) 1,853 (4,423) 65 (100)</p> <p>17 (45) 0 (0) 28 (50)</p> <p>8 (24) 1 (0) 2 (36)</p> <p>25 (11) 3,348 (2,469) 71 (45)</p>	<p>Maude Ave</p> <p>Mathilda Ave</p> <p>219 (261) 1,458 (3,751) 169 (463)</p> <p>329 (188) 332 (175) 203 (183)</p> <p>289 (233) 105 (440) 63 (345)</p> <p>368 (126) 2,892 (1,834) 96 (186)</p>	<p>Indio Wy</p> <p>Mathilda Ave</p> <p>110 (140) 1,592 (4,159) 64 (63)</p> <p>164 (57) 29 (2) 66 (53)</p> <p>36 (49) 34 (0) 228 (333)</p> <p>121 (91) 2,850 (1,941) 255 (236)</p>	<p>California Ave</p> <p>Mathilda Ave</p> <p>209 (297) 1,612 (3,968) 57 (188)</p> <p>152 (121) 69 (33) 54 (43)</p> <p>80 (104) 24 (61) 161 (364)</p> <p>98 (63) 2,995 (2,136) 211 (227)</p>	<p>Washington Ave</p> <p>Mathilda Ave</p> <p>102 (253) 1,115 (2,946) 182 (233)</p> <p>67 (137) 35 (35) 11 (121)</p> <p>176 (107) 36 (47) 23 (35)</p> <p>37 (44) 2,876 (1,176) 27 (64)</p>	16. Mathilda Ave & W McKinley Ave	17. Mathilda Ave & Iowa Ave	18. Mathilda Ave & Olive Dr	19. Mathilda Ave & El Camino Real	20. Bordeaux Dr & Java Dr	<p>W McKinley Ave</p> <p>Mathilda Ave</p> <p>51 (45) 1,057 (3,069) 44 (61)</p> <p>47 (68) 21 (90)</p> <p>68 (77) 20 (19) 22 (48)</p> <p>41 (43) 2,873 (1,090) 83 (49)</p>	<p>Iowa Ave</p> <p>Mathilda Ave</p> <p>64 (20) 1,000 (3,082) 36 (99)</p> <p>33 (49) 33 (55) 21 (68)</p> <p>49 (30) 41 (57) 22 (38)</p> <p>16 (39) 2,893 (1,096) 40 (37)</p>	<p>Olive Dr</p> <p>Mathilda Ave</p> <p>75 (76) 916 (3,035) 27 (90)</p> <p>47 (58) 46 (53) 19 (43)</p> <p>38 (70) 28 (61) 23 (81)</p> <p>62 (40) 2,947 (1,045) 17 (23)</p>	<p>El Camino Real</p> <p>Mathilda Ave</p> <p>196 (406) 571 (2,211) 206 (542)</p> <p>323 (218) 1,120 (793) 266 (82)</p> <p>351 (229) 548 (1,369) 90 (205)</p> <p>359 (183) 2,326 (669) 21 (46)</p>	<p>Java Dr</p> <p>Bordeaux Dr</p> <p>4 (102) 70 (61) 24 (6)</p> <p>154 (19) 69 (165) 227 (16)</p> <p>13 (1) 16 (0) 19 (10)</p> <p>2 (6) 89 (11) 0 (0)</p>										
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Source: Fehr & Peers, July 2013.

- ↔ Turn Lane
- AM (PM) Peak Hour Traffic Volume
- ① Study Intersection
- 🚦 Traffic Signal
- ⊙ Stop Sign

FIGURE 5.4-2a
**Peak Hour Traffic Volumes and Lane Configurations
 Cumulative No Project Conditions**

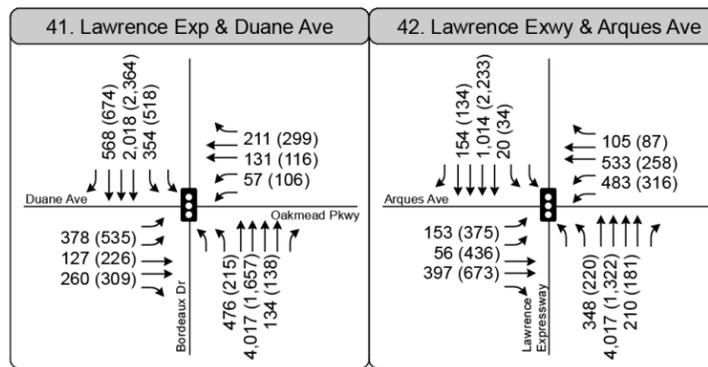
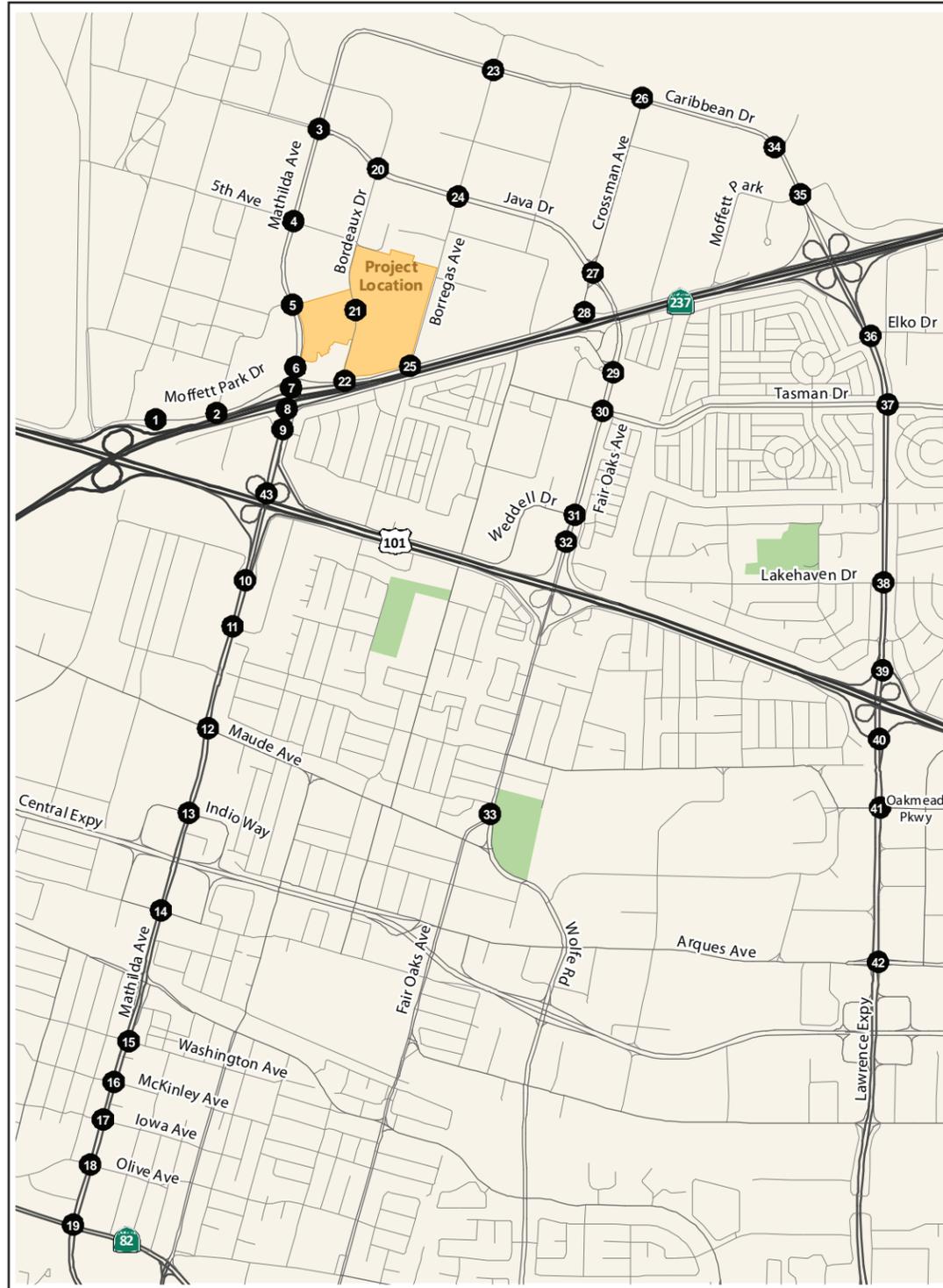


<p>21. Bordeaux Dr & New Roadway</p> <p>Intersection does not exist under this condition</p>	<p>22. Bordeaux Dr & Moffett Park Dr</p> <p>Moffett Park Dr: 20 (174) left, 5 (32) right, 16 (19) through</p> <p>Bordeaux Dr: 234 (40) left, 526 (358) right</p>	<p>23. Borregas Ave & Caribbean Dr</p> <p>Caribbean Dr: 45 (10) left, 16 (7) right, 67 (3) through</p> <p>Borregas Ave: 101 (1,372) left, 19 (32) right, 1 (3) through</p>	<p>24. Borregas Ave & Java Dr</p> <p>Java Dr: 113 (26) left, 121 (49) right, 49 (58) through</p> <p>Borregas Ave: 39 (0) left, 143 (0) right, 32 (8) through</p>	<p>25. Borregas Ave & Moffett Park Dr</p> <p>Moffett Park Dr: 37 (208) left, 5 (62) right, 27 (5) through</p> <p>Borregas Ave: 332 (49) left, 213 (385) right</p>
<p>26. Crossman Ave & Caribbean Dr</p> <p>Caribbean Dr: 0 (0) left, 0 (0) right, 0 (0) through</p> <p>Crossman Ave: 57 (392) left, 21 (104) right, 7 (19) through</p>	<p>27. Crossman Ave & Java Dr</p> <p>Java Dr: 17 (8) left, 14 (242) right, 16 (374) through</p> <p>Crossman Ave: 18 (13) left, 48 (486) right, 20 (45) through</p>	<p>28. Crossman Ave & Moffett Park Dr</p> <p>Moffett Park Dr: 63 (13) left, 119 (293) right, 41 (29) through</p> <p>Crossman Ave: 50 (0) left, 109 (24) right, 2 (38) through</p>	<p>29. Fair Oaks Ave & Fair Oaks Wy</p> <p>Fair Oaks Wy: 10 (40) left, 48 (1,306) right, 6 (18) through</p> <p>Fair Oaks Ave: 221 (47) left, 7 (8) right, 40 (292) through</p>	<p>30. Fair Oaks Ave & Tasman Dr</p> <p>Tasman Dr: 8 (34) left, 79 (842) right, 13 (35) through</p> <p>Fair Oaks Ave: 30 (7) left, 131 (55) right, 288 (73) through</p>
<p>31. Fair Oaks Ave & Weddell Dr</p> <p>Weddell Dr: 39 (171) left, 449 (1,366) right, 14 (39) through</p> <p>Fair Oaks Ave: 39 (60) left, 0 (5) right, 260 (133) through</p>	<p>32. Fair Oaks Ave & 101 NB Ramps</p> <p>US-101 NB Ramps: 261 (122) left, 567 (1,227) right, 0 (0) through</p> <p>Fair Oaks Ave: 461 (239) left, 0 (1) right, 155 (574) through</p>	<p>33. Fair Oaks Ave & Wolfe Rd</p> <p>Wolfe Rd: 172 (958) left, 0 (0) right, 0 (0) through</p> <p>Fair Oaks Ave: 669 (899) left, 0 (7) right, 367 (278) through</p>	<p>34. Caribbean Dr & Twin Creeks Ent</p> <p>Twin Creeks Entrance: 7 (3) left, 99 (2,096) right, 7 (4) through</p> <p>Caribbean Dr: 4 (1) left, 0 (0) right, 1 (43) through</p>	<p>35. Caribbean Dr & Moffett Park Dr</p> <p>Moffett Park Dr: 10 (6) left, 161 (1,087) right, 1 (7) through</p> <p>Caribbean Dr: 14 (5) left, 8 (2) right, 77 (436) through</p>
<p>36. Lawrence Exp & Persian Dr</p> <p>Persian Dr: 22 (72) left, 603 (2,614) right, 196 (503) through</p> <p>Lawrence Expwy: 61 (38) left, 76 (144) right, 24 (58) through</p>	<p>37. Lawrence Exp & Tasman Dr</p> <p>Tasman Dr: 12 (386) left, 442 (1,265) right, 54 (351) through</p> <p>Lawrence Expwy: 405 (275) left, 202 (191) right, 212 (270) through</p>	<p>38. Lawrence Exp & Lakehaven Dr</p> <p>Lakehaven Dr: 11 (32) left, 1,290 (1,794) right, 15 (123) through</p> <p>Lawrence Expwy: 95 (86) left, 34 (60) right, 310 (205) through</p>	<p>39. Lawrence Exp & 101 NB Ramps</p> <p>US-101 NB Ramps: 306 (0) left, 826 (3,026) right, 0 (0) through</p> <p>Lawrence Expwy: 416 (345) left, 0 (0) right, 684 (947) through</p>	<p>40. Lawrence Exp & 101 SB Ramps</p> <p>US-101 SB Ramps: 321 (217) left, 2,399 (3,486) right, 0 (0) through</p> <p>Lawrence Expwy: 218 (497) left, 497 (1,249) right, 3,409 (1,364) through</p>

Source: Fehr & Peers, July 2013.

- ↔ Turn Lane
- AM (PM) Peak Hour Traffic Volume
- ① Study Intersection
- 🚦 Traffic Signal
- ⊙ Stop Sign

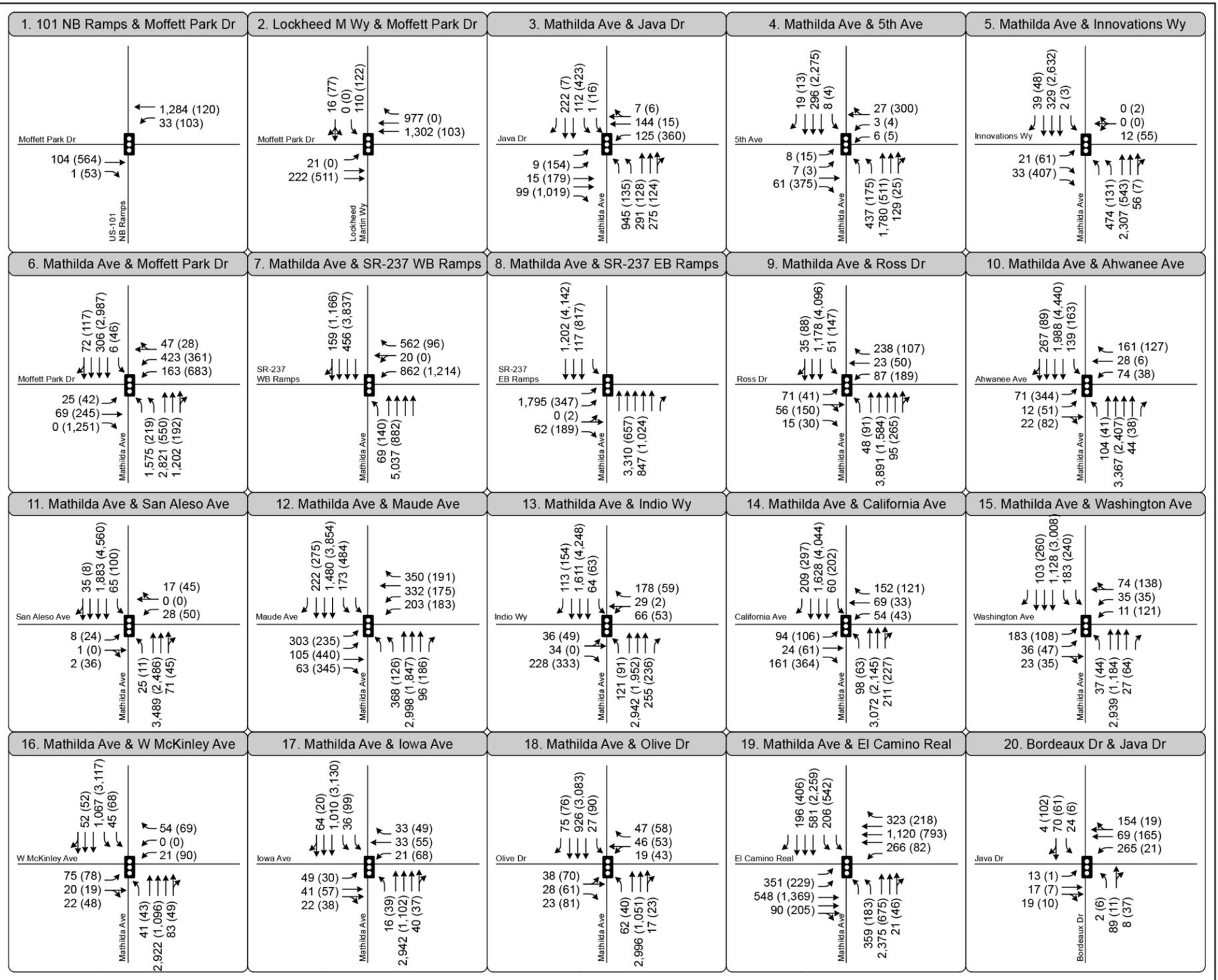
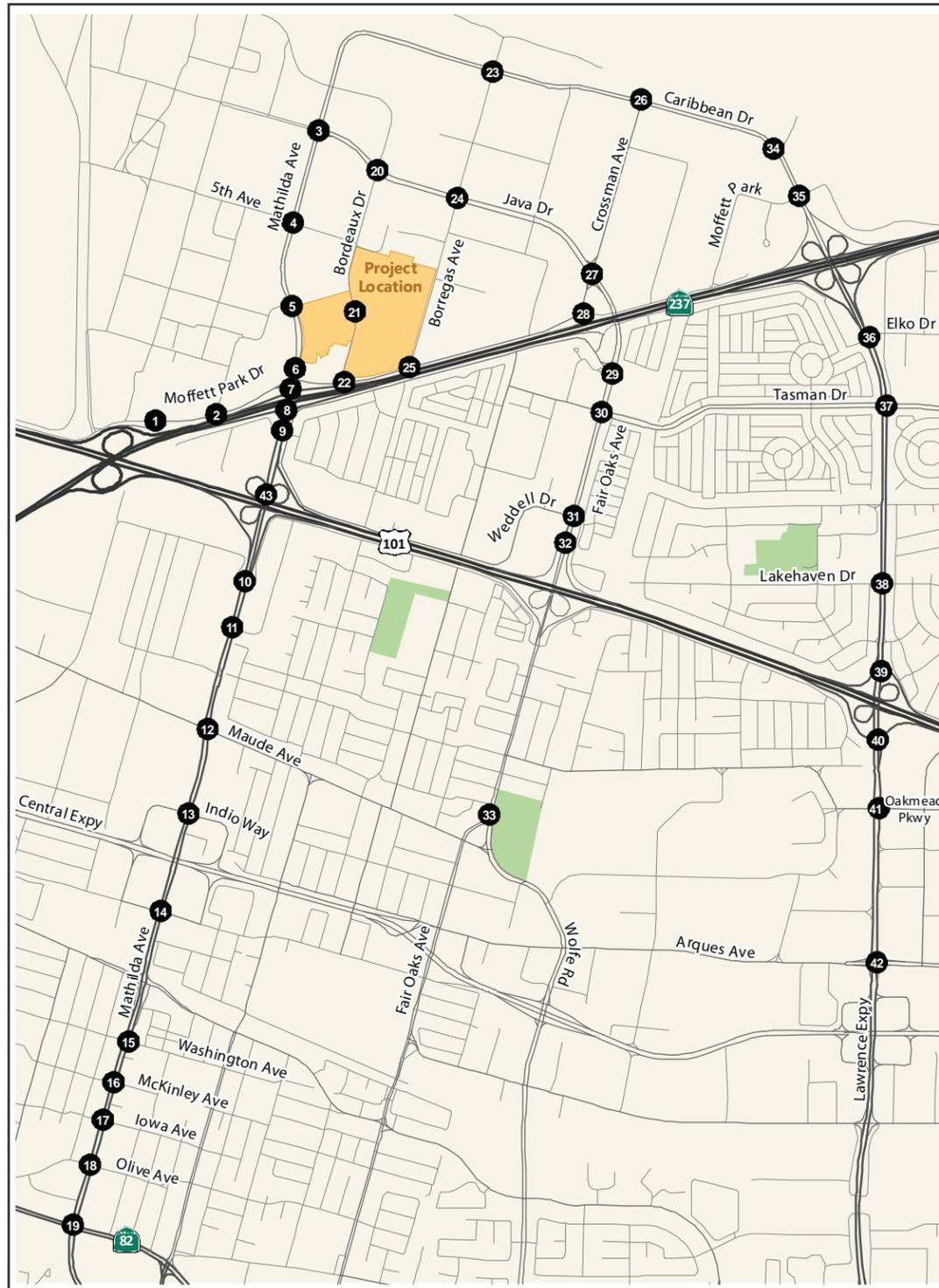
FIGURE 5.4-2b
**Peak Hour Traffic Volumes and Lane Configurations
 Cumulative No Project Conditions**



Source: Fehr & Peers, July 2013.

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Study Intersection
- Traffic Signal
- Stop Sign

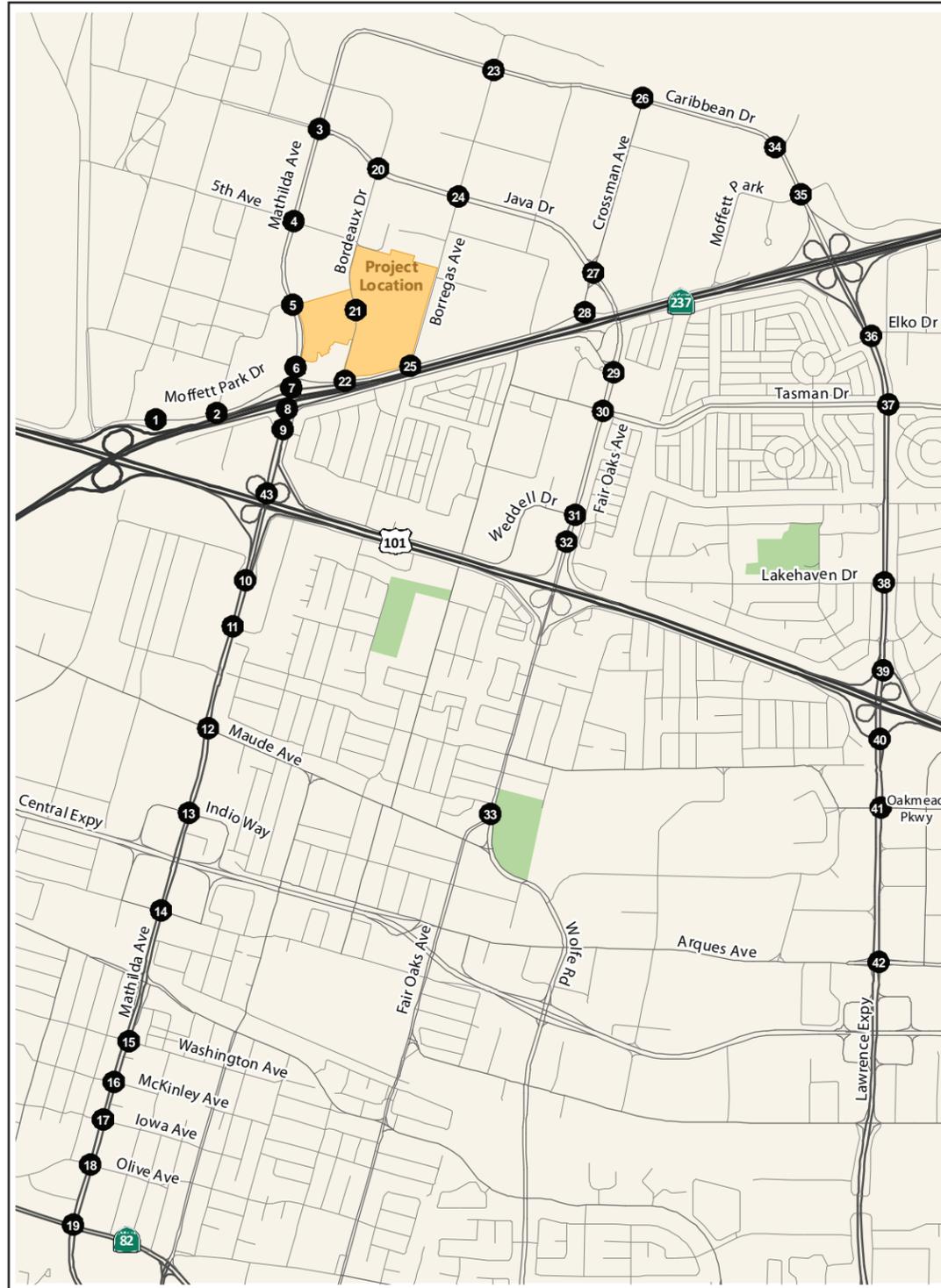
FIGURE 5.4-2c
**Peak Hour Traffic Volumes and Lane Configurations
 Cumulative No Project Conditions**



Source: Fehr & Peers, July 2013.

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Study Intersection
- Traffic Signal
- Stop Sign

FIGURE 5.4-3a
Peak Hour Traffic Volumes and Lane Configurations
Cumulative Plus Project Conditions



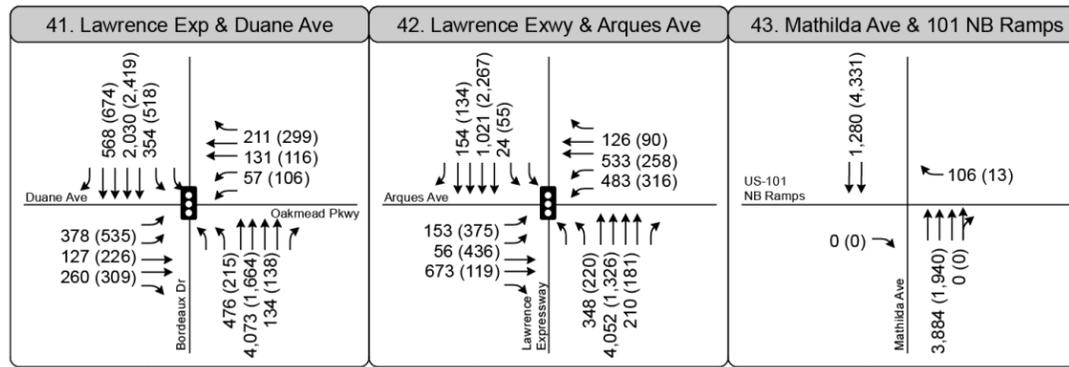
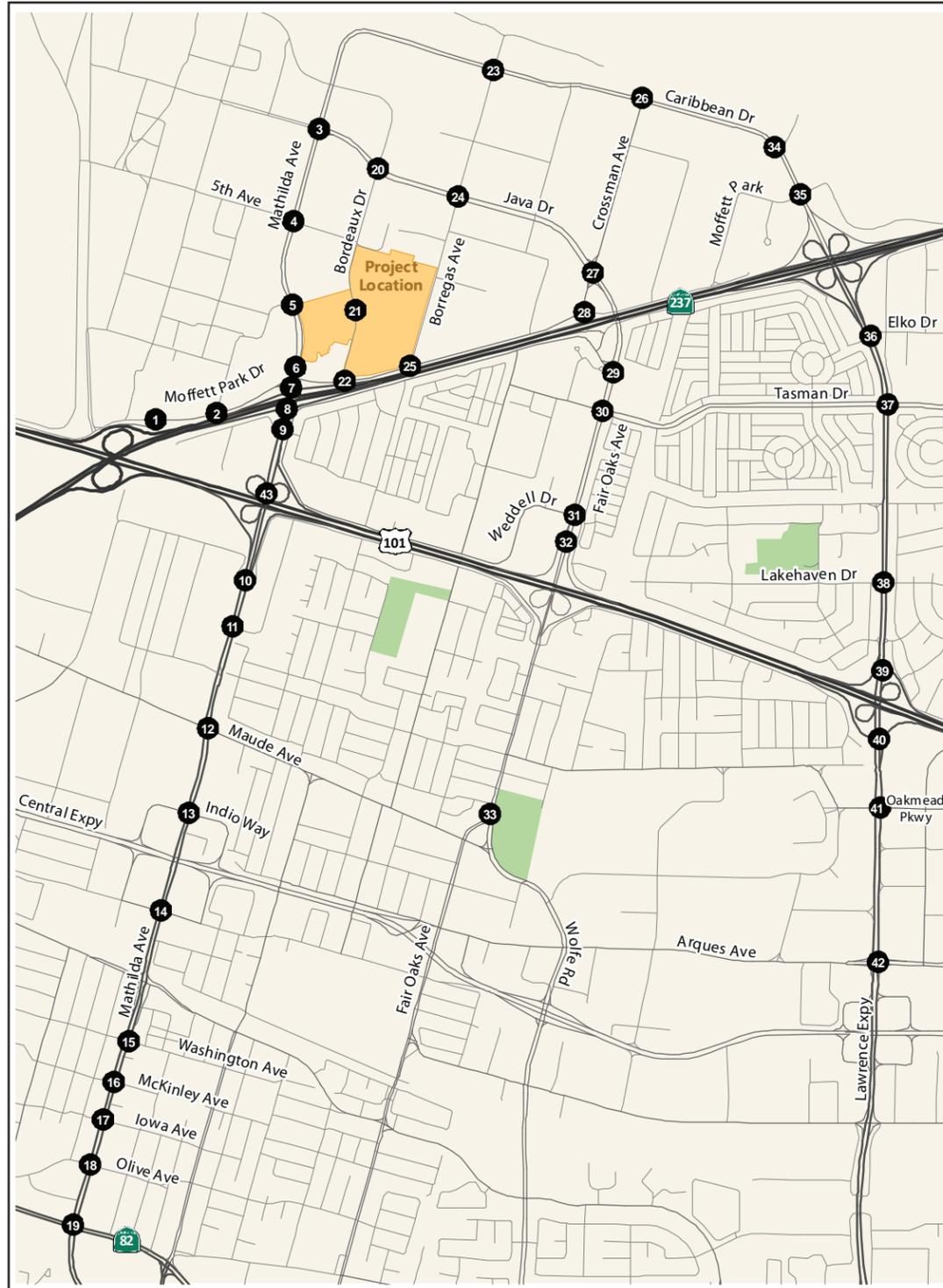
<p>21. Bordeaux Dr & New Roadway</p>	<p>22. Bordeaux Dr & Moffett Park Dr</p>	<p>23. Borregas Ave & Caribbean Dr</p>	<p>24. Borregas Ave & Java Dr</p>	<p>25. Borregas Ave & Moffett Park Dr</p>
<p>26. Crossman Ave & Caribbean Dr</p>	<p>27. Crossman Ave & Java Dr</p>	<p>28. Crossman Ave & Moffett Park Dr</p>	<p>29. Fair Oaks Ave & Fair Oaks Wy</p>	<p>30. Fair Oaks Ave & Tasman Dr</p>
<p>31. Fair Oaks Ave & Weddell Dr</p>	<p>32. Fair Oaks Ave & 101 NB Ramps</p>	<p>33. Fair Oaks Ave & Wolfe Rd</p>	<p>34. Caribbean Dr & Twin Creeks Ent</p>	<p>35. Caribbean Dr & Moffett Park Dr</p>
<p>36. Lawrence Exp & Persian Dr</p>	<p>37. Lawrence Exp & Tasman Dr</p>	<p>38. Lawrence Exp & Lakehaven Dr</p>	<p>39. Lawrence Exp & 101 NB Ramps</p>	<p>40. Lawrence Exp & 101 SB Ramps</p>

Source: Fehr & Peers, July 2013.

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Study Intersection
- Traffic Signal
- Stop Sign

FIGURE 5.4-3b

Peak Hour Traffic Volumes and Lane Configurations Cumulative Plus Project Conditions



Source: Fehr & Peers, July 2013.

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Study Intersection
- Traffic Signal
- Stop Sign

FIGURE 5.4-3c
Peak Hour Traffic Volumes and Lane Configurations
Cumulative Plus Project Conditions

Signalized Intersections

Table 5.4-2 presents the level of service calculations for the study intersections under Cumulative No Project and Cumulative plus Project Conditions.

Under Cumulative plus Project Conditions the following signalized intersections are projected to operate at unacceptable service levels (LOS E/F for City intersections and LOS F for regionally significant and CMP intersections) during the identified peak hours.

- **Mathilda Avenue/Java Drive (#3):** the addition of project traffic exacerbates unacceptable LOS F operations in the PM peak hour.

The Mathilda Avenue/Java Drive intersection was also projected to operate at unacceptable service levels under Background plus Project Conditions.

The results of the LOS calculations indicate that the corridor intersections operate at acceptable service levels (LOS E or better for regionally significant and CMP intersections) using TRAFFIX LOS software during the AM and PM peak hours with the exception of the following:

- **Mathilda Avenue/Moffett Park Drive (#6):** the addition of project traffic causes the intersection operations to degrade from LOS E to LOS F during the AM peak hour.
- **Mathilda Avenue/SR 237 Westbound Ramps (#7):** the addition of project traffic exacerbates unacceptable LOS F operations during the PM peak hour.

Under Existing plus Project Conditions all of the Mathilda Avenue corridor study intersections are projected to operate at acceptable service levels.

Unsignalized Intersections

Under Cumulative plus Project Conditions, the following unsignalized intersection is projected to operate at an unacceptable service level (LOS F) during the identified peak hours.

- **Bordeaux Drive/Moffett Park Drive (#22):** during both peak hours the addition of project traffic degrades intersection operation from acceptable LOS (LOS D in AM peak hour and LOS C in PM peak hour) to unacceptable LOS F. The MUTCD peak hour warrant is not met during the AM peak hour, but is met during the PM peak hour.
- **Borregas Avenue/Moffett Park Drive (#25):** during the AM peak hour the addition of project traffic degrades intersection operation from acceptable LOS D to unacceptable LOS F. The MUTCD peak hour warrant is not met during the AM peak hour, but is met during the PM peak hour.

The Bordeaux Drive/Moffett Park Drive and Borregas Avenue/Moffett Park Drive intersections were also projected to operate at unacceptable service levels under Background plus Project Conditions.

The remaining unsignalized intersections are projected to operate at acceptable LOS. The peak-hour signal warrants are shown in Appendix D of the Traffic Impact Analysis (Appendix E of this EIR).

However, the peak-hour signal warrant analysis should not serve as the only basis for deciding whether and when to install a traffic signal. To reach such a decision, the full set of warrants should be investigated based on a thorough study of traffic and roadway conditions by an experienced engineer. The decision to install a signal should not be based solely upon the warrants, since the installation of signals can lead to certain types of collisions. The responsible state or local agency should undertake regular monitoring of actual traffic conditions and accident data and timely re-evaluation of the full set of warrants in order to prioritize and program intersections for signalization. .

**TABLE 5.4-2
CUMULATIVE AND CUMULATIVE PLUS PROJECT INTERSECTION LEVELS OF SERVICE**

	Intersection	Peak Hour ¹	Inter-section Control	Cumulative Conditions		Cumulative plus Project Conditions				
				Delay ²	LOS ³	Delay ²	LOS ³	Δ in Crit. V/C ⁴	Δ in Crit. Delay ⁵	Signal Warrant Met? ⁶
1	Northbound US 101 Ramps/Moffett Park Drive	AM	Signal	3.2	A	3.4	A	0.000	0.0	N/A
		PM		0.5	A	5.0	A	0.065	5.6	N/A
2	Lockheed Martin Way/Moffett Park Drive**	AM	Signal	6.5	A	6.5	A	0.000	0.0	N/A
		PM		9.7	A	9.3	A	0.000	0.0	N/A
3	Mathilda Avenue/Java Drive**	AM	Signal	22.0	C+	22.0	C+	0.001	0	N/A
		PM		154.8	F	154.0	F	0.000	0.0	N/A
4	Mathilda Avenue/5th Avenue**	AM	Signal	13.7	B	13.7	B	0.001	0.0	N/A
		PM		31.7	C	31.7	C	0.000	0.0	N/A
5	Mathilda Avenue/Innovations Way**	AM	Signal	9.3	A	13.7	B	0.023	6.0	N/A
		PM		18	B-	24.7	C	0.063	7.9	N/A
6	Mathilda Avenue/Moffett Park Drive**	AM	Signal	116.6	F	169.1	F	0.147	80.6	N/A
		PM		243.4	F	275.5	F	0.166	41.6	N/A
7	Mathilda Ave/Westbound SR 237 Ramps**	AM	Signal	32.5	C-	75.3	E-	0.146	57.4	N/A
		PM		135.0	F	166.4	F	0.073	36.3	N/A
8	Mathilda Ave/Eastbound SR 237 Ramps**	AM	Signal	20.1	C+	30.2	C	0.100	12.3	N/A
		PM		23.0	C+	38.3	D+	0.059	19.3	N/A
9	Mathilda Avenue/Ross Drive**	AM	Signal	12.3	B	12.8	B	0.042	0.7	N/A
		PM		29.1	C	43.5	D	0.047	21.8	N/A

TABLE 5.4-2, CONTINUED

	Intersection	Peak Hour ¹	Inter-section Control	Cumulative Conditions		Cumulative plus Project Conditions				
				Delay ²	LOS ³	Delay ²	LOS ³	Δ in Crit. V/C ⁴	Δ in Crit. Delay ⁵	Signal Warrant Met? ⁶
10	Mathilda Avenue/Ahwanee Avenue**	AM	Signal	19.4	B-	20.4	C+	0.022	1.6	N/A
		PM		56.8	E+	64.8	E	0.021	12.0	N/A
11	Mathilda Avenue/San Aleso Avenue**	AM	Signal	8.6	A	8.9	A	0.026	0.4	N/A
		PM		8.8	A	9.0	A	0.019	0.3	N/A
12	Mathilda Avenue/Maude Avenue*	AM	Signal	35.4	D+	39.5	D	0.028	6.8	N/A
		PM		39.2	D	42.4	D	0.016	5.4	N/A
13	Mathilda Avenue/Indio Way**	AM	Signal	14.4	B	14.8	B	0.019	0.6	N/A
		PM		66.0	E	71.4	E	0.018	8.3	N/A
14	Mathilda Avenue/California Ave**	AM	Signal	19.0	B-	20.0	B-	0.026	1.7	N/A
		PM		64.2	E	68.9	E	0.015	7.4	N/A
15	Mathilda Avenue/Washington Avenue**	AM	Signal	21.5	C+	22.4	C+	0.020	1.3	N/A
		PM		22.6	C+	24.1	C	0.014	2.3	N/A
16	Mathilda Avenue/West McKinley Avenue**	AM	Signal	14.0	B	14.2	B	0.017	0.3	N/A
		PM		18.2	B-	18.5	B-	0.012	0.5	N/A
17	Mathilda Avenue/Iowa Avenue**	AM	Signal	12.8	B	12.8	B	0.007	0.1	N/A
		PM		17.3	B	17.4	B	0.009	0.3	N/A
18	Mathilda Avenue/Olive Drive**	AM	Signal	10.4	B+	10.5	B+	0.009	0.1	N/A
		PM		12.8	B	12.9	B	0.009	0.3	N/A
19	Mathilda Avenue/El Camino Real**	AM	Signal	53.2	D-	56.2	E+	0.010	4.0	N/A
		PM		46.4	D	49.1	D	0.010	4.5	N/A
20	Bordeaux Drive/Java Drive	AM	Signal	17.7	B	17.8	B	0.034	0.2	N/A
		PM		17.6	B	17.5	B	0.000	0.0	N/A
21	Bordeaux Drive/New Roadway (future)	AM	SSSC	N/A	N/A	8.7	A	N/A	N/A	N/A
		PM		N/A	N/A	8.6	A	N/A	N/A	N/A
22	Bordeaux Drive /Moffett Park Drive	AM	SSSC	33.6	D	151.4	F	0.236	2.1	No
		PM		18.6	C	56.5	F	1.360	94.9	Yes
23	Borregas Avenue/Caribbean Drive	AM	Signal	11.0	B+	12.6	B	-0.068	4.2	N/A
		PM		15.8	B	9.0	A	0.289	-6.8	N/A
24	Borregas Avenue/Java Drive	AM	Signal	22.9	C+	23.5	C	0.029	0.6	N/A
		PM		17.0	B	17.9	B	0.027	0.0	N/A

TABLE 5.4-2, CONTINUED

	Intersection	Peak Hour ¹	Inter-section Control	Cumulative Conditions		Cumulative plus Project Conditions				
				Delay ²	LOS ³	Delay ²	LOS ³	Δ in Crit. V/C ⁴	Δ in Crit. Delay ⁵	Signal Warrant Met? ⁶
25	Borregas Avenue/Moffett Park Drive	AM	SSSC	31.1	D	116.0	F	0.211	2.6	No
		PM		15.0	B	17.5	C	0.254	2.5	Yes
26	Crossman Avenue/Caribbean Drive	AM	Signal	7.1	A	7.1	A	0.007	0.0	N/A
		PM		18.5	B-	18.8	B-	0.000	0.4	N/A
27	Crossman Avenue/Java Drive	AM	Signal	24.0	C	24.1	C	0.000	0.0	N/A
		PM		20.5	C+	20.9	C+	0.016	0.5	N/A
28	Crossman Avenue/Moffett Park Drive	AM	Signal	15.1	B	15.2	B	0.024	0.3	N/A
		PM		13.3	B	15.2	B	0.018	0.3	N/A
29	Fair Oaks Avenue/Fair Oaks Way	AM	Signal	18.9	B-	19.3	B-	0.021	0.4	N/A
		PM		26.8	C	28	C	0.022	1.5	N/A
30	Fair Oaks Avenue/Tasman Drive	AM	Signal	20.6	C+	21.0	C+	0.014	0.6	N/A
		PM		18.1	B-	18.1	B-	0.007	0.0	N/A
31	Fair Oaks Avenue/East Weddell Drive	AM	Signal	21.4	C+	21.2	C+	0.007	-0.2	N/A
		PM		23.1	C	23.2	C	0.007	0.1	N/A
32	Fair Oaks Ave/Northbound US 101 Ramps	AM	Signal	20.2	C+	20.2	C+	0.002	0.1	N/A
		PM		21.5	C+	22.0	C+	0.011	0.8	N/A
33	Fair Oaks Avenue/Wolfe Road	AM	Signal	12.6	B	12.7	B	0.013	0.2	N/A
		PM		12.8	B	12.8	B	0.006	0.1	N/A
34	Twin Creeks Entrance/Caribbean Drive	AM	Signal	8.7	A	8.8	A	0.006	0.1	N/A
		PM		10.6	B+	10.6	B+	0.007	0.1	N/A
35	Moffett Park Drive/Caribbean Drive	AM	Signal	14.8	B	15	B	0.013	0.4	N/A
		PM		14.8	B	14.9	B	0.009	0.1	N/A
36	Lawrence Expressway/Persian Drive-Elko Drive**	AM	Signal	33.8	C-	34.9	C-	0.009	1.3	N/A
		PM		33.2	C-	35.1	D+	0.009	2.9	N/A
37	Lawrence Expressway/Tasman Drive**	AM	Signal	50.8	D	51.3	D-	0.006	0.4	N/A
		PM		56.5	E+	56.4	E+	0.008	-0.5	N/A
38	Lawrence Expressway/Lakehaven Drive**	AM	Signal	48.3	D	48.3	D	0.008	0.2	N/A
		PM		54.8	D-	54.9	D-	0.008	0.1	N/A
39	Lawrence Expressway/NB US 101 Ramps**	AM	Signal	13.6	B	13.6	B	0.008	0.0	N/A
		PM		15.8	B	15.7	B	0.008	0.0	N/A
40	Lawrence Expressway/SB US 101 Ramps**	AM	Signal	13.0	B	12.9	B	0.008	0.0	N/A
		PM		25.2	C	25.6	C	0.008	0.5	N/A

TABLE 5.4-2, CONTINUED

Intersection	Peak Hour ¹	Inter-section Control	Cumulative Conditions		Cumulative plus Project Conditions				
			Delay ²	LOS ³	Delay ²	LOS ³	Δ in Crit. V/C ⁴	Δ in Crit. Delay ⁵	Signal Warrant Met? ⁶
41 Lawrence Expressway/Duane Avenue/Oakmead Parkway**	AM	Signal	40.8	D	41.0	D	0.008	0.3	N/A
	PM		43.5	D	43.5	D	0.001	-0.1	N/A
42 Lawrence Expressway/Arques Avenue**	AM	Signal	74.5	E	76.5	E-	0.008	2.9	N/A
	PM		44.0	D	44.2	D	0.006	0.1	N/A

Notes:

Bold font indicates unacceptable operations based on VTA's LOS E Standard. **Bold and highlighted** indicates significant impacts.

¹ AM = morning peak hour, PM = afternoon peak hour.

² Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Signalized intersections include adjusted saturation flow rates to reflect Santa Clara County Conditions per VTA guidelines. Total control delay for the worst movement is presented for side-street stop-controlled intersections

³ LOS = Level of Service. LOS calculations conducted using the TRAFFIX level of service analysis software package, which applies the methodology described in the 2000 HCM.

⁴ Change in the critical volume-to-capacity ratio (V/C) between Existing and Project Conditions.

⁵ Change in critical movement delay between Existing and Project Conditions.

⁶ Signal warrant based CA MUTCD Warrant 3, Peak Hour (Urban Area)

* CMP intersection with LOS E threshold.

** Regionally significant intersection with LOS E threshold.

Highlighted cells indicate potential project related impacts

Source: Fehr & Peers, August 2013

Cumulative Intersection Impacts and Mitigation Measures

This section evaluates the intersection LOS results presented in Table 4.6-9 in Section 4.6, *Transportation and Traffic*, against the City of Sunnyvale's, and the Santa Clara Valley Transportation Authority's (VTA) criteria for significant impacts. Mitigation measures are identified where necessary.

Mathilda Avenue/Java Drive (#3)

During the PM peak hour, the addition of project traffic is projected to exacerbate unacceptable LOS F operations at the Mathilda Avenue/Java Drive intersection. However, the critical delay is not projected to increase by more than four seconds (0 seconds) and the critical V/C ratio is not projected to increase by more than 0.01 (0.000) between the Cumulative No Project and Cumulative plus Project scenarios; therefore the project is considered to have a less-than-significant impact at the Mathilda Avenue/Java Drive intersection based on Sunnyvale's impact criteria and no mitigation measures are identified.

Bordeaux Drive/Moffett Park Drive (#22)

Under Cumulative plus Project Conditions the Bordeaux Drive/Moffett Park Drive intersection is projected to operate at unacceptable LOS F during the AM peak hour; however, is not projected to meet the MUTCD peak hour signal warrant volume threshold. In the PM peak hour, the intersection is projected to operate at unacceptable LOS F and is projected to meet the MUTCD peak hour signal

warrant volume thresholds. Therefore, based on the City of Sunnyvale's intersection threshold, the Bordeaux Drive/Moffett Park Drive intersection would have a significant impact during the PM peak period.

Based on City standards, the project's impact would be mitigated to less-than-significant levels with the installation of a traffic signal. The signal is assumed to include a protected eastbound left-turn phase from Moffett Park Drive to northbound Bordeaux Drive and a southbound right-turn overlap phase.

The proposed R&D development complex would develop in phases. Buildings B1 and B2 near the Moffett Park Drive/Borregas Avenue intersection, building B5 near the Mathilda Avenue/Innovation Way intersection, and the parking garage at the corner of the Moffett Park Drive/Bordeaux Drive intersection would develop in the first phase. Assuming that these first three buildings and parking garage would develop in phase one, the Moffett Park Drive/Bordeaux Drive intersection and would operate at LOS C and the project would have a less-than-significant impact.

Although VTA guidelines only allow for a maximum 9.5 percent reduction on vehicle trips, the MPSP TDM program is required to reduce peak hour trips by 30 percent. With a 30 percent reduction in vehicle trips, the intersection would operate at acceptable LOS D and the peak hour volume warrant would not be met; thus the impact at this intersection would be less-than-significant with implementation of the MPSP's TDM requirements.

The proposed realignment of the SR 237 Westbound Ramp/Moffett Park Drive off-ramp discussed in Section 4.6, *Transportation and Traffic* and included in the City's TIF program, would require the closure of Moffett Park Drive between Mathilda Avenue and Bordeaux Drive. This closure would eliminate the eastbound approach of the Bordeaux Drive/Moffett Park Drive intersection, thus removing all conflict points and eliminating the entire intersection. Therefore, if the proposed off-ramp realignment is implemented no additional improvements would be required at this intersection. It should be noted that the specific modifications related to the reconfiguration of the SR 237/Mathilda Avenue interchange analyzed in this report are based on recommendations from the 2006 Route 237 Corridor Study. The SR 237/Mathilda Avenue project is currently under conceptual design review, and specific modifications to the SR 237/Mathilda Avenue intersections could change based on conclusions from the on-going analysis of this interchange.

Mitigation Measure 5.4-1: *Construct a traffic signal to the satisfaction of the Public Works Director at the Moffett Park Drive/Bordeaux Drive intersection prior to occupancy of the second phase of development. Impacts at this intersection would not occur with the first phase of development (Buildings B1, B2, and B5 and Parking Structure A). This intersection could potentially be removed when the future improvements to the SR237/Mathilda Avenue interchange are constructed. Temporary traffic signals or other interim traffic improvements may be considered by the Public Works Director and installed/completed prior to occupancy of the second phase of development if the SR237/Mathilda Avenue interchange project has not been completed at that time. The final design of the SR237/Mathilda interchange will be determined in the operations study lead by VTA.*

Level of Significance after Mitigation: *Less Than Significant***Borregas Avenue/Moffett Park Drive (#25)**

Under Cumulative plus Project Conditions the Borregas Avenue/Moffett Park Drive intersection is projected to operate at unacceptable LOS F during the AM peak hour; however, is not projected to meet the MUTCD peak hour signal warrant volume threshold. In the PM peak hour, the intersection is projected to operate at acceptable LOS E and is projected to meet the MUTCD peak hour signal warrant volume thresholds. While the intersection operates at an unacceptable LOS during the AM peak hour and meets the peak hour volume signal warrant during the PM peak hour, the intersection does not meet the both impact thresholds (LOS F and peak hour signal warrant) during either the AM and PM peak hours. Therefore, based on the City of Sunnyvale's intersection threshold, the Borregas Avenue/Moffett Park Drive intersection would have a less-than-significant impact.

It should be noted that during the AM peak hour, the worst movement for this side-street stop controlled intersection is the southbound left-turn lane (LOS F with 95.7 seconds of delay), which is projected to have 9 vehicles; thus the LOS F operations only applies to those 9 vehicles. The total delay for the southbound approach (combined southbound left-turns and right-turn movement) is projected to be 19.4 seconds of delay (LOS C). In the PM peak hour, the worst movement is the southbound right-turn lane (LOS C with 16.7 seconds of delay), which is projected to carry 80 vehicles. The total delay for the southbound approach (combined southbound left-turns and right-turn movement) is projected to be 13.4 seconds of delay (LOS B).

Cumulative plus Project Mathilda Avenue Micro simulation Analysis

The study intersections on the Mathilda Avenue corridor between Moffett Park Drive and Almanor Avenue are closely spaced and the corridor experiences operational issues beyond simple intersection LOS primarily due to vehicle weaving. The TRAFFIX analysis software program does not accurately capture the operations of the Mathilda Avenue corridor since it does not evaluate the interactions of closely spaced and coordinated intersections. To better estimate and assess the projected traffic operations along Mathilda Avenue between Moffett Park Drive and Almanor Avenue a micro simulation analysis using SimTraffic was conducted. The micro simulation analysis was also utilized to provide an assessment of the weaving operations at the US 101/Mathilda Avenue interchange. Table 5.4-3 displays the projected LOS and delay along Mathilda Avenue based on the SimTraffic analysis. SimTraffic LOS and Queuing worksheets are provided in the Traffic Impact Analysis in Appendix E of this EIR.

As shown in Table 5.4-3, when analyzed using a micro simulation analysis (SimTraffic) during the AM peak hour the three intersections south of the Eastbound SR 237 ramps are projected to operate at unacceptable LOS F. During the PM peak hour every intersection is projected to operate at an unacceptable LOS F. This is in contrast to what was reported using the standard HCM LOS methodologies (TRAFFIX), where no deficiencies were shown in the corridor, with the exception of the eastbound and westbound SR 237 ramps. This is because HCM methodologies only measure the capacity

of a single intersection and do not take into account delay caused by queues from downstream intersections or deficient weaving movements. Based on this analysis it can be concluded that the tight intersection spacing, high traffic conflicting traffic volumes within the limited weave points and lack of vehicular storage between intersections is the predominate cause of the poor operations within the segment of Mathilda Avenue. These issues result in both excessive delays and low travel speeds throughout the corridor.

**TABLE 5.4-3
CUMULATIVE PLUS PROJECT MATHILDA AVENUE INTERSECTION LEVELS OF SERVICE
MICRO SIMULATION ANALYSIS**

	Intersection	Peak Hour ¹	Inter-section Control	Traffic		SimTraffic	
				Delay ²	LOS ³	Delay ²	LOS ³
5	Mathilda Avenue/Innovations Way**	AM	Signal	13.7	B	21.4	C
		PM		24.7	C-	>180.0	F
6	Mathilda Avenue/Moffett Park Drive**	AM	Signal	168.6	F	68.3	E
		PM		>180.0	F	>180.0	F
7	Mathilda Ave/Westbound SR 237 Ramps**	AM	Signal	75.1	E-	55.6	F
		PM		166.4	F	>180.0	F
8	Mathilda Ave/Eastbound SR 237 Ramps**	AM	Signal	30.1	C	101.9	F
		PM		38.3	D+	>180.0	F
9	Mathilda Avenue/Ross Drive**	AM	Signal	12.8	B	>180.0	F
		PM		43.5	D	>180.0	E
10	Mathilda Avenue/Ahwanee Avenue**	AM	Signal	20.4	C+	116.0	F
		PM		64.8	E	115.6	F

Source: Fehr & Peers, August 2013

Mathilda Avenue/SR-237 Ramp Realignment Evaluation

The City's TIF and VTA's VTP 2035 include the reconfiguration of the SR-237/Mathilda Avenue ramp intersection in their lists of constrained projects. This improvement would shift the westbound US 237 off-ramp north to align with the westbound leg of Moffett Park Drive at Mathilda Avenue. The western leg of Moffett Park Drive between Mathilda Avenue and Bordeaux Drive would be removed. The on-ramp for westbound SR-237 would also be removed. This improvement specifically includes:

- Reconfiguration of Mathilda Avenue/SR-237 to eliminate the traffic signal aligning with the Route 237 WB off and on ramps

- Shifting of the WB 237 off ramp to an alignment approximating the current alignment of Moffett Park Drive
- Restriction of access to the WB 237 on ramp to southbound Mathilda and eastbound Moffett Park Drive traffic only – no northbound Mathilda access
- Elimination of EB Moffett Park Drive access from Mathilda Avenue, tying of WB Moffett Park Drive into the WB 237 ramp via a stop or signal
- Elimination of the NB 101 to NB Mathilda free right turn ramp and NB 101 to SB Mathilda loop ramp, replacement with a traffic signal serving both movements

As noted previously, traffic associated with the proposed project is anticipated to significantly impact the vehicular operations at the SR-237 WB / Mathilda interchange and has identified this improvement as a mitigation measure (see Mitigation Measure 5.4-1). To verify that realignment of the SR-237 ramps will improve operations at the impacted intersections a micro simulation analysis was conducted under Cumulative plus Project conditions assuming the above changes. Table 5.4-4 provides a summary of the LOS and delay results assuming the realignment of the SR-237 ramps.

TABLE 5.4-4
MATHILDA AVE / SR-237 INTERCHANGE RECONFIGURATION INTERSECTION LEVELS OF SERVICE
MICRO SIMULATION ANALYSIS

	Intersection	Peak Hour	Inter-section Control	Traffic Existing Configuration		SimTraffic Existing Configuration		SimTraffic Ramp Realignment	
				Delay	LOS	Delay	LOS	Delay	LOS
5	Mathilda Avenue/Innovations Way-New Roadway	AM	Signal	13.7	B	21.4	C	149.9	F
		PM		24.7	C-	>180.0	F	>180.0	F
6	Mathilda Avenue/Moffett Park Drive-237 Westbound Off-Ramp*	AM	Signal	168.6	F	68.3	E	102.9	F
		PM		>180.0	F	>180.0	F	>180.0	F
7	Mathilda Ave/Westbound SR 237 On-Ramps**	AM	SSSC**	75.1	E-	55.6	E	22.6	C
		PM		166.4	F	>180.0	F	5.3	A
8	Mathilda Ave/Eastbound SR 237 Ramps**	AM	Signal	30.1	C	101.9	F	112.4	F
		PM		38.3	D+	>180.0	F	22.4	C
9	Mathilda Avenue/Ross Drive	AM	Signal	12.8	B	>180.0	F	174.4	F
		PM		43.5	D	>180.0	F	33.2	C
10	Mathilda Avenue/Ahwanee Avenue	AM	Signal	20.4	C+	116.0	F	69.0	E
		PM		64.8	E	115.6	F	42.3	D

TABLE 5.4-4, CONTINUED

Notes

- * Under Ramp Realignment Scenario the SR-235 Westbound Off-Ramp is reconfigured to the current Moffett Place alignment
- ** Under Ramp Realignment Scenario the signal at the Mathilda Ave/Westbound SR 237 On-Ramps was assumed to be removed

Source: Fehr & Peers, August 2013

As shown in Table 5.4-4, it is projected that the proposed ramp realignment will improve the operations at some intersections within the Mathilda Avenue corridor; however, all signalized intersections are still projected to operate at substandard LOS F. It should also be noted that the operations at the following intersections are anticipated to significantly degrade with the Ramp Realignment.

- *Mathilda Avenue/Innovations Way – New Roadway (Both Peaks)* – Intersection operations are projected to degrade at this intersection due to the shifting of traffic (mainly project related) from Moffett Park Drive, east of Mathilda Avenue, to the New Roadway, which will serve as the southernmost connection between Bordeaux Drive and Mathilda Avenue.
- *Mathilda Avenue/Moffett Park Drive-237 Westbound Off-Ramp (AM Peak)* – Intersection operations are projected to degrade at this intersection due to the additional westbound traffic associated with the SR-237 WB Off-Ramp. The additional traffic from the westbound off-ramp creates a conflict with the heavy northbound Mathilda Avenue movement, resulting in a lack of overall green time and capacity at the intersection. However, it should be noted that the projected operations at this intersection are better than those projected at the Mathilda Avenue/Moffett Park Drive-237 Westbound Off-Ramp under the existing configuration.
- *Mathilda Avenue/Ross Drive (PM Peak)* – Intersection operations are projected to degrade at this intersection due to the additional northbound traffic that will divert from the 101 SB On-Ramp, which is assumed to be closed with the Ramp Realignment, to the SR-237 EB On-Ramp which is located to the north of the Ross Drive intersection. The diverted traffic (around 400 vehicles) along Mathilda Avenue will have to now travel through the Ross Drive intersection to access the freeway.

While the Ramp Realignment scenario will improve conditions within the corridor, particularly at the Mathilda Avenue/SR-237 interchange, the corridor will still operate at substandard levels. The significant vehicular demand within this portion of the corridor (over 5,000 peak hour trips in some places during the AM peak hour) currently exceeds the capacity of the various intersections and capacities within the corridor.

Project Access Alternatives

The purpose of the project access alternatives was to determine what temporary impacts may occur to the surrounding roadway network if one or multiple of the planned changes to the roadway network accessing the project site are made prior to the final configuration of either the proposed project or the SR-237/Mathilda Avenue interchange realignment.

Since the timing of the planned SR-237/Mathilda Avenue interchange ramp realignment is uncertain, a sensitivity analysis was conducted under the following three separate access scenarios:

- *Alternative 1* - Retaining WB Moffett Park Drive access to Mathilda Avenue via a tie to the WB 237 off ramps
- *Alternative 2* - Providing alternative access via the proposed new Bordeaux/Innovation roadway
- *Alternative 3* - No Moffett Park Drive access or no new roadway between Mathilda Avenue and Bordeaux Drive at Innovation Way. Traffic diversion to Java Drive, other routes.

The intersections analyzed under the three alternatives were chosen as they were deemed to be affected by the new east-west roadway. LOS and average intersection delay results, using HCM 2000 methodologies (TRAFFIX), are summarized in Table 5.4-5 for each alternative.

**TABLE 5.4-5
PROJECT ACCESS ALTERNATIVE LOS SUMMARY**

	Intersection	Peak Hour ¹	Inter-section Control	Alternative 1		Alternative 2		Alternative 3	
				Delay ²	LOS ³	Delay ²	LOS ³	Delay ²	LOS ³
5	Mathilda Avenue/Innovations Way	AM	Signal	13.7	B	117.0	F	12.7	B
		PM		24.7	C	1. 146.2	2. F	21.5	C+
20	Bordeaux Drive/ Java Drive	AM	Signal	17.8	B	18.4	B-	18.8	B-
		PM		17.5	B	20.1	C+	20.0	C+
21	Bordeaux Drive/New Roadway	AM	SSSC	8.7	A	26.5	D	N/A	N/A
		PM		8.6	A	3. 40.1	4. E	N/A	N/A
22	Bordeaux Drive /Moffett Park Drive	AM	SSSC	151.4	F	N/A	N/A	N/A	N/A
		PM		56.5	F	N/A	N/A	N/A	N/A
23	Borregas Avenue/Caribbean Drive	AM	Signal	12.6	B	13.1	B	13.1	B
		PM		9.0	A	14.3	B	14.8	B
24	Borregas Avenue/Java Drive	AM	Signal	23.5	C	19.9	B-	20.9	C+
		PM		17.9	B	19.5	B-	20.8	C+
25	Borregas Avenue/Moffett Park Drive	AM	SSSC	116.0	F	22.2	C	22.1	C
		PM		17.5	C	12.4	B	12.4	B

Notes:

¹ AM = morning peak hour, PM = afternoon peak hour.

² Whole intersection weighted average control delay expressed in seconds per vehicle for signalized and all-way stop controlled intersections. Signalized intersections include adjusted saturation flow rates to reflect Santa Clara County Conditions per VTA guidelines. Total control delay for the worst movement is presented for side-street stop-controlled intersections

³ LOS = Level of Service. LOS calculations conducted using the TRAFFIX level of service analysis software package, which applies the methodology described in the 2000 HCM.

Source: Fehr & Peers, August 2013

As shown in Table 5.4-5, all intersections operate at acceptable levels of delay under all three scenarios with the following exceptions:

Alternative 1

- Bordeaux Drive/Moffett Park Drive – both peak hours (LOS F)

- Borregas Avenue/Moffett Park Drive – AM peak hour (LOS F)

Alternative 2

- Mathilda Avenue/Innovations Way – AM peak hour (LOS F)
- Bordeaux Drive/New Roadway – PM Peak hour (LOS F),

Alternative 3

- None

The following improvements would be required to restore operations at the key identified intersections to acceptable levels under each alternative.

Alternative 1 - Retaining WB Moffett Park Drive access to Mathilda Avenue via a tie to the WB 237 off ramps

Bordeaux Drive/Moffett Park Drive

Signalization would restore operations at the intersection back to acceptable levels, based on the City's LOS standards.

Borregas Avenue/Moffett Park Drive

Signalization would restore operations at the intersection back to acceptable levels, based on the City's LOS standards.

Alternative 2 - Providing alternative access via the proposed new Bordeaux/Innovation roadway

Mathilda Avenue/Innovations Way

An exclusive northbound right-turn lane would be required to restore operations back to acceptable levels at this intersection, based on the City's LOS standards.

Bordeaux Drive/New Roadway

Signalization would restore operations at the intersection back to acceptable levels, based on the City's LOS standards.

Alternative 3 - No Moffett Park Drive access or no new roadway between Mathilda Avenue and Bordeaux Drive at Innovation Way. Traffic diversion to Java Drive, other routes

No Improvements required.

NOISE

Short-Term Cumulative Impacts

The project has no control over the timing or sequencing of the related projects, and as such, any quantitative analysis to ascertain the daily construction noise that assumes multiple, concurrent construction projects would be speculative. Construction-related noise for the proposed project and each related project would be localized. In addition, it is likely that each of the related projects would have to comply with the noise standards of the local Municipal Code, as well as mitigation measures that may be prescribed pursuant to CEQA provisions that require significant impacts to be reduced to the extent feasible.

Project construction noise impacts would cease upon completion of excavation, grading, and building activities. Compliance with the noise standards of the local Municipal Code and Mitigation Measure 4.7-1, would serve to minimize the length of time noise-sensitive receptors are exposed to significant noise levels. Additionally, because noise dissipates as it travels away from its source, noise impacts from construction activities would be limited to each of the respective sites and their and vicinities. As such, the project would not result in a substantial cumulative contribution to construction noise in the project vicinity. Therefore, a less than significant impact would occur in this regard.

Long-Term Cumulative Impacts

Cumulative Mobile Noise. The cumulative mobile noise analysis is conducted in a two-step process. First, the combined effects from both the proposed project and other projects are compared. Second, for combined effects that are determined to be cumulatively significant, the project's incremental effects then are analyzed. The project's contribution to a cumulative traffic noise increase would be considered significant when the combined effect exceeds perception level (i.e., auditory level increase) threshold. The combined effect compares the "Future With Project" condition to "Existing" conditions. This comparison accounts for the traffic noise increase from the project generated in combination with traffic generated by projects in the cumulative projects list. The following criteria have been utilized to evaluate the combined effect of the cumulative noise increase.

- Combined Effects: The cumulative with project noise level ("Future With Project") would cause a significant cumulative impact if a 3 dBA increase over existing conditions occurs and the resulting noise level exceeds the applicable exterior standard at a sensitive use.

Although there may be a significant noise increase due to the proposed project in combination with identified cumulative projects (combined effects), it must also be demonstrated that the project has an incremental effect. In other words, a significant portion of the noise increase must be due to the proposed project. The following criteria have been utilized to evaluate the incremental effect of the cumulative noise increase.

- Incremental Effects: The “Future With Project” causes a 1 dBA increase in noise over the “Future Without Project” noise level.

A significant impact would result only if both the combined and incremental effects criteria have been exceeded. Noise by definition is a localized phenomenon, and drastically reduces as distance from the source increases. Consequently, only proposed projects and growth due to occur in the general vicinity of the project site would contribute to cumulative noise impacts. Table 5.4-6, Cumulative Noise Scenario, lists the traffic noise effects along roadway segments in the project vicinity for “Existing,” “Future Without Project,” and “Future With Project,” including incremental and net cumulative impacts.

First, it must be determined whether the Cumulative Plus Project Increase Above Existing Conditions (Combined Effects) is exceeded. Per Table 5.4-6 this criterion is not exceeded along any of the segments. Next, under the Incremental Effects criteria, cumulative noise impacts are defined by determining if the ambient (Future Without Project) noise level is increased by 1 dB or more. Based on the results of Table 4.7-13, there would be one roadway segment along Moffett Park Drive (between Bordeaux Avenue and Mathilda Avenue) would exceed both the combined and incremental effects criteria.

It should be noted that Table 5.4-6 indicates that several roadway segments would experience decreases from existing noise levels during the future scenarios. Roadway noise modeling is based on traffic volumes obtained from the City’s regional model, which takes into account growth from future development as well as planned circulation improvements. The noise level decreases are due to the traffic model accounting for planned improvements that would modify circulation and divert traffic from some of the roadways in the project’s study area.

A significant cumulative mobile noise impact would result only if both the combined and incremental effects criteria have been exceeded and the resulting noise level exceeds the applicable exterior standard at a noise sensitive use. As described under Impact Statement 4.7-3, receptors along Moffett Park Drive between Bordeaux Avenue and Mathilda Avenue would experience traffic noise levels of 64.4 dBA. Therefore, noise levels would not exceed the normally acceptable land use compatibility standards of 65 dBA for hotel uses (which are currently located along this segment). It should be noted that the nearest hotel building is 120 feet from the Moffett Park Drive centerline, the noise levels experienced at the hotel building would be even less than the modeled 64.4 dBA. Therefore, the proposed project would not result in long-term mobile noise impacts based on project generated traffic as well as cumulative and incremental noise levels. Thus, the proposed project, in combination with cumulative background traffic noise levels, would result in a less than significant cumulative impact in this regard.

**TABLE 5.4-6
CUMULATIVE NOISE SCENARIO**

Roadway Segment	Existing	Future Without Project	Future With Project	Combined Effects	Incremental Effects	Potentially Result in a Cumulatively Significant Impact?
	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	Difference in dBA Between Existing and Future With Project	Difference in dBA Between Future Without Project and Future With Project	
Mathilda Avenue						
South of SR 82	66.3	67.7	67.8	1.5	0.1	No
SR 82 to McKinley Avenue	66.1	67.2	67.3	1.2	0.1	No
McKinley Avenue to Indio Way	70.1	72.0	72.1	2.0	0.1	No
Indio Way to US 101	69.9	71.9	72.1	2.2	0.2	No
US 101 to SR-237	69.2	71.1	71.5	2.3	0.4	No
SR-237 to Innovation Way	67.0	69.3	69.5	2.5	0.2	No
Innovation Way to Java Drive	66.6	69.0	69.1	2.5	0.1	No
Mathilda Avenue / Caribbean Drive						
Java Drive to Borregas Avenue	62.3	65.6	65.7	3.4	0.1	No
Caribbean Drive						
Borregas Avenue to Crossman Avenue	63.9	62.3	62.7	-1.2	0.4	No
Crossman Avenue to Moffett Park Drive	65.6	67.5	67.7	2.1	0.2	No
Caribbean Drive / Lawrence Expressway						
Moffett Park Drive to Elko Drive	70.2	71.2	72.2	2.0	1.0	No
Lawrence Expressway						
Elko Drive to US 101 Northbound Ramps	70.8	70.4	70.5	-0.3	0.1	No
US 101: Northbound Ramps to Southbound Ramps	72.5	72.6	72.7	0.2	0.1	No
US 101 Southbound Ramps to Arques Avenue	73.1	72.6	72.7	-0.4	0.1	No
Arques Avenue to Central Expressway	72.4	71.1	71.1	-1.3	0	No
Java Drive						
Mathilda Avenue to Bordeaux Drive	58.5	58.1	58.3	-0.2	0.2	No
East of Bordeaux Drive	61.0	58.8	59.7	-1.3	0.9	No
Crossman Avenue						
Caribbean Drive to Java Drive	61.4	63.1	63.1	1.7	0	No
Java Drive to Moffett Park Drive	61.5	60.6	61.0	-0.5	0.4	No
Moffett Park Drive						
Crossman Avenue to Borregas Avenue	59.6	54.0	56.5	-3.1	2.5	No
Borregas Avenue to Bordeaux Avenue	60.6	59.1	62.0	1.4	2.9	No
Bordeaux Avenue to Mathilda Avenue	62.0	59.7	64.4	2.4	4.7	Yes ¹
Mathilda Avenue to Lockheed Martin Parkway	62.6	61.1	62.2	-0.4	1.1	No
Lockheed Martin Pkwy to US 101 Northbound Ramps	61.8	61.5	61.5	-0.3	0	No
Fair Oaks Avenue						
Crossman Avenue to Fair Oaks Way	63.5	64.3	64.7	1.2	0.4	No
Fair Oaks Way to US 101 Northbound Ramps	66.8	66.7	66.9	0.1	0.2	No
US 101 Northbound Ramps to Wolfe Road	64.4	64.2	64.3	-0.1	0.1	No

TABLE 5.4-6, CONTINUED

Roadway Segment	Existing	Future Without Project	Future With Project	Combined Effects	Incremental Effects	Potentially Result in a Cumulatively Significant Impact?
	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	dBA @ 100 Feet from Roadway Centerline	Difference in dBA Between Existing and Future With Project	Difference in dBA Between Future Without Project and Future With Project	
Wolfe Road						
Fair Oaks Avenue to Maude Avenue	61.4	60.6	60.7	-0.7	0.1	No

NOTES: ADT = average daily trips; dBA = A-weighted decibels; CNEL = community noise equivalent level

1 – Although the Incremental Effects and Combined Effects are exceeded, noise levels would not exceed the 65 dBA normally acceptable standards for hotel uses. Therefore, a less than significant impact would occur.

Source: Based on traffic data from Fehr and Peers, 2013. See Appendix G for more details on modeling inputs.

Cumulative Stationary Noise. The proposed project would introduce new parking areas and mechanical equipment such as HVAC systems throughout the project site. As previously discussed, the proposed project would not result in on-site stationary noise sources that would exceed the City's standards within the Municipal Code. Thus, the proposed project would not result in long-term stationary noise sources that could significantly affect surrounding sensitive receptors. Future development proposals within the City would require separate discretionary approval and CEQA assessment, which would address potential noise impacts and identify necessary attenuation measures, where appropriate. Thus, cumulative stationary noise impacts would be considered a less than significant impact.

AIR QUALITY

Cumulative Short-Term Emissions

The San Francisco Bay Area Air Basin is designated nonattainment for O₃, PM₁₀, and PM_{2.5} for state standards, and nonattainment for O₃ and PM₁₀ for federal standards (refer to Table 4.8-3). As discussed above, the project's construction-related emissions by themselves would have the potential to exceed the BAAQMD significance thresholds for criteria pollutants during construction Years 1 through 4. Mitigation Measures 4.8-1a through 4.8-1c would reduce emissions to a less than significant level for ROG, PM₁₀, and PM_{2.5}. However, NO_x would remain significant and unavoidable during construction years 1 through 4.

Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the project-related construction emissions (with mitigation) would be cumulatively considerable. The BAAQMD recommended Basic Construction Mitigation Measures are recommended for all projects whether or not construction-related emissions exceed the thresholds of significance. Compliance with BAAQMD construction-related mitigation requirements are considered to reduce cumulative impacts at a basin-wide level. However, despite the implementation of the BAAQMD Basic Construction Mitigation Measures as well as Additional Mitigation Measures, construction NO_x emissions would exceed thresholds. Therefore, construction

emissions associated with the proposed Project would result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Emissions

The BAAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, 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. The BAAQMD developed the operational thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. Therefore, because the Project does not exceed the BAAQMD operational thresholds the Project would not be a cumulatively considerable contributor to a significant cumulative impact. As depicted in Table 4.8-5, the proposed Project's operational emissions would exceed BAAQMD thresholds for air pollutants. Therefore, operational emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

The Project proposes all commercial uses, which the BAAQMD does not consider to be sensitive receptors. Additionally, the project does not propose any uses that would be considered a significant source of air toxics. Therefore, TAC emissions associated with the proposed project would not result in a cumulatively considerable contribution to significant cumulative TAC impacts.

GREENHOUSE GAS EMISSIONS

The geographic scope of the cumulative greenhouse gas analysis is considered on both a state-wide basis (policy consistency) and globally (GHG emissions) since the resulting climate change effects are global. Because GHG emissions affect global climate change, evaluation of cumulative impacts is not based on adding emissions from all reasonably foreseeable projects (which would not be feasible on a global basis for GHGs). The City has used significance thresholds originally established by BAAQMD for individual projects that determine whether the project would result in cumulatively considerable GHG emissions to analyze the project's greenhouse gas impact in this EIR. As discussed in Section 4.9, Greenhouse Gas Emissions, the project's GHG emissions would not exceed the EIR's significance threshold of 4.6 MT CO₂e/sp/year, indicating the project's contribution to significant GHG emissions would not be cumulatively considerable.

HAZARDS AND HAZARDOUS MATERIALS

The geographic scope of impacts associated with hazards and hazardous materials encompasses the Project site and its vicinity. Due to the site-specific nature of hazardous materials impacts and mitigation measures, there would be no potential for cumulative effects of hazards or hazardous materials from construction and operation of the proposed Project in conjunction with other cumulative development (listed above). Compliance with applicable laws and regulations as well as implementation of appropriate hazardous buildings materials surveys and abatement would avoid the potential for local or regional

cumulative effects related to the exposure to hazardous materials during construction or operation of the Project, and cumulative impacts would be less than significant.

CULTURAL RESOURCES

As discussed in Section 4.11, *Cultural Resources*, the potential for encountering historical archaeological and/or paleontological resources at the Project site is considered to be low because the Project area was not historically utilized by the Native American population and has not been identified for the presence of Native American cultural resources by the NAHC. There is a potential to encounter previously undiscovered cultural resources during construction. However, since the Project's impacts on cultural resources would be site-specific and mitigated to a less than significant level with implementation of general mitigation measures such as monitoring and adherence to state and federal regulations, the Project's contribution to any such impacts would not be cumulatively considerable.

PUBLIC SERVICES, UTILITIES, AND SERVICE SYSTEMS

The geographic scope of the cumulative public services and utilities analysis consists of the service areas of the various service agencies. Development of the Project would have the potential to contribute incrementally to cumulative effects on the demand for public services and utilities as a result of future growth in the community. Projects-specific mitigation measures are provided in Section 4.12, *Public Services and Utilities*, including the requirement to enter an agreement with the City of Sunnyvale and the Sunnyvale Public Safety Department regarding the addition of adequate police and fire protection resources including the potential for new equipment, staff, and/or a new facility, and the payment of mitigation fees to Fremont Union High School District in the amount adopted by the district. These measures would reduce impacts to a less than significant level.

All proposed development plans will be reviewed and evaluated to coordinate community growth in a manner that adheres to the goals of the General Plan and does not significantly affect the levels of service of existing services, utilities, and service systems. The City's development review process guides community development in a manner that achieves its goal of maintaining balanced growth and providing adequate services and infrastructure, as stated in the Community Vision of the City's General Plan. The adherence of the above-listed cumulative projects within the City to the land use guidelines and objectives of the General Plan will ensure that potential cumulative effects on public services, utilities, and service systems would be less than significant. The Project's demand on public services, utilities, and service systems would result in a less than cumulatively considerable contribution to this less than significant cumulative impact.

RECREATION

The analysis of cumulative recreational impacts considers the larger context of future development within Sunnyvale as envisioned by the City's General Plan and relies upon the projections of that General Plan. As discussed in Section 4.13, *Recreation*, the Project's buildings are oriented to surround two large landscaped common spaces to accommodate active and passive recreation onsite. Integral to the campus,

the proposed development would also provide a 50,000 square foot amenities building including a fitness center, café, and extensive outdoor facilities including a pool and basketball court. The amenities center would be solely for the use of the campus tenants and employees. Creating this type of facility would reduce traffic trips, as employees are more likely stay on site for lunch and alter their commute times to allow for before or after business hours workouts or activities.

The Project's contribution to cumulative increases in non-residential space would be within growth levels anticipated in the City's General Plan, and the Project's incremental contribution to this cumulative increase would be less than cumulatively considerable. Potential cumulative impacts associated with the construction of new recreational facilities and required mitigation measures to reduce those impacts to less than significant are included throughout this SEIR. Therefore, the Project would not contribute to cumulative long-term impacts on recreation, nor would the Project result in the physical deterioration of existing recreational facilities or require the addition of new parks beyond those identified in the General Plan.

5.5 ENERGY CONSERVATION

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Appendix F requires a description (where relevant) of the wasteful, inefficient, and unnecessary consumption of energy caused by a project. In 1975, the California State Legislature adopted Assembly Bill 1575 (AB 1575) in response to the oil crisis of the 1970s. Appendix F of the State CEQA Guidelines provides guidance for assessing potential impacts that a project could have on energy supplies, focusing on the goal of conserving energy by ensuring that projects use energy wisely and efficiently. Because Appendix F does not include specific significance criteria, this threshold is based on the goal of Appendix F. Therefore, an energy impact is considered significant if the proposed Project would:

Develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy or construct new or retrofitted buildings that would have excessive energy requirements for daily operation.

5.5.1 PROJECT ENERGY CONSUMPTION

SHORT-TERM CONSTRUCTION

In 1994, the U.S. Environmental Protection Agency (EPA) adopted the first set of emission standards (Tier 1) for all new off-road diesel engines greater than 37 kilowatts (kW). The Tier 1 standards were phased in for different engine sizes between 1996 and 2000, reducing NOX emissions from these engines by 30 percent. The EPA Tier 2 and Tier 3 standards for off-road diesel engines are projected to further reduce emissions by 60 percent for NOX and 40 percent for particulate matter from Tier 1 emission levels. In 2004, the EPA issued the Clean Air Non-road Diesel Rule. This rule will cut emissions from off-road diesel engines by more than 90 percent, and will be fully phased in by 2014. The Project is expected to be constructed over four phases and last a period of eight years. Project construction would involve demolition, site preparation, grading, paving, building construction, and architectural coating.

There are no unusual project characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or State. The Project would be required to implement the Bay Area Air Quality Management District's (BAAQMD) Basic Construction Mitigation Measures which include dust control (watering, covering/stabilizing disturbed areas, limiting on-site vehicle speeds, etc.). Additionally, as discussed in Section 4.8, Air Quality, the Project would also implement Additional Control Mitigation Measures (low VOC content paint, CARB certified off-road engines, and use of Best Available Control Technology) to further reduce construction-related emissions. Therefore, with implementation of Mitigation Measures 4.8-1a through 4.8-1c, it is expected that construction fuel consumption associated with the proposed Project would not be any more inefficient, wasteful, or unnecessary than other similar development projects of this nature.

LONG TERM OPERATIONS

Transportation Energy Demand. Pursuant to the Federal Energy Policy and Conservation Act of 1975, the National Highway Traffic and Safety Administration (NHTSA) is responsible for establishing additional vehicle standards and for revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon (mpg). Since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 mpg. Heavy-duty vehicles (i.e., vehicles and trucks over 8,500 pounds gross vehicle weight) are not currently subject to fuel economy standards. Compliance with Federal fuel economy standards is not determined for each individual vehicle model. Rather, compliance is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the United States.

Trip generation and the daily vehicle miles traveled (VMT) were used to estimate vehicle fuel consumption associated with trips generated by the proposed Project. Table 5.4-1, *Project Operational Fuel Consumption*, provides an estimate of the daily fuel consumed by vehicles traveling to and from the proposed Project. As indicated in Table 5.4-1, the operation of Project is estimated to consume approximately 3,022 gallons of fuel daily.

**TABLE 5.5-1
PROJECT OPERATIONAL FUEL CONSUMPTION**

Vehicle Type	Percent of Vehicle Trips ¹	Project-Related Daily Trips ²	Daily Vehicle Miles Traveled ³	Average Fuel Economy (miles per gallon) ⁴	Total Daily Fuel Consumption (gallons) ⁵
Passenger Cars	82	9,111	47,075	21.6	2,179
Light/Medium Trucks	14	1,556	8,037	17.2	467
Heavy Trucks/Other	4	444	2,296	6.1	376
<i>TOTAL</i>⁶	<i>100</i>	<i>11,111</i>⁷	<i>57,408</i>⁸	<i>--</i>	<i>3,022</i>

TABLE 5.5-1, CONTINUED

Notes:

- 1 – Percent of Vehicle Trip distribution based on CalEEMod assumptions.
- 2 – Daily Trips calculated by multiplying the total daily trips by percent vehicle trips (i.e., Daily Trips x percent of Vehicle Trips). These trips represent the total proposed trips, and not the net.
- 3 – Daily VMT calculated by multiplying percent vehicle trips by total VMT (i.e., VMT x percent of Vehicle Trips).
- 4 – Average fuel economy derived from the Department of Transportation.
- 5 – Total Daily Fuel Consumption calculated by dividing the daily VMT by the average fuel economy (i.e., VMT/Average Fuel Economy).
- 6 – Values may be slightly off due to rounding.
- 7 – Based upon data within the *Moffett Place Transportation Impact Analysis*, prepared by Fehr & Peers (July 2013).
- 8 – Daily VMT presented is the reduced VMT as a result of the Project's Transportation Demand Management Plan.

Source: Based upon the CalEEMod data; refer to Appendix F.

Transportation Demand Management (TDM) Plan. The development site is located in close proximity to the Lockheed Martin light rail transit (LRT) station and plans to have a Transportation Demand Management (TDM) program, consistent with the TDM requirements outlined in the Moffett Park Specific Plan. As the proposed Moffett Place Project would be occupied by multiple tenants, the Project would offer a menu of TDM Plan elements for its tenants to implement and monitor in order to collectively achieve the TDM Plan goals. Additional details would be added to the TDM Plan as the Project is refined during the course of the entitlement process.

The TDM Plan would achieve the following goals:

- Minimum 25 percent overall daily employee trip reduction; and
- Minimum 30 percent overall peak hour employee trip reduction.

Tenant-appointed TDM Coordinators would be responsible for implementing the TDM Plan. Additionally, informational displays on alternative transportation systems would be located at conspicuous locations in tenant premises and in the amenities building.

The TDM Plan would include Program and Service Measures that provide financial incentives, alternate work schedule options, and carpool matching. The financial incentives would include tenant provided *VTA Eco Passes*, which give holders unlimited rides on VTA light rail, bus, and express bus services, and Guaranteed Ride Home services, for their employees. The work schedule options include telecommuting and compressed/alternative work schedule activities that would be facilitated by TDM Coordinators. Additionally, the carpool matching program would also be assisted by TDM Coordinators.

The proposed Project would also include planning and design measures as Supplementary TDM Plan Elements. The planning and design measures include access to transit service, bike and pedestrian facilities, and carpool/vanpool parking. Specifically, the Project provides direct access to VTA bus and LRT service on Mathilda Avenue via public pathways and private sidewalks, and improved sidewalk

access to VTA bus and LRT service on Java Drive via public sidewalks on Borregas Avenue. The bike and pedestrian facilities consist of the following elements to enhance bike and pedestrian access:

- Public sidewalks along the proposed new street connection between Bordeaux Drive and Mathilda Avenue;
- Formal pedestrian pathways connecting all buildings and parking facilities and designated passenger loading and unloading zones at all main building entries;
- Public trail improvements along the Water District drainage creek within the Project boundary;
- Two public pathways through the site between Mathilda Avenue and Borregas Avenue; and
- Bicycle parking facilities (Class I [secure enclosures] and Class II [lockable racks]), located to enhance usefulness.

As indicated above, the Project would include preferential parking for carpool and vanpool users, with additional parking design measures including a reduction in parking. The total parking supply would be provided at the minimum allowable ratio of 1 space per 300 square feet, which is less than the maximum allowable parking supply ratio of 1 space per 250 square feet. Additionally, the Project amenities facility includes a 50,000 square foot building with fitness center (including changing facilities and showers) and cafe, and extensive outdoor features including a pool and basketball courts.

Therefore, the Project would not result in any unusual characteristics that would result in excessive long-term operational fuel consumption. Fuel consumption associated with vehicle trips generated by the Project would not be considered inefficient, wasteful, or unnecessary in comparison to development of other similar facilities in the region.

Building Energy Demand and Efficiency Measures. Title 24, California's Energy Efficiency Standards for Residential and Non-residential Buildings, was established by the California Energy Commission (CEC) in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, and provide energy efficiency standards for residential and non-residential buildings. In 2010, the CEC updated Title 24 standards with more stringent requirements. The 2010 Standards are expected to substantially reduce the growth in electricity and natural gas use. Additional savings result from the application of the Standards on building alterations. For example, requirements for cool roofs, lighting, and air distribution ducts are expected to save about additional of electricity. These savings are cumulative, doubling as years go by.

The Project would involve operations typical of an office complex, requiring electricity and natural gas for typical lighting, climate control, and day-to-day activities. The Project proposes to implement several project design features that would reduce energy consumption at the Project site. Specifically, the Project would be compliant with the CalGreen standards, anticipates exceeding Title 24 requirements by approximately 15 percent, and would incorporate energy efficient lighting fixtures. Implementation of the energy efficiency design features would result in reduced Project-related GHG emissions. The Project

would adhere to all Federal, State, and local requirements for energy efficiency. The proposed Project would not result in the inefficient, wasteful, or unnecessary consumption of building energy.

5.6 ALTERNATIVES

CEQA Section 15126.6(a) requires that an EIR describe “a range of reasonable alternatives to the project, or to the location of any project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives that are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no iron-clad rule governing the nature or scope of the alternatives to be discussed, other than the rule of reason.”

Section 15126.6(b) states, “[b]ecause an EIR must identify ways to mitigate or avoid the significant effect that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project even if these alternatives would impede, to some degree, the attainment of the project objectives, or would be more costly.”

Section 15126.6(c) describes the selection process for a range of reasonable alternatives as, “[t]he range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency’s determination. Additional information, explaining the choice of alternatives may be included in the administrative record. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (i) failure to meet most of the basic project objectives; (ii) infeasibility; or, (iii) inability to avoid significant environmental impacts.”

Section 15126.6(e) requires the analysis of a No Project Alternative. The analysis must discuss the existing condition, as well as what would be reasonably expected to occur in the foreseeable future if the project is not approved. The No Project Alternative is the circumstance under which the project does not proceed and wherein the existing environmental setting is maintained. The analysis also must discuss the environmental effects resulting from what would reasonably be expected to occur in the foreseeable future if the project were not approved, based on current plans, site zoning, and consistency with available infrastructure and community services. If the Environmentally Superior Alternative is the No Project Alternative, the EIR shall also identify an Environmentally Superior Alternative among the other alternatives (CEQA Section 15126.6(e)(2)).

In response to the Notice of Preparation, the City received comments from several groups who expressed concern about traffic, pedestrian and bicycle accommodations, hazardous materials, tree removal, and biological impacts. Specifically, the Santa Clara Valley Transportation Authority (VTA) responded with concerns regarding traffic impacts to the US 101 and SR 237. Additionally, they recommended the DEIR should include analyses of pedestrian and bicycle accommodations. The California Department of Transportation (Caltrans) also responded with comments regarding freeway impacts and were particularly concerned about how the project would impact US 101 / N. Mathilda Avenue and SR 237 / N. Mathilda Avenue interchanges. Caltrans also suggested that the DEIR should include Travel Demand Management (TDM) policies to encourage usage of nearby public transit lines and reduce vehicle trips on the State Highway System. A joint letter from environmental groups including the California Native Plant Society, Sierra Club, Greenbelt Alliance, and the Santa Clara Valley Audubon Society was received and commented on the Project's potential cumulative impacts of N-deposition on sensitive habitats in the region, tree removal, bird safe design and operations, traffic and growth impacts, public services and landscaping. Lastly, Santa Clara County recommended a Transportation Impact Analysis (TIA) be prepared for the Project, following the latest adopted Congestion Management Program (CMP) TIA Guidelines to identify significant impacts for the DEIR. The County also recommended the project applicant review the available data to determine if there are any impacts from contaminated sites near the property.

SUMMARY OF POTENTIALLY SIGNIFICANT IMPACTS

The SEIR identifies the following potentially significant impacts:

- **Land Use:** The proposed Project is within the Airport Influence Area (AIA) of the Moffett Federal Airfield and would require the dedication of an aviation easement to the County of Santa Clara to ensure that prospective buyers of the property are informed about the Airport. In addition, its proposed glass and metal exterior could produce glare, which could conflict with General Compatibility Policy G-6 of the Santa Clara County Comprehensive Land Use Plan, Moffett Federal Airfield (Moffett Federal Airfield CLUP). Lighting proposed by the Project could be arrayed in such a manner that it is mistaken for airport approach or runway lights in conflict with Moffett Federal Airfield CLUP General Compatibility Policy G-7. The proposed Project could conflict with Moffett Federal Airfield CLUP Height Compatibility Policy H-2, as the Federal Aviation Administration (FAA) may not be informed about the proposed Project as required by FAR Part 77, Subpart B on FAA Form 7460-1, Notice of Proposed Construction or Alteration.
- **Aesthetics:** The glass and metal building exteriors proposed by the Project could increase the amount of glare in the Project area and negatively affect visibility for pilots using the nearby Moffett Federal Airfield. Moreover, lighting proposed by the Project could be arrayed in such a manner that it is mistaken for airport approach or runway lights and potentially interfere with aircraft operations.

- **Biological Resources:** Project construction and operation could result in indirect impacts on the riparian habitat of the Sunnyvale West Channel (potential degradation of downstream water quality), which is located immediately adjacent to the western boundary of the Project site. Project implementation could result in the removal of trees that would be subject to the regulations of the City's Tree Preservation Ordinance.
- **Geology, Soils, and Seismicity:** Some of the proposed structures (Buildings 1, 4, 6, and Parking Structures 1 and 2) could experience settlement due to liquefaction. There is potential for lateral spreading to occur for building B4 and the vehicular bridge. Potential impacts could occur due to site soil that is moderately to severely corrosive and moderately to highly expansive and if utilities are improperly abandoned. In addition, the proposed corporate campus could experience settlement without proper geotechnical engineering.
- **Transportation and Traffic:** Under both Existing Plus Project Conditions and Background Plus Project Conditions, three intersections would operate at LOS F, conflicting with the MPSP TDM program, which requires a 30 percent reduction in peak hour trips. Impacts related to these three intersections are considered less than significant with mitigation incorporated. Moreover, the addition of Project traffic would result in significant impacts to identified freeway segments that would be mitigated with fair share contributions to planned freeway segment improvements.
- **Noise and Vibration:** Project construction could temporarily increase ambient noise levels and vibration in the vicinity due to operation of heavy equipment during construction.
- **Air Quality:** Project construction would violate a BAAQMD air quality standard for NO_x emissions during construction years 1 through 4 despite the implementation of exhaust control measures. Therefore, impacts associated with project construction would be considered significant and unavoidable.
- **Greenhouse Gases:** The Project would generate direct construction-related greenhouse gas emissions. Moreover, the Project would result in an incremental increase in direct project-related operational greenhouse gas emissions from mobile sources, and indirect project related GHG emissions from energy consumption, water demand, and waste generation that. The Project would have a less than Significant could have a significant impact on the environment.
- **Hazards and Hazardous Materials:** Construction workers and the public could accidentally be exposed to hazardous building materials, such as asbestos-containing materials, lead-based paints, mercury, or PCBs, if they are accidentally released into the environment during the demolition of on-site buildings or subsequently through their transport or disposal.
- **Cultural Resources:** Demolition and construction activities on the Project site could disturb unknown subsurface cultural resources, including human remains and/or paleontological resources.
- **Public Services and Utilities:** The proposed corporate campus would increase the demands placed on the Sunnyvale Department of Public Safety Fire Services and the City of Sunnyvale Police Services Bureau, potentially affecting response times and coverage ability. Moreover, the

introduction of the corporate campus could indirectly induce student population growth through the addition of new jobs that would attract new residents to the area.

All of the above impacts could be reduced to a less-than-significant level with implementation of mitigation measures included in this SEIR, with the exception of construction air quality impacts. Mitigation measures recommended in this SEIR would involve minor design changes, changes in construction practices, and/or payment of fees.

The alternatives presented below include the following:

- an alternative that looks at an alternate location to the proposed Project site to determine if the different site conditions would reduce any of the potential Project impacts or result in fewer impacts than the Project (rejected from further analysis);
- the CEQA-required No Project Alternative;
- an alternative that would result in the redevelopment of the Project site as directed by the existing Moffett Park Specific Plan development regulations governing the site (Existing Specific Plan (0.60 FAR) Alternative) to address environmental impacts related to building intensity (i.e., cumulative traffic impacts);
- an alternative that includes the construction of a fire station on an adjacent parcel (Fire Station Alternative) to address environmental impacts related to increased demands on fire protection services (i.e., potential reductions in response times and coverage ability); and,
- the Environmentally Superior Alternative (as required by CEQA).

PROJECT OBJECTIVES

The Project objectives are presented in Chapter 3, *Project Description*, and reiterated here for reference:

1. Develop a project that is consistent and compatible with the existing land uses in the surrounding area.
2. Develop an office campus of sufficient size and quality that enable it to attract and accommodate large corporate tenants.
3. Develop an office campus of sufficient density to take advantage of the site's proximity to the existing transit facilities.
4. Design office buildings that satisfy modern tenant demands for site configurations, amenities, and efficient/effective employee collaboration space.
5. Develop Class A office space with ample amenities to attract high quality tenants
6. Provide adequate parking spaces to accommodate the operations of the new occupants as well as adequate spaces for business invitees.

7. Construct an environmentally sensitive office campus with LEED Gold accreditation.
8. Develop office buildings that maximize on-site open space through project massing and sensitive design.
9. Develop a project that would create construction jobs and employment opportunities in the City of Sunnyvale
10. Develop a project of sufficient density to support the proposed project amenities, and to be financeable and financially feasible.

5.6.1 ALTERNATIVES CONSIDERED BUT REJECTED FROM FURTHER ANALYSIS

ALTERNATE LOCATION ALTERNATIVE

An alternate location to the proposed Project site was also evaluated to determine if any of the potential Project impacts could be reduced. This alternative was rejected from further analysis because there is no other available property of an appropriate size in Sunnyvale. The Project proposes 1.8 million square feet of office development, which would require an approximately 50-acre site. In addition, the Project site is currently zoned for office uses; existing infrastructure is sufficient to accommodate the proposed Project; and it is already developed with significant coverage, but is currently underutilized, which in some respects could make this site more desirable for redevelopment than development on less developed or undeveloped site. Moreover, the Project includes the construction of a new extension of Innovation Way, connecting Bordeaux Drive to the Mathilda Ave/Innovation Way intersection. The new connection would improve east/west connectivity across Mathilda Avenue and could reduce traffic at the Innovation Way and Mathilda intersection, providing more direct freeway access to Moffett Park via Innovation Way. Furthermore, the Project site is already owned by the Project Applicant, has good access from SR 237 and US 101, and is in a location with access to public transit. Therefore, this Project alternative was rejected from further analysis.

5.6.2 NO PROJECT ALTERNATIVE

Under the No Project Alternative, the proposed Project would not be developed and the environmental impacts identified in this report (summarized above) would be avoided. The existing office space would continue to be utilized in the same fashion as it is today. However, the portion of the existing office and commercial space that is vacant would presumably be rented out, and traffic levels on local roadways providing access to the site would increase. Such increases are reflected in the traffic impact analysis in Section 4.6 under Background Conditions, where service level operation at study intersections would remain at acceptable levels of service. Therefore, traffic increases on local roadways and intersections under this alternative would result in less-than-significant traffic impacts. This alternative would also eliminate potential increases in construction-related noise and air quality impacts, as well as operational GHG emissions. Since the Project would result in incremental impacts in these areas compared to levels

under existing conditions, the No Project Alternative would be considered the Environmentally Superior Alternative.

However, if a new corporate campus is not developed on the Project site, all of the objectives of the Project would not be met. This alternative would result in a continued lack of Class A office space necessary to attract and accommodate large, high quality corporate tenants. In addition, this alternative would result in a continued lack of density necessary to take advantage of the site's proximity to the existing transit facilities. Moreover, the need for expanded and updated facilities would continue to persist and would not be satisfied by interior remodeling (which would not be subject to environmental review).

Under the No Project Alternative, a Class A corporate campus that would contribute to the City's General Plan vision of an attractive community would not be constructed, and there would be no maintenance or enhancement of the appearance of Sunnyvale that would help distinguish it from other cities through high quality architecture. In addition, the No Project Alternative would not meet the City's General Plan vision of environmental sustainability because it would not result in the construction of energy efficient buildings. Finally, this alternative would not meet the General Plan vision for a robust economy, as it would not result in the development of a Class A corporate campus that would attract businesses, which provide jobs and tax revenue. This alternative would not meet some of the goals, policies, and action statements of the General Plan, such as to develop clear, safe, and convenient linkages between all modes of travel, including access to transit stations and stops, and connections between work, home, and commercial sites (Action Statement LT-5.6a). The No Project Alternative would not meet General Plan Goal LT-6 or supporting policies LT-6.2 and LT-7-2, as it would not promote economic development or business opportunities.

In addition, the No Project Alternative would not meet some of the guiding principles and objectives of the Moffett Park Specific Plan. Specifically, it would not develop additional needed Class A office space (Guiding Principle 1.0). It would not focus areas of higher intensity development in areas adjacent to public transportation facilities (Guiding Principle 5.0). Nor would it result in the construction of energy efficient buildings that would contribute to the Moffett Park Specific Plan Guiding Principle 10.0 of incorporating sustainable design and green building concepts into private and public projects. This alternative would not provide for higher intensity development within close proximity to rail and transit stations (Objective LU-6).

5.6.3 EXISTING SPECIFIC PLAN (0.60 FAR) ALTERNATIVE

The Existing Specific Plan (0.60 FAR) Alternative would result in the development of the Project site with a corporate campus similar to the proposed Project. All features would remain the same as the proposed Project, including the site layout, access, number of buildings/parking garages, green building techniques, landscaping, etc. with the exception that the amount of gross building area would be reduced from a total of 1,779,554 square feet as proposed by the Project to a total of 1,395,662 square feet. Regardless, the overall amount of building space on the Project site would be increased by 723,717 square feet over existing conditions. It should be noted that under this alternative, a ten percent increase in square

footage would be sought under the City's Green Building Program. Due to the reduction in gross building area, the office buildings and parking structures would have less square footage and fewer stories/levels, as described below.

As stated above, the number of buildings and site layout would remain the same. As such, six office buildings, one amenities building, and two parking structures would be constructed. All the features of the amenities building would remain the same, including the number of stories (two), height (60 feet), and square footage (50,000 square feet). The six office buildings, however, would be reduced from eight stories to six stories and 129 feet tall to 96 feet tall with a slightly larger development footprint. Parking would be provided at the same ratio of one space per 300 square feet of building space and thus, 4,652 parking spaces would be provided under the Existing Specific Plan (0.60 FAR) Alternative, which would result in a reduction of 1,114 parking spaces compared to the proposed Project. Due to the reduction in parking spaces, the two parking structures under this alternative would be 2.5 levels, 24 feet high and two levels, 17 feet high, respectively. Table 5.6-1 below, Existing Specific Plan (0.60 FAR) Alternative Compared to the Proposed Project, presents a comparison between buildout of the Existing Specific Plan (0.60 FAR) Alternative and the proposed Project.

**TABLE 5.6-1
EXISTING SPECIFIC PLAN (0.60 FAR) ALTERNATIVE COMPARED TO THE PROPOSED PROJECT**

	Project	Existing Specific Plan (0.60 FAR) Alternative
Office Buildings		
Number of Buildings	6	6
Number of Stories	8	6
Maximum Height	129 feet	96 feet
Amenities Building		
Number of Buildings	1	1
Number of Stories	2	2
Maximum Height	60 feet	60 feet
<i>Total Gross Building Area</i>	<i>1,779,554 square feet</i>	<i>1,395,662 square feet</i>
Parking Structure A		
Number of Levels	3-3/4	2.5
Maximum Height	36.5 feet	24 feet
Parking Structure B		
Number of Levels	3	2
Maximum Height	26 feet	17 feet
<i>Total Number of Parking Spaces</i>	<i>5,766</i>	<i>4,652</i>

CONSISTENCY WITH PROJECT OBJECTIVES

This alternative would not meet key Project objectives of developing an office/R&D park of sufficient size and quality that enable it to attract and accommodate large corporate tenants and being financeable and financially feasible.

IMPACT COMPARISON

The environmental effects of this alternative would be similar to those of the proposed Project except under the following topics, where impacts under this alternative would be less under the proposed Project:

- **Land Use:** Due to the overall reduction in development square footage, the office building heights would be reduced from eight stories, as proposed by the Project to six stories. This in turn would reduce the amount of glass and metal building exterior that could produce glare that would potentially conflict with policies in the Comprehensive Land Use Plan Santa Clara County, Moffett Federal Airfield (Moffett Federal Airfield CLUP). Regardless, this alternative would have a similar potential as the proposed Project to conflict with the Moffett Federal Airfield CLUP and would require the same mitigation measure as proposed for the Project to reduce the potential impact to a less than significant level (Mitigation Measure 4.2-3a).
- **Aesthetics:** Similar to land use, light and glare impacts would be reduced, which in turn would reduce the Project's potential to negatively affect visibility for pilots using the nearby Moffett Federal Airfield. However, impacts would not be reduced to a less than significant level and would require implementation of the same mitigation measures identified for the Project (Mitigation Measure 4.2-3a-b).
- **Transportation and Traffic:** With a reduction in development of square footage and fewer employees, the amount of traffic would be reduced under this alternative. However, the increase in traffic under this alternative compared to existing conditions would still require similar mitigation as required for the proposed Project. Additionally, this alternative would also result in significant impacts related to the performance of the circulation system, compliance with VTA congestions management standards, and parking.
- **Noise and Vibration:** Compared to the proposed Project, the increase in noise and vibration at the Project site would be less under this alternative. However, noise associated with demolition and construction would still require mitigation to reduce potential impacts to less than significant (Mitigation Measure 4.7-1). Both the proposed Project and the Existing Specific Plan (0.60 FAR) Alternative would result in less than significant noise and vibration impacts.
- **Air Quality:** With the reduced Project size under this alternative, the impacts associated with air quality would be less than under the proposed Project. However, similar to the proposed Project, construction related and operational impacts regarding air quality standards would be considered significant and unavoidable, despite compliance with BAAQMD rules and implementation of a TDM plan.

- **Greenhouse Gases:** With a reduction in energy demand and vehicular trips, business as usual greenhouse gas emissions would be reduced with this alternative. However, the proposed Project's impacts on greenhouse gas emissions are already considered less than significant.
- **Public Services and Utilities:** While less office space and fewer employees would be expected under this alternative, the increase in demand for fire and police protection services would still affect response times and coverage ability for the Project area, such that similar mitigation as required for the Project would be necessary for this alternative to reduce potential impacts to less than significant (Mitigation Measure 4.12-1a). Although other public services and utilities would experience less demand as well, the Project's impacts on these services and utilities are already less than significant.
- **Recreation and Energy Resources:** With the reduced Project size under this alternative, the increase in demand for recreational facilities and energy resources at the Project site would be less than under the proposed Project. However, the Project's impacts on these facilities and resources are already less than significant.

5.6.4 FIRE STATION ALTERNATIVE

This alternative would result in the same development as the proposed Project with the exception that a new fire station would be constructed in the northwestern corner of the Project site, which would reduce the amount of surface parking in this area by approximately 250 spaces. The lost parking would be accommodated in Parking Garage B, which would convert from a two level to a 2-3/4 level structure to house the 250 spaces lost by the construction of the fire station. The proposed fire station building a single-story structure and would be approximately 17,250 square feet. Figure 5.6-1 presents a conceptual illustration of this alternative. This alternative was selected to alleviate the Project's increased demand on fire protection services and the resulting decreases in response times and coverage ability. It would result in a beneficial impact of improving fire response times and coverage ability for the Project area.

The fire station proposed under this alternative would consist of the following minimum recommended features:

1. Three bay apparatus room
2. A fourth apparatus bay providing storage for BC Command vehicle, police command vehicle, Bearcat or emergency response trailer/DUI trailer
3. Day Room – Kitchen – Dining/Lounge
4. Six single occupancy sleeping quarters
5. Three single occupancy restroom/shower
6. Exercise room

7. Three private offices
8. Lobby space with public restroom (single occupancy)
9. Training Room with storage
10. Two turn-out/gear storage rooms
11. Shop/storage space (off apparatus room)
12. Wash down/laundry room with single occupancy restroom
13. Storage room (off apparatus bay)
14. Building main electrical room
15. Fully fenced perimeter
16. Five staff parking stall within fenced perimeter
17. Outdoor drill/training/maintenance yard – 30,000 square feet
18. Outdoor storage area
19. Four visitor parking spaces
20. Indoor shooting range (approximately 3,750 square feet – either basement condition or stand along structure)

CONSISTENCY WITH PROJECT OBJECTIVES

Overall, like the proposed Project, this alternative would meet the key Project objectives.

IMPACT COMPARISON

The environmental effects of this alternative would be similar to those of the proposed Project with the exception of land use, aesthetics, hydrology/water quality, traffic, noise, air quality, and greenhouse gases.

- **Land Use/Aesthetics:** The addition of a fire station within the Project site as proposed by this alternative would further increase the site density compared to the existing development within the Project area. Regardless, similar to the proposed Project, as the MPSP area redevelops as directed by the MPSP, a more uniform setting will be established in the Project area. The additional building surfaces would also increase the potential for glare impacts and result in a

similar inconsistency with the Moffett Federal Airfield CLUP, but this potential impact can be mitigated with the same measure proposed for the Project (Mitigation Measure 4.2-3a).

- **Hydrology and Water Quality:** The fire station proposed under this alternative would replace surface parking in the northwestern corner of the Project site. As some landscaping potential could be lost, the extent of impervious surfaces could increase compared to the proposed Project. However, as with the proposed Project, impacts would be less than significant.
- **Transportation and Traffic:** The construction of a fire station within the Project site would result in a similar impact to transportation and traffic as the proposed Project. Since the fire station would be replacing an existing fire station within the MPSP area, there would not be an increase in traffic than what is already proposed. Traffic impacts associated with the proposed Project would also apply to this alternative.

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- **Noise and Vibration:** The fire station proposed under this alternative would increase noise and vibration during the construction period. Operational noise impacts would be similar to the proposed Project since there is already a fire station located within the MPSP area. Similar to the proposed Project, impacts related to noise and vibration under this alternative would be less than significant.
- **Air Quality:** With the addition of a new fire station, construction and operational related air quality impacts would incrementally increase. Operational impacts would be similar to the proposed Project since the additional fire station would replace the existing fire station on Innovation Way. Like the proposed Project, construction air quality impacts would be considered significant and unavoidable.
- **Greenhouse Gases:** The construction of the fire station proposed in this alternative would incrementally increase GHG emissions during the construction and operational phase, compared to the proposed Project. It should be noted, however, that since the fire station would replace an existing fire station on Innovation Way, the overall operational impacts would be similar to those of the proposed Project. Impacts related to GHG emissions under this alternative are less than significant.
- **Public Services and Utilities:** The construction of the fire station proposed by this alternative would result in a beneficial impact of improving fire response times and coverage ability for the Project area and it would completely avoid the Project's potential to decrease fire response times and coverage ability for the Project area. However, the increase in demand for police protection services would be the same as it would for the proposed Project and the same mitigation required for the Project would be necessary for this alternative to reduce potential impacts to less than significant (Mitigation Measure 4.12-1a).

5.6.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

An EIR is required to identify the Environmentally Superior Alternative from a range of reasonable and feasible alternatives evaluated in the EIR [Section 15126.6 (e) (2)]. If the Environmentally Superior Alternative is the "No Project" Alternative, the EIR shall also identify an Environmentally Superior Alternative among the other alternatives. The Environmentally Superior Alternative would be the alternative that results in fewer environmental impacts.

The preceding discussion compares the impacts of these alternatives with the proposed Project and a tabular comparison summary is presented in Table 5.5-2. All of the Project alternatives would reduce or have the same traffic impacts as the proposed Project. As shown in this table, the Fire Station Alternative would have a beneficial impact on fire protection, which was determined to be a potentially significant, but mitigable impact for the proposed project. When the overall environmental impacts of each alternative are taken into consideration, the Existing Specific Plan (0.60 FAR) Alternative would provide the greatest reduction in potentially significant environmental effects when compared to the proposed project, and therefore, would be the Environmentally Superior Alternative. However, this alternative would not meet some of the project objectives.

**TABLE 5.5-2
SUMMARY COMPARISON OF PROJECT ALTERNATIVES**

		Impact Similar but Greater than (>), Less than (<), Less than or Equal to(≤), or Same (=) as Proposed Project			
Potential Impact		Mitigation Measure	No Project	Existing Specific Plan (0.60 FAR)	Fire Station
Meets Principal Applicant Objectives?	Yes	Not Applicable	No	Yes	Yes
<i>Land Use</i>					
4.1-1: The project would not physically divide an established community.	Less Than Significant	None Required	= (LS)	= (LS)	= (LS)
4.1-2: The project could conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect.	Less Than Significant with Mitigation	<p>Mitigation Measure 4.1-1a, Avigation Easement Dedication: As a condition of development approval, the Project applicant shall dedicate an avigation easement to the County of Santa Clara. The avigation easement shall be similar to that shown as Exhibit 1 in Appendix A of the Moffett Federal Airfield CLUP.</p> <p>Mitigation Measure 4.1-1b, Federal Aviation Administration (FAA) Notification: As a condition of development approval, the Project Applicant shall notify the Federal Aviation Administration (FAA) as required by FAR Part 77, Subpart B on FAA Form 7460-1, Notice of Proposed Construction or Alteration.</p>	< (LS)	= (LSM, Same Mitigation Required)	= (LSM, Same Mitigation Required)
<i>Aesthetics</i>					
4.2-1: The project would not substantially affect scenic vistas, nor would it substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway.	No Impact	None Required	= (LS)	= (LS)	= (LS)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
4.2-2: The project would not substantially degrade the visual character or quality of the site and its surroundings.	Less Than Significant	None Required	< (LS)	= (LSM, Same Mitigation Required)	= (LSM, Same Mitigation Required)
4.2-4: The project would not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.	Less Than Significant	None Required	< (LS)	= (LSM, Same Mitigation Required)	= (LSM, Same Mitigation Required)
<i>Biological Resources</i>					
4.3-1: Project development could result in 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 CDFW or USFWS.	Less Than Significant	None Required	< (LS)	= (LS)	= (LS)
4.3-2: Project development and operation could have a substantial adverse effect on riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS	Less Than Significant With Mitigation	4.3-2, Protection of Nesting Special-status and Migratory Birds: Four measures from the City's adopted "Guidelines and Standards for Land Use Near Streams" and listed in Section 4.3.3 from would ensure that site construction and operation would not result in indirect adverse effects on the riparian and aquatic habitats or the Sunnyvale West Channel: dust control during site preparation, BMPs during construction and post-construction to reduce sedimentation, and adherence to water quality standards.	< (LS, no mechanism to impose construction mitigation)	= (LSM, Same Mitigation Required)	= (LSM, Same Mitigation Required)

TABLE 5.5-2, CONTINUED

		Impact Similar but Greater than (>), Less than (<), Less than or Equal to(≤), or Same (=) as Proposed Project			
Potential Impact	Mitigation Measure	No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
4.3-3: Project development and operation would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	Less Than Significant	None Required	= (LS)	= (LS)	= (LS)
4.3-4: : Project development would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.	Less Than Significant	<p>Mitigation Measure 4.3-4(a): Prior to the issuance of any building permits, the Project applicant shall demonstrate to the satisfaction of the Community Development Director, that the proposed building design incorporates design features for bird-safe buildings, so long as they do not conflict with the Project objective of constructing an energy efficient building designed to meet LEED Gold certification. Bird-safe design guidelines, such as the Standards for Bird-Safe Buildings adopted by the City of San Francisco Planning Department in July 2011 should be used to identify appropriate design features.</p> <p>Mitigation Measure 4.3-4(b): Prior to the issuance of Grading Plans or improvement plans, the Project applicant shall demonstrate to the satisfaction of the Community Development Director that the following notes are shown on the grading and improvement plans: All tree and building removal and initial grading of the</p>	= (LS)	= (LS)	= (LS)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to(≤), or Same (=) as Proposed Project		
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station
	<p>site shall occur outside of the migratory bird and raptor breeding season (August 16 through February 28) unless the following requirements are implemented:</p> <ul style="list-style-type: none"> • If construction activities are scheduled to occur during the breeding season for non-special-status species (generally between March 1 and August 15), a qualified wildlife biologist shall be retained to conduct the following focused nesting surveys, as follows: • Tree surveys shall be conducted within the Project site to look for nesting non-special-status migratory birds and raptors. • In addition, surveys of all buildings shall be conducted to look for nesting non-special-status migratory birds and raptors. • The surveys shall be conducted between March 1 and August 15 and within one week prior to initiation of construction activities. A summary report of the survey findings shall be submitted to the satisfaction of the Community Development Director. If no active nests are detected during 			

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project		
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station
	<p>surveys, then no additional mitigation is required.</p> <ul style="list-style-type: none"> If construction activities are scheduled to occur during the breeding season (generally between March 1 and August 15), and if surveys indicate that migratory bird or raptor nests are found in any areas that would be directly affected by construction activities, a no-disturbance buffer shall be established around the site to avoid disturbance or destruction of the nest site until after the breeding season, or after a wildlife biologist determines that the young have fledged (usually late-June to mid-July). The extent of these buffers shall be determined by a qualified wildlife biologist and shall depend on the level of noise or construction disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors shall be analyzed in order to make an appropriate decision on buffer distances. A summary report of the 			

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
	survey findings with the location of the active nests and required buffer distances shall be submitted to the satisfaction of the Community Development Director.				
4.3-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	Less Than Significant with Mitigation	Mitigation Measure 4.3-5: The applicant shall demonstrate to the satisfaction of the Director of Community Development that the removal of the protected trees as defined by the City Code has been mitigated through the planting of new trees at a 1:1 ratio, in conformance with the Landscape Plan.	< (LS)	= (LS)	= (LS)
4.3-6: Project development would not substantially reduce the habitat of a fish or wildlife species.	Less Than Significant	None Required	= (LS)	= (LS)	= (LS)
<i>Geology and Soils</i>					
4.4-1: The proposed project could result in exposure of people and structures to potential adverse effects, including risk of loss, injury, or death involving strong seismic ground shaking; or seismic related ground failure, including liquefaction.	Less Than Significant with Mitigation	Mitigation Measure 4.4-1a, Foundations: The proposed 8-story office buildings, parking structures, and vehicular bridge should be supported on deep foundations consisting of driven, precast, prestressed concrete friction piles or augured cast-in-place piles. In order to reduce the potential for settlements due to liquefaction	< (LS)	= (LSM, Same Mitigation Required)	= (LSM, Same Mitigation Required)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project		
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station
	<p>impacting pile foundations, it is recommended that each pile extend to a depth of at least 50 feet below grade. The amenities building may be supported on conventional shallow foundations consisting of continuous and/or isolated spread footings, as long as the estimated differential settlements are considered reasonable from a structural viewpoint.</p> <p>Mitigation Measure 4.4-1b, Implement Recommendations of Geotechnical Report: The project sponsor shall implement all of the recommendations of the project geotechnical report, and any associated updates or revisions, related to review of plans and specifications for proposed buildings; demolition observation and testing; construction observation and testing; site demolition, clearing, and preparation; subgrade preparation; subgrade stabilization; material for fill; compaction requirements; trench backfill; site drainage; foundations; concrete slabs and pedestrian pavements; vehicular pavements; and retaining walls.</p> <p>Mitigation Measure 4.4-1c, Geological Monitor: A representative from TRC should observe the geotechnical aspects of the grading and earthwork for general conformance with their recommendations</p>			

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to(≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
	including site preparation, selection of fill materials, and the placement and compaction of fill. The Project plans and specifications should incorporate all recommendations contained in the Geotechnical Report.				
4.4-2: The proposed project would not result in substantial erosion or loss of topsoil.	Less Than Significant	None Required	< (LS)	= (LS)	= (LS)
4.4-3: The proposed project could cause a geologic unit to become unstable as a result of the project, and potentially resulting in lateral spreading, subsidence, liquefaction or collapse.	Less Than Significant With Mitigation	<p>Mitigation Measure 4.4-3a, Compaction: In accordance with the recommendations of the project geotechnical report, all fill and scarified surface soils should be uniformly compacted to at least 90 percent relative compaction at a moisture content near the laboratory optimum, except for the native expansive clays. The native expansive clays should be compacted to between 87 and 92 percent relative compaction at a moisture content at least 3 percent over optimum. Fill should be placed in lifts no greater than 8 inches in uncompacted thickness. Each successive lift should be firm and relatively non-yielding under the weight of construction equipment.</p> <p>In pavement areas, the upper 6 inches of subgrade and full depth of aggregate base should be compacted to at least 95 percent relative compaction, except for the native clays. Aggregate base and all import soils</p>	<	= (LSM, Same Mitigation Required)	> (LSM, Same Mitigation Required)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project		
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station
	<p>should be compacted at a moisture content near the laboratory optimum moisture content.</p> <p>If there are updates or revisions to the project geotechnical report, the above mitigation requirements shall be revised to match the updated recommendations as necessary.</p> <p>Mitigation Measure 4.4-3b, Abandonment of Existing Utilities: In accordance with the recommendations of the project geotechnical report, the project sponsor shall ensure that existing utilities are completely removed from all building areas. A utility may only be abandoned in place if it would not pose and unacceptable risk, and if approved by the geotechnical engineer. If abandoned in place, the utility must be completely backfilled with grout or sand-cement slurry and the ends outside of the building area must be capped with concrete. Trench fills must also be removed and replaced with engineered fill with the trench side slopes flattened to at least 1:1. If there are updates or revisions to the project geotechnical report, the above mitigation requirements shall be revised to match the updated recommendations as necessary.</p> <p>Mitigation Measure 4.4-3c, Corrosion Protection Engineer: In accordance with</p>			

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to(≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
	the recommendations of the preliminary geotechnical report, a corrosion protection engineer shall be consulted about appropriate corrosion protection methods for buried metallic materials on the project site prior to site grading and construction.				
Impact 4.4-4: The proposed project could be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code, creating substantial risks to life or property.	Less Than Significant with Mitigation	Mitigation Measure 4.4-1a and 4.4-1b.	<	= (LSM, Same Mitigation Required)	> (LSM, Same Mitigation Required)
<i>Hydrology and Water Quality</i>					
4.5-1: The proposed project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality.	Less Than Significant	None Required	< (LS)	= (LS)	= (LS)
4.5-2: The proposed project would not 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.	No Impact	None Required	< (LS)	= (LS)	= (LS)
4.5-3: Project implementation would not substantially alter the existing drainage pattern of the site or area by altering the course of a stream or incrementally increasing surface runoff from impervious surfaces in such a manner that could increase downstream erosion, siltation, or flooding on- or off-site.	Less Than Significant	None Required	< (LS)	= (LS)	= (LS)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to(≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
4.5-4: Project implementation would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.	Less Than Significant	None Required	< (LS)	= (LS)	= (LS)
4.5-5: The Project would place structures within a 100-year flood hazard area but would not impede or redirect flood flows.	Less Than Significant	None Required	= (LS)	= (LS)	= (LS)
4.5-6: The project would not 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.	Less Than Significant	None Required	< (LS)	= (LS)	= (LS)
<i>Transportation and Traffic</i> 4.6-1: The proposed project could conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit.	Less than Significant	Mitigation Measure 4.6-1: Prior to occupancy of each phase, the project applicant shall, to the satisfaction of the Public Works Director, provide a Traffic Impact Fee payment to the City. The payment would be based on the amount of development associated with each phase of development and be based on the current TIF rates at the time of payment. Payment of the TIF fee would constitute the project’s fair share contribution to the required	< (LS)	= (LSM)	= (LSM)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project				
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station		
	improvements to reduce potential impacts at the Mathilda/Moffett Park intersection. Required improvements consist of reconfiguration of the SR 237/Mathilda Avenue ramp intersections					
4.6-2: The proposed project could conflict with an applicable congestion management program, including, but not limited to LOS standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways.	Less Than Significant	Mitigation Measure 4.6-2: Prior to occupancy of each phase, the project applicant shall, to the satisfaction of the Public Works Director, provide a fair share contribution to freeway improvements were identified in the Valley Transportation Plan (VTP) 2035 to improve freeway operations on the affected segments.	< (LS)	= (LSM)	= (LSM)	
4.6-3: The proposed project could result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks.	Less Than Significant With Mitigation	Mitigation Measure 4.6-3: Refer to Section 4.4-1, Mitigation Measures 4.1-1a and 4.1-1b.	< (LS)	= (LSM)	= (LSM)	
4.6-4: The proposed project could substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).	Less Than Significant	None Required	= (LS)	= (LS)	= (LS)	
4.6-5: The proposed project could result in inadequate emergency access.	Less Than Significant	None Required	Less Than Significant	< (LS)	= (LS)	< (LS)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
4.6-6: The proposed project could conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.	Less Than Significant	None Required	= (LS)	= (LS)	= (LS)
4.6-7: The proposed project could conflict with adopted policies, plans, or programs regarding parking.	Less Than Significant	None Required	= (LS)	= (LS)	= (LS)
4.6-8: The proposed project could result in inadequate roadway operations as a result of construction related traffic.	Less Than Significant With Mitigation	<p>Mitigation Measure 4.6-8: Prior to issuance of a grading permit, the applicant shall, to the satisfaction of the Public Works Director, receive approval of a traffic control plan that restricts directional access to the construction site. In-bound construction traffic from Mathilda Avenue shall be directed to access the construction site via Mathilda Avenue or Moffett Park Drive, while outbound construction traffic shall be restricted to Java Drive, eastbound Moffett Park Drive or as approved by the Public Works Director.</p> <p>The traffic control plan shall prohibit truck access to the site during peak commute times (7 AM to 9 AM and 4 PM to 6 PM) to limit potential impacts to the operations of Mathilda Avenue. Alternative times may be considered in specific cases as approved by</p>	< (LS)	< (LSM)	> (LSM)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
	the Public Works Director.				
<i>Noise</i>					
4.7-1: Project construction could cause a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project due to operation of heavy equipment during construction.	Less Than Significant With Mitigation	<p>Mitigation Measure 4.7-1: Prior to the issuance of demolition permits or ground disturbing activities (whichever occurs first), the Contractor shall demonstrate to the satisfaction of the City of Sunnyvale Community Development Department that the proposed project complies with the following:</p> <ul style="list-style-type: none"> • Construction contracts specify that all construction equipment, fixed or mobile, shall be equipped with properly operating and maintained mufflers and other state required noise attenuation devices. • Property occupants located adjacent to the project boundary shall be sent a notice, at least 15 days prior to commencement of construction of each phase, regarding the construction schedule of the proposed project. A sign, legible at a distance of 50 feet shall also be posted at the project construction site. All notices and signs shall be reviewed and approved by the City of 	< (LS)	< (LSM, Same Mitigation Required)	> (LSM, Same Mitigation Required)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project		
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station
	<p>Sunnyvale Community Development Department prior to mailing or posting and shall indicate the dates and duration of construction activities, as well as provide a contact name and a telephone number where residents can inquire about the construction process and register complaints.</p> <ul style="list-style-type: none"> The Contractor shall provide evidence that a construction staff member will be designated as a Noise Disturbance Coordinator and will be present on-site during construction activities. The Noise Disturbance Coordinator shall be responsible for responding to any local complaints about construction noise. When a complaint is received, the Noise Disturbance Coordinator shall notify the City within 24-hours of the complaint and determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and shall implement reasonable measures to resolve the complaint, as deemed acceptable by the Community Development Department. All notices that are 			

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
	<p>sent to residential units immediately surrounding the construction site and all signs posted at the construction site shall include the contact name and the telephone number for the Noise Disturbance Coordinator.</p> <ul style="list-style-type: none"> • During construction, stationary construction equipment shall be placed such that emitted noise is directed away from sensitive noise receivers. • Pursuant to the Municipal Code Chapter 16.08, construction activities shall occur between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, 7:00 a.m. and 5:00 p.m. on Saturdays, and shall be prohibited on Sundays and holidays. 				
4.7-2: Project construction could expose people to or generate excessive groundborne vibration at adjacent structures during construction.	Less Than Significant	None Required	< (LS)	< (LS)	> (LS)
4.7-3: Operation of proposed office/R&D buildings and the traffic associated with operation would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing	Less Than Significant	None Required	< (LS)	< (LS)	> (LS)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
without the project, including noise from office/R&D activities already on-site.					
4.7-4: Project operation would not expose on-site occupants to excessive vibrations from passing trains on the light rail tracks.	Less Than Significant	None Required	< (LS)	< (LS)	> (LS)
4.7-5: The project would not expose on-site uses to excessive noise levels from Moffett Field operations.	Less Than Significant	None Required	= (LS)	= (LS)	= (LS)
<i>Air Quality</i>					
4.8-1: Project construction would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	Significant and Unavoidable	4.10-1a-c, BAAQMD Basic and Additional Construction Mitigation Measures, BAAQMD Architectural Coatings Mitigation Measures, Haul Truck VMT Limits: Prior to issuance of any Grading or Demolition Permit, the Town Engineer and the Chief Building Official shall confirm that the Grading Plan, Building Plans, and specifications stipulate that basic and enhanced construction mitigation measures shall be implemented as indicated in Section 4.8.3, including but not limited to dust and dirt controls, use of low volatile organic compounds, limited soil hauling activities, etc.	<	< (Significant and Unavoidable)	> (Significant and Unavoidable)
4.8-2: Project operations would violate an air quality standard or contribute substantially to an existing or projected air quality violation.	Less Than Significant	None Required	<	< (LS)	> (LS)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
4.8-3: Project implementation would not expose sensitive receptors to substantial pollutant concentrations.	Less Than Significant With Mitigation	Mitigation Measure 4.8-3: Refer to Mitigation Measure 4.8-1a.	<	< (LSM)	> (LSM)
4.8-4: Project implementation would not create objectionable odors affecting a substantial number of people.	Less Than Significant	None Required	= (LS)	= (LS)	= (LS)
4.8-5: Construction-related and operational criteria pollutant emissions could conflict with or obstruct implementation of the applicable Air Quality Plan.	Less Than Significant	None Required.	<	< (LS)	> (LS)
<i>Greenhouse Gases</i>					
4.9-1: The project would generate greenhouse gas emissions, either directly or indirectly, that could have a significant impact on the environment.	Less Than Significant	None Required	≤ (LS)	< (LS)	> (LS)
4.9-2: The project would not conflict with an applicable plan, policy, or regulation of an agency adopted for the purpose of reducing greenhouse gas emissions.	Less Than Significant	None Required	≤ (LS)	< (LS)	> (LS)
<i>Hazards and Hazardous Materials</i>					
4.10-1: Project implementation would not create a significant hazard to the public or to the environment through the routine transport, use, or disposal of hazardous materials.	Less Than Significant	None Required	< (LS)	< (LS)	< (LS)
4.10-2: The project could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous	Less Than Significant With Mitigation	4.10-2, Hazardous Building Materials Surveys and Abatement: Prior to demolition, appropriate surveys shall be completed to ensure that adequate	< (LS, no mechanism to impose	= (LSM, Same Mitigation Required)	= (LSM, Same Mitigation Required)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
materials to the environment during building demolition.	abatement practices are implemented, if friable asbestos-containing, lead-containing, and PCB-containing materials are identified, properly removed, and legally disposed.	construction mitigation)			
4.10-3: The project would not create a hazard to the public or the environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment during soil excavation.	Less Than Significant	None Required	< (LS)	= (LS)	= (LS)
<i>Cultural Resources</i>					
4.11-1: Project implementation would not affect any historical resource.	No Impact	None Required	< (LS)	= (LS)	= (LS)
4.11-2: Demolition and construction activities on the project site could cause a substantial adverse change in the significance of unknown subsurface archaeological resources, including the disturbance of human remains.	Less Than Significant With Mitigation	4.11-2a-c, Archaeological Monitor, Identification of Eligible Resources, Discovery of Human Remains: Three provisions are specified to ensure that any potentially significant archaeological resources, eligible historic or archaeological resources, and potential human burial sites are protected through monitoring and appropriate treatment.	< (LS)	= (LSM, Same Mitigation Required)	= (LSM, Same Mitigation Required)
4.11-3: Demolition and construction activities on the project site would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature.	Less Than Significant With Mitigation	4.11-3a-b, Halt Construction and Evaluate Resource, Paleontological Monitor: If a paleontological resource (fossilized invertebrate, vertebrate, plan or micro-fossil) is found during construction,	< (LS)	= (LSM, Same Mitigation Required)	= (LSM, Same Mitigation Required)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
	provisions are specified to ensure that any potentially significant paleontological resources are protected or salvaged.				
<i>Public Services and Utilities</i>					
4.12-1: Construction of the proposed project would require additional emergency and public services for future visitors or workers, and could require the construction of new or physically altered government facilities to maintain acceptable service ratios, response times, or other performance objectives for fire protection, police protection, schools, or other public facilities.	Less Than Significant with Mitigation	Mitigation Measure 4.12-1a , Concurrent with project entitlements, the Project applicant will enter into a binding agreement with the City of Sunnyvale regarding the addition of adequate public safety facilities and equipment.	< (LS)	= (LSM, Same Mitigation Required)	+ Beneficial Impact for Fire Protection) = (LSM, Same Mitigation Required for Police Protection)
4.12-2: The proposed project would not require the construction of new wastewater treatment or storm drain facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects.	Less Than Significant	None Required	< (LS)	= (LSM)	= (LSM)
4.12-3: The proposed project would incrementally increase potable water demand within the service area. However, there are sufficient water supplies available to serve the project from existing entitlements and resources, and no new or expanded entitlements or facilities, the construction of	Less Than Significant	None Required	< (LS)	< (LS)	> (LS)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
which would have significant environmental effects, are needed.					
4.12-4: Development of the project would result in increased wastewater flows to the wastewater treatment provider, which has adequate capacity to serve the project's expected demand in addition to existing commitments.	Less Than Significant	None Required	< (LS)	< (LS)	> (LS)
4.12-5: The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.	No Impact	None Required	< (LS)	< (LS)	> (LS)
4.12-6: The project could substantially increase solid waste generation, but would comply with federal, state, and local statutes and regulations regarding solid waste.	Less Than Significant	None Required	< (LS)	< (LS)	> (LS)
4.12-7: The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.	Less Than Significant	None Required	< (LS)	< (LS)	> (LS)
<i>Recreation</i>					
4.13-1: Development of the proposed project would not increase the use of neighborhood and regional parks or other recreational facilities such that substantial physical deterioration would occur or be accelerated.	Less Than Significant	None Required	< (LS)	< (LS)	> (LS)
4.13-2: Development of the proposed project would not include recreational facilities or	Less Than Significant	None Required	< (LS)	< (LS)	> (LS)

TABLE 5.5-2, CONTINUED

Potential Impact	Mitigation Measure	Impact Similar but Greater than (>), Less than (<), Less than or Equal to (≤), or Same (=) as Proposed Project			
		No Project	Existing Specific Plan (0.60 FAR)	Fire Station	
require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.					
4.13-3: Development of the proposed project within the vicinity of the San Francisco Bay Trail would provide recreational and transportation opportunities to future employees working at the offices proposed on the project site.	Less Than Significant	None Required	< (LS)	= (LS)	= (LS)

REFERENCES – CEQA CONSIDERATIONS

City of Sunnyvale, 2003. *Moffett Park Specific Plan Final EIR*, November 11.

City of Sunnyvale, 2004. *Moffett Park Specific Plan*, April 27.

City of Sunnyvale, 2011. *Sunnyvale General Plan*, July 26.

City of Sunnyvale. 2011. *Sunnyvale Municipal Code*. Current through Ordinance 2982-12 and the December 2012 code supplement. Available online at <http://qcode.us/codes/sunnyvale/>.