



Draft EIR
**Moffett Park
Specific Plan**
File No.: 2021080338



Prepared by



Sunnyvale

In Consultation with
50 YEARS
EST. 1972
**DAVID J. POWERS
& ASSOCIATES, INC.**
ENVIRONMENTAL CONSULTANTS & PLANNERS

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Appendix H: Noise Report

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SUMMARY

The City of Sunnyvale, as the Lead Agency, has prepared this Draft Environmental Impact Report (EIR) for the proposed update to the Moffett Park Specific Plan (hereinafter referred to as the “Specific Plan” or “project”) in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

As the CEQA Lead Agency for this project, the City of Sunnyvale is required to consider the information in this EIR along with any other available information in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, significant environmental impacts including growth-inducing impacts, cumulative impacts, mitigation measures, and alternatives. It is not the intent of an EIR to recommend either approval or denial of a project.

Summary of Project Location and Description

The approximately 1,270-acre Specific Plan area (hereinafter referred to as “Moffett Park”) is located in the northernmost portion of the City. Moffett Park is generally bounded by State Route (SR) 237 to the south, Moffett Federal Airfield and a golf course to the west; San Francisco Bay, a former/closed Sunnyvale landfill, Sunnyvale Materials Recovery and Transfer (SMaRT) Station®, Donald M. Somers Water Pollution Control Plant (WPCP), WPCP salt ponds for wastewater treatment, an open-water pond, and Caribbean Drive to the north; and Caribbean Drive, Twin Creeks Sports Complex, and Baylands Park to the east.

The proposed project is a comprehensive, City-initiated update of the Specific Plan. The proposed Specific Plan provides a vision and guiding principles, development standards, and design guidelines for future development within Moffett Park. A summary of the key policies, development standards, and implementation actions with the intent to protect environmental resources and avoid/reduce impacts is provided in Section 2.3.6 of the EIR.

The Specific Plan would allow for the addition of residential uses and an increase in the allowable office/industrial/R&D, commercial, and institutional uses within Moffett Park. The Specific Plan would allow for a net increase of 20,000 residential units (where there are no residential units existing today), 650,000 square feet of commercial uses,¹ 10.0 million square feet of office/industrial/R&D uses, and 200,000 square feet of institutional uses² beyond what is currently existing and recently approved. As a result, the buildout of the Specific Plan (which would include existing, recently approved, and proposed uses) would result in a total of 20,000 residential units and approximately 33.5 million square feet of commercial, office/industrial/R&D, and institutional uses.

¹ The 650,000 square feet of commercial uses include 500,000 square feet of retail uses and 150,000 square feet of hospitality uses.

² Future institutional uses could include facilities such as schools, government facilities, and public/community facilities.

Summary of Significant Impacts

The EIR includes a detailed discussion of the existing setting, impacts, and Specific Plan policies proposed to protect environmental resources and avoid and/or reduce impacts. The analysis in the EIR concluded that the implementation of the Specific Plan would result in significant and avoidable impacts from 1) project-level operational criteria air pollutant emissions and 2) expanding the WPCP to treat cumulative sewage generation. These impacts are identified in the EIR as follows:

- **Impact AIR-2:** The project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard. **(Significant and Unavoidable Impact)**
- **Impact AIR-C:** The project would result in a cumulatively considerable contribution to a significant cumulative air quality impact. **(Significant and Unavoidable Cumulative Impact)**
- **Impact GHG-1:** The project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Significant and Unavoidable Impact)**
- **Impact GHG-2:** The project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. **(Significant and Unavoidable Impact)**
- **Impact GHG-C:** The project would result in a cumulatively considerable contribution to a significant cumulative GHG emissions impact. **(Significant and Unavoidable Cumulative Impact)**
- **Impact UTL-C:** The project would result in a cumulatively considerable contribution to a significant cumulative utilities and service systems impact due to the future expansion of the WPCP to treat sewage from cumulative projects. **(Significant and Unavoidable Cumulative Impact)**

The Specific Plan includes the following requirement to reduce its significant project-level operational criteria air pollutant emissions:

- **Requirement 10.3.3-3:** All diesel standby emergency generators powered by diesel fuel shall meet US EPA Tier 4 engine standards.
 - Future development projects in Moffett Park that include installation of permanent stationary emergency generators shall ensure generators have engines that meet or exceed US EPA Tier 4 standards for particulate matter emissions.

The Specific Plan includes the following requirements to reduce its significant GHG emissions:

- **Requirement 8.3.3-4:** Future development projects shall comply with EV system requirements in the most recently adopted version of CALGreen Tier 2 requirements at the time a building permit application is filed.
- **Requirement 10.4-20:** Develop solid waste minimization programs that include increased rates of recycling, composting of food, and reuse of construction materials.
- **Requirement 10.6:** Update Specific Plan policies and implement measures on a regular basis (e.g., every five years) to measure progress and incorporate new measures to progress toward achieving carbon neutrality. Future updates to the Specific Plan would address the goals of new local and state plans (e.g., state’s upcoming scoping plan) to achieve GHG emissions reductions as well as new methods to more accurately model GHG emissions and implement innovative measures or project designs.

As discussed in Section 3.19.2.2 in more detail, the City is aware an updated to the WPCP Master Plan is needed to plan for adequate wastewater treatment in the future. The City’s existing process and regulations ensure that sufficient sewage treatment capacity would be provided in the future. The construction of the expansion of the WPCP could result in significant, unavoidable environmental impacts given its location near sensitive habitat. The specific design and improvements needed are unknown at this time, therefore, it is speculative to evaluate the impacts. For this reason, the City conservatively concluded that the future expansion of the WPCP to serve cumulative projects (including the Specific Plan) could result in significant and unavoidable impacts. Separate environmental review shall be required when an expansion to the WPCP is proposed.

Summary of Alternatives

CEQA requires that an EIR identify alternatives to a project as it is proposed. CEQA Guidelines Section 15126.6 specifies that the EIR should identify alternatives 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.” The purpose of the alternatives analysis is to determine whether there are alternatives of design, scope, or location which would substantially lessen the significant impacts, even if those alternatives “impede to some degree the attainment of the project objectives” or are more expensive (CEQA Guidelines Section 15126.6).

While CEQA does not require that alternatives must be capable of meeting all the project objectives, their ability to meet most of the objectives is considered relevant to their consideration. The Specific Plan objectives are summarized as follows:

1. Maintain Moffett Park as an integral part of Sunnyvale
2. Establish Moffett Park as a model community through its commitment to comprehensively addressing resilience, climate protection, and equity in all activities
3. Evolve Moffett Park into a vibrant and inclusive community where all people can thrive
4. Maintain and strengthen Moffett Park as a diverse economic engine that supports economic prosperity for all
5. Create a connected, accessible district that prioritizes the movement of people over vehicles to reduce climate pollution and to support a healthy community

6. Cultivate dynamic and connected public spaces that accommodate the physical and social needs of all users
7. Create a healthy, resilient, and biodiverse environment
8. Integrate innovative and emerging technologies in the district to support community-wide goals

A location alternative was considered but rejected because there are no alternative locations that are of similar size to Moffett Park within the City. In addition, given that the main objective of the project is to establish a long-term strategy to guide future development in the Moffett Park area, it would not be feasible to evaluate an alternative location in the City. The Moffett Park Specific Plan must, by its nature, guide future development located in Moffett Park. The following were evaluated as alternatives to the project and described in detail in Section 8.0 Alternatives:

- No Project/No New Development Alternative
- No Project/Adopted Specific Plan Buildout Alternative
- 25 Percent Reduced Development Alternative

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. In addition to the No Project Alternatives, the environmentally superior alternative to the proposed project is the 25 Percent Reduced Development Alternative. A detailed analysis of the project alternatives is provided in Section 7.0 Alternatives.

Known Views of Local Groups and Areas of Controversy

Environmental concerns from local residents, property owners, organizations, and/or agencies about the project related to:

- Aesthetics
- Air Pollution
- Biological Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use
- Parks and Recreation
- Public Services
- Transportation
- Utilities and Service Systems

SECTION 1.0 INTRODUCTION

1.1 PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

The City of Sunnyvale, as the Lead Agency, has prepared this Draft Environmental Impact Report (EIR) for the proposed update to the Moffett Park Specific Plan (hereinafter referred to as the “Specific Plan” or “project”) in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

As described in CEQA Guidelines Section 15121(a), an EIR is an informational document that assesses potential environmental impacts of a proposed project, as well as identifies mitigation measures and alternatives to the proposed project that could reduce or avoid adverse environmental impacts (CEQA Guidelines 15121(a)). As the CEQA Lead Agency for this project, the City of Sunnyvale is required to consider the information in the EIR along with any other available information in deciding whether to approve the project. The basic requirements for an EIR include discussions of the environmental setting, significant environmental impacts including growth-inducing impacts, cumulative impacts, mitigation measures, and alternatives. It is not the intent of an EIR to recommend either approval or denial of a project.

According to the CEQA Guidelines Section 15168(a), a Program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related either (1) geographically; (2) as logical parts in the chain of contemplated actions; (3) in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program; or (4) as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

Program EIRs allow for a more exhaustive consideration of effects, cumulative impacts, and alternatives than would be practical for a series of individual project-level EIRs. A Program EIR also allows lead agencies to consider broad policy alternatives and program-wide mitigation measures to deal with basic environmental issues and cumulative effects through the use of “tiering”. Tiering refers to using the analysis of general matters contained in a broader EIR in later environmental review documents prepared for projects with a narrower scope or more limited geographic scale (CEQA Guidelines, Section 15152). To use the tiering concept, the later EIR or Initial Study incorporates by reference the general discussions from the broader EIR and concentrates on the issues specific to the later project and effects that were not identified in the prior EIR. This EIR provides both program- and limited project-level environmental review for the Specific Plan.

This EIR will allow for streamlined environmental review of subsequent development projects consistent with the Specific Plan and analysis in this EIR. When individual projects or activities under the Specific Plan are proposed, the City would examine the projects or activities to determine whether their effects were adequately analyzed in this EIR, as provided under CEQA Guidelines Sections 15168(c), 15168(d), 15182, and/or 15183.

CEQA Guidelines Section 15168(c) states that later activities in the program must be examined in light of the program EIR to determine whether an additional environmental document must be prepared. CEQA Guidelines Section 15168(d) stipulates that a program EIR can be used to simplify the task of preparing environmental documents on later activities in the program, and that the program EIR can (1) provide the basis in an Initial Study for determining whether the later activity may have significant effects; (2) be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole; and (3) focus an EIR on a later activity to permit discussion solely of new effects which had not been considered before. CEQA Guidelines Section 15182 describes the terms for CEQA exemption eligibility for residential, commercial, and mixed-use projects consistent with a Specific Plan.

CEQA Guidelines Section 15183 stipulates that projects consistent with the development density established by existing zoning, community plan (such as the proposed Specific Plan), or General Plan policies for which an EIR was certified shall not require additional review, except as might be necessary to examine whether there are project-specific significant effects which are peculiar to the project or its site.

If subsequent projects within Moffett Park, consistent with the Specific Plan, are found to be within the scope of this EIR, additional environmental documents may not be required. If a subsequent activity would have effects that were not identified in this EIR, the City would require preparation of additional environmental review as applicable.

1.2 EIR PROCESS

1.2.1 Notice of Preparation and Scoping

In accordance with Section 15082 of the CEQA Guidelines, the City of Sunnyvale prepared a Notice of Preparation (NOP) for this EIR. The NOP was circulated to local, state, and federal agencies on August 18, 2021. The standard 30-day comment period concluded on September 16, 2021. The NOP provided a general description of the proposed project and identified possible environmental impacts that could result from implementation of the project. The City of Sunnyvale also held a public scoping meeting on August 26, 2021, to discuss the project and solicit public input as to the scope and contents of this EIR. The meeting was held virtually. Appendix A of this EIR includes the NOP and comments received on the NOP.

1.2.2 Draft EIR Public Review and Comment Period

Publication of this Draft EIR will mark the beginning of a 45-day public review period. During this period, the Draft EIR will be available to the public and local, state, and federal agencies for review and comment. Notice of the availability and completion of this Draft EIR will be sent directly to every agency, person, and organization that commented on the NOP, as well as the Office of Planning and Research (OPR). Written comments concerning the environmental review contained in this Draft EIR during the 45-day public review period should be sent to:

Michelle King, Principal Planner
Department of Community Development
City of Sunnyvale
456 West Olive Avenue, Sunnyvale, CA 94086
mking@sunnyvale.ca.gov

1.3 FINAL EIR/RESPONSES TO COMMENTS

Following the conclusion of the 45-day public review period, the City of Sunnyvale will prepare a Final EIR in conformance with CEQA Guidelines Section 15132. The Final EIR will consist of:

- Revisions to the Draft EIR text, as necessary
- List of individuals and agencies commenting on the Draft EIR
- Responses to comments received on the Draft EIR, in accordance with CEQA Guidelines Section 15088
- Copies of letters received on the Draft EIR

Section 15091(a) of the CEQA Guidelines stipulates that no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant environmental effects of the project unless the public agency makes one or more written findings. If the lead agency approves a project despite it resulting in significant adverse environmental impacts that cannot be mitigated to a less than significant level, the agency must state the reasons for its action in writing. This Statement of Overriding Considerations must be included in the record of project approval.

1.3.1 Notice of Determination

If the project is approved, the City of Sunnyvale will file a Notice of Determination (NOD), which will be available for public inspection and posted within 24 hours of receipt at the County Clerk's Office and available for public inspection for 30 days. The filing of the NOD starts a 30-day statute of limitations on court challenges to the approval under CEQA (CEQA Guidelines Section 15094(g)).

SECTION 2.0 PROJECT INFORMATION AND DESCRIPTION

2.1 PROJECT LOCATION

The approximately 1,270-acre³ Specific Plan area (hereinafter referred to as “Moffett Park”) is located in the northernmost portion of the City of Sunnyvale (City). Moffett Park is generally bounded by State Route (SR) 237 to the south, Moffett Federal Airfield and a golf course to the west; San Francisco Bay (Bay), the former/closed Sunnyvale landfill, Sunnyvale Materials Recovery and Transfer (SMaRT) Station®, Donald M. Somers Water Pollution Control Plant (WPCP), WPCP salt ponds for wastewater treatment, an open-water pond,⁴ and Caribbean Drive to the north; and Caribbean Drive, Twin Creeks Sports Complex, and Baylands Park to the east.

A regional map and vicinity map of Moffett Park are shown on Figure 2.2-1 and Figure 2.2-2, respectively. An aerial photograph with surrounding land uses is shown on Figure 2.2-3.

2.2 BACKGROUND INFORMATION

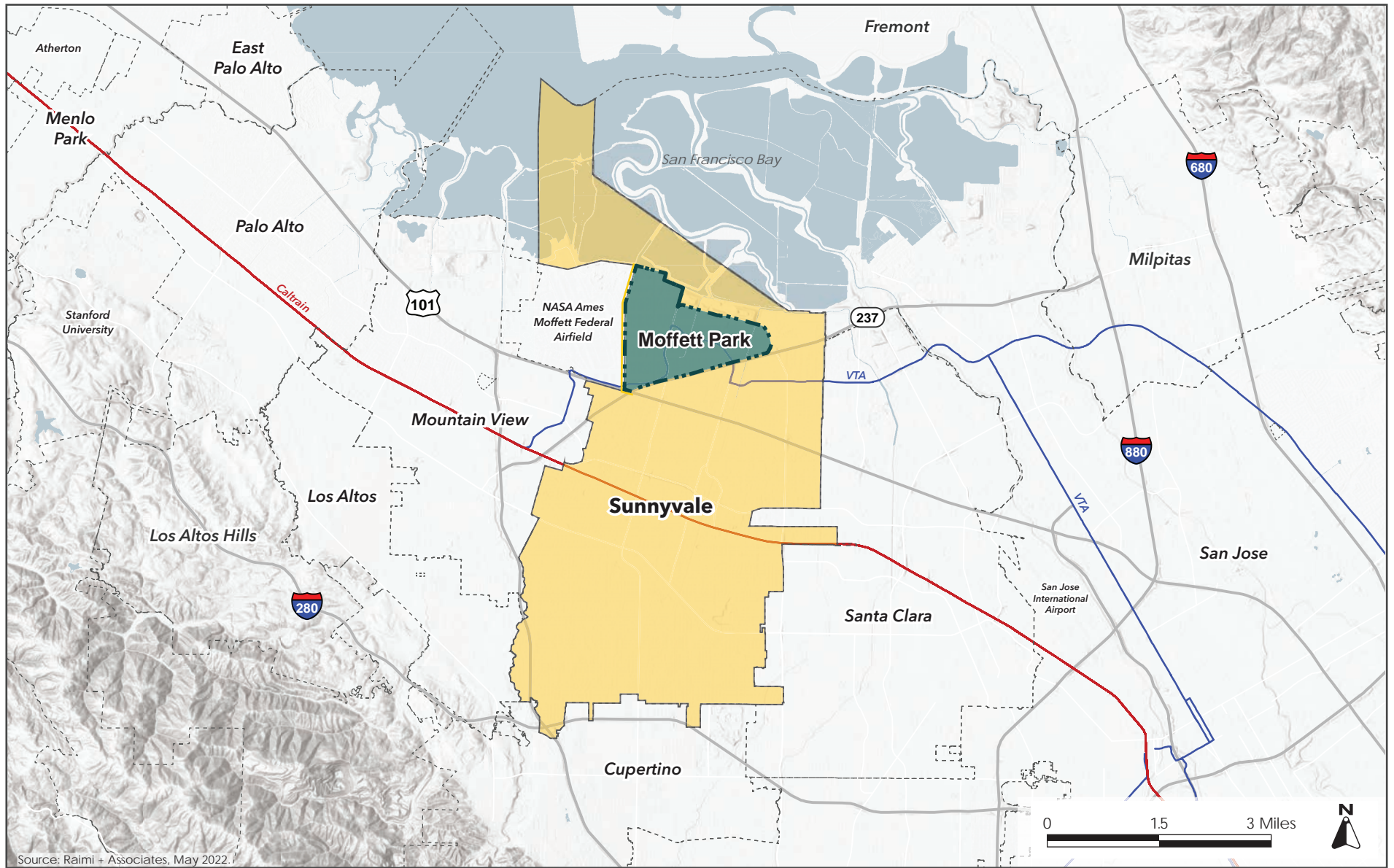
The City adopted the current Specific Plan (hereinafter referred to as “adopted Specific Plan”) in 2004 and amended it in 2006, 2009, 2011, 2013, and 2016. All Specific Plan amendments were focused on including additional sites as Moffett Park Transit Oriented Development (MP-TOD) which allows higher floor area ratio (FAR) to accommodate Class A office. None of the amendments changed the total buildout envisioned for Moffett Park. Moffett Park had long been home to several large corporate campuses. The adopted Specific Plan allows for a maximum buildout of 24.33 million square feet of commercial and office/Research & Development (R&D)/industrial uses.

Currently, Moffett Park is developed with approximately 18.5 million square feet of office/R&D/industrial, commercial uses (including restaurants and hotels), and institutional (including a fire station, post office, Veterans Affairs (VA) research center and community college) uses. Previous efforts by the City to develop Moffett Park as a hub for office space has resulted in a built landscape that varies considerably in both age and composition. Most of the existing buildings are largely reflective of the type of work and industry of each building’s respective tenants. Older buildings consist of mostly one- and two-story offices, warehouses, and R&D facilities. More recent buildings depart significantly from this typology, with new office towers typically eight-stories (or approximately 130 feet tall). Parking garages are limited, with most buildings featuring expansive surface parking lots. Although Moffett Park features dozens of individual businesses, significant portions of the area are consolidated under six key landowners: Google, Lockheed Martin Corporation, Jay Paul Company, Juniper Networks, Harvest, and the United States (U.S.) Department of the Navy (Navy).

Prior to the start of the Specific Plan update, the City approved a variety of office projects within Moffett Park. These recently approved projects include approximately 4.1 million square feet of new construction that, if built, would increase the total built square footage from 18.5 to 22.6 million square feet.

³ The total land area of Moffett Park is 1,275 acres: 1,157.7 acres is privately-owned land, institutional uses, and open space and 117.3 acres of public streets/roadways.

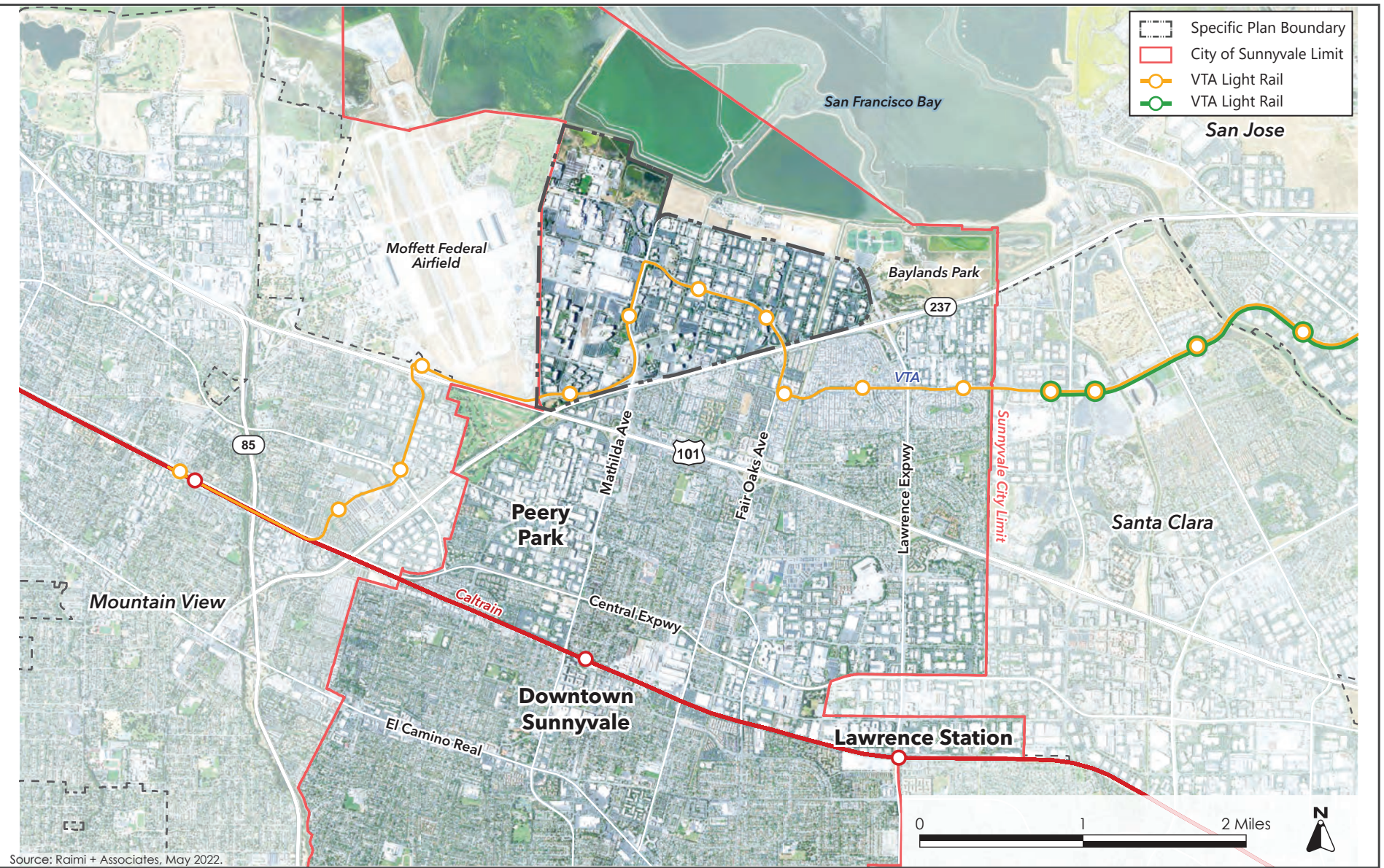
⁴ This pond is currently managed by Lockheed Martin as open-water habitat.



Source: Raimi + Associates, May 2022.

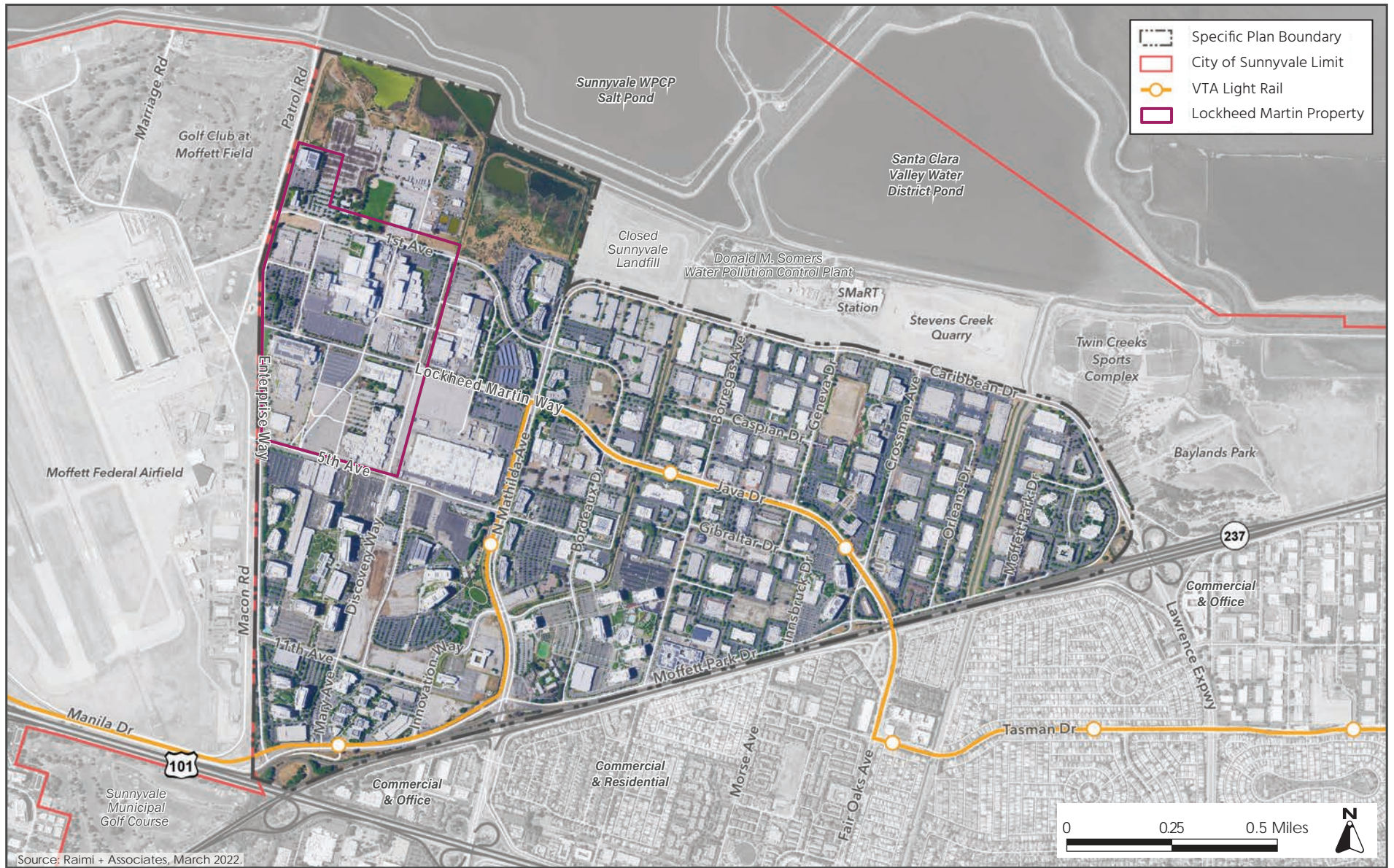
REGIONAL MAP

FIGURE 2.2-1



VICINITY MAP

FIGURE 2.2-2



AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 2.2-3

Over the past decade, shifts in both market demand and population demographics have emphasized the need for a renewed strategy for the Specific Plan. Where once the area was seen as a vital single-use office hub catering exclusively to corporate firms and campuses, contemporary trends reveal that such a vision has become outdated. Because individual employers, residents, and visitors alike are seeking a more diverse concentration of uses especially in commercial areas, the Sunnyvale City Council responded by authorizing an update to the Specific Plan in 2019. The City Council directed the update address the need for both commercial spaces and housing, improved infrastructure and transit services, greater connectivity between Moffett Park and the wider Sunnyvale community, and a strong sense of place and local character.

2.3 PROJECT DESCRIPTION

The proposed project is a comprehensive, City-initiated update of the Specific Plan. The proposed Specific Plan provides a vision and guiding principles, development standards, and design guidelines for future development within Moffett Park. A draft of the Specific Plan is attached to this EIR as Appendix B.

The City's vision for Moffett Park is as follows:

Moffett Park is an integral part of Sunnyvale, and a well-connected ecological innovation district with a diverse mix of uses that serves as a model of resilience, climate protection, equity, and economic opportunity.

The following guiding principles have been identified to achieve the above vision:

- Maintain Moffett Park as an integral part of Sunnyvale
- Establish Moffett Park as a model community through its commitment to comprehensively addressing resilience, climate protection, and equity in all activities
- Evolve Moffett Park into a vibrant and inclusive community where all people can thrive
- Maintain and strengthen Moffett Park as a diverse economic engine that supports economic prosperity for all
- Create a connected, accessible district that prioritizes the movement of people over vehicles to reduce climate pollution and to support a healthy community
- Cultivate dynamic and connected public spaces that accommodate the physical and social needs of all users
- Create a healthy, resilient, and biodiverse environment
- Integrate innovative and emerging technologies in the district to support the community wide goals

The Specific Plan would allow the addition of residential uses and an increase in the allowable office/industrial/R&D, commercial, and institutional uses within Moffett Park. The Specific Plan would allow for a net increase of 20,000 residential units (where there are no residential units existing today), 650,000 square feet of commercial uses,⁵ 10.0 million square feet of

⁵ The 650,000 square feet of commercial uses include 500,000 square feet of retail uses and 150,000 square feet of hospitality uses.

office/industrial/R&D uses, and 200,000 square feet of institutional uses⁶ beyond what is currently existing and recently approved. As a result, the buildout of the Specific Plan (which would include existing, recently approved, and proposed uses) would result in a total of 20,000 residential units and approximately 33.5 million square feet of commercial, office/industrial/R&D, and institutional uses. A summary of the existing, allowed, and proposed development within Moffett Park is provided in Table 2.3-1.

Table 2.3-1: Summary of Existing, Recently Approved, Allowed, and Proposed Development within Moffett Park					
	Residential Units	Commercial	Office/Industrial/R&D	Institutional	Total Non-Residential
A. Existing Development	0	305,304 ¹	18,102,203 ²	126,122 ³	18,533,629
B. Existing Development + Recently Approved but not yet Constructed Projects	0	515,303	22,000,000	126,122 ³	22,641,425
C. Allowed Development under the Proposed Specific Plan	20,000	1,165,303	32,000,000	326,000	33,491,303
<i>Net Change (C-B)</i>	<i>20,000</i>	<i>650,000⁴</i>	<i>10,000,000</i>	<i>199,878</i>	<i>10,849,878</i>
¹ Existing commercial square footage includes retail and hospitality uses. ² Existing office/industrial/R&D uses includes ancillary commercial uses. ³ Existing institutional uses include the fire station, post office, Veteran Affairs research center, and community college. ⁴ Commercial land uses include retail and hospitality uses. City Council approved for study, 500,000 square feet of retail uses. In addition, the project would include about 150,000 square feet of hospitality.					

Buildout of the Specific Plan is projected to generate approximately 42,000 residents and 95,683 jobs. Table 2.3-2 shows the number of employees generated at project buildout. Refer to Appendix C for more detailed information about the existing and proposed net new employees within Moffett Park.

⁶ Future institutional uses could include facilities such as schools, government facilities, and public/community facilities.

Land Use Category	Number of Employees at Project Buildout
Retail	1,333
Service/Hotel	1,350
Office	86,473
Industrial/R&D	6,000
Institutional	257
Total	95,683

2.3.1 Land Use Designations

The Specific Plan includes eleven land use designations: (1)(2) Office/R&D (two designations); (3)(4)(5) Mixed Employment (three designations); (6) Activity Center; (7) Mixed Use; (8) Residential; (9) Hospitality; (10) Public; and (11) Institutional. These land uses are described in Table 2.3-3 below and the proposed land use map is shown on Figure 2.3-1.

Designation	Description	Allowed Uses	Location and Gross Acreage
(1) MP-O1: Office 1 (2) MP-O2: Office 2	A mix of moderate and high intensity ⁷ office and R&D uses, with hotels, retail, and other general commercial allowed. Residential uses are not allowed.	<ul style="list-style-type: none"> • Office • R&D/Flex • Light Industrial • Manufacturing • Retail • General Commercial • Eating/Drinking Establishments • Hospitality • Healthcare • Parks and Open Space 	Throughout Moffett Park, totaling 417.5 acres <ul style="list-style-type: none"> • MP-O1: 225 acres • MP-O2: 189 acres
(3) MP-E1: Mixed-Employment 1 (4) MP-E2: Mixed-Employment 2 (5) MP-E3: Mixed-	Areas that allow for a mix of R+D, light industrial, manufacturing, and moderate intensity office uses. Residential uses are not allowed.	<ul style="list-style-type: none"> • Office • R&D/Flex • Light Industrial • Manufacturing • Retail • General Commercial • Eating/Drinking Establishments • Healthcare 	Located primarily west of Mathilda Avenue, totaling 335 acres <ul style="list-style-type: none"> • MP-E1: 44 acres • MP-E2: 143 acres • MP-E3: 147 acres

⁷ Moderate intensity is defined as office/R&D buildings with an FAR less than 1.0 and buildings less than 75 feet in height. High intensity is defined as office/R&D buildings with a finished floor greater than 75 feet in height.

Table 2.3-3: Land Use Designation Descriptions			
Designation	Description	Allowed Uses	Location and Gross Acreage
Employment 3		<ul style="list-style-type: none"> • Parks and Open Space 	
(6) MP-AC: Activity Center	Vibrant activity centers would provide the main locations for neighborhood-serving uses, including retail, personal services, food and beverage, and entertainment, residential, and office uses.	<ul style="list-style-type: none"> • Retail, Restaurants, Entertainment • Museums, Galleries • Residential • Office • R&D • General Commercial • Hospitality • Healthcare • Group Homes • Parks and Open Space 	Throughout Moffett Park, totaling 71 acres
(7) MP-MU: Mixed Use	A mix of single use residential or office uses. These areas provide a transition from mixed-use activity centers and residential areas to other land use types in Moffett Park.	<ul style="list-style-type: none"> • Retail, Restaurants, Entertainment • Museums, Galleries • Residential • Office • R&D • General Commercial • Hospitality • Healthcare • Group Homes • Parks and Open Space 	Throughout Moffett Park, totaling 136 acres
(8) MP-R: Residential	A mix of mid-rise and high-rise ⁸ residential uses.	<ul style="list-style-type: none"> • Residential • Day Care • Group Homes • Parks and Open Space • Schools and Community Facilities 	Residential uses would make up 140 acres of Moffett Park
(9) H: Hospitality	Areas that accommodate hospitality uses, in addition to complementary retail and commercial spaces	<ul style="list-style-type: none"> • Hospitality • Retail, Restaurants, Entertainment • General Commercial • Office 	Through Moffett Park, totaling 19 acres

⁸ Mid-rise units are defined as buildings up to 75 feet in height. High-rise units are defined as buildings with a finished floor greater than 75 feet in height.

Table 2.3-3: Land Use Designation Descriptions			
Designation	Description	Allowed Uses	Location and Gross Acreage
(10) P: Public	Public open space areas include ponds, channels, and riparian areas adjacent to the East and West Channels.	<ul style="list-style-type: none"> • Restoration/ wastewater treatment plant ponds • Channels • Riparian areas • Parks and Open Space • Trails • Public/community Facilities 	<p>Throughout Moffett Park, 41 acres</p> <p>Note that additional open space would be required in other land use designations, which would result in a total of 215 to 240 acres of park and open space areas.</p>
(11) I: Institutional	Public and institutional facilities, including but not limited to schools, colleges, government offices, and community facilities.	<ul style="list-style-type: none"> • Schools • Government facilities • Public/community facilities • Parks and Open Space 	Throughout Moffett Park, two acres

Source: City of Sunnyvale. *Draft Moffett Park Specific Plan*. December 2022.

2.3.2 Maximum Building Heights

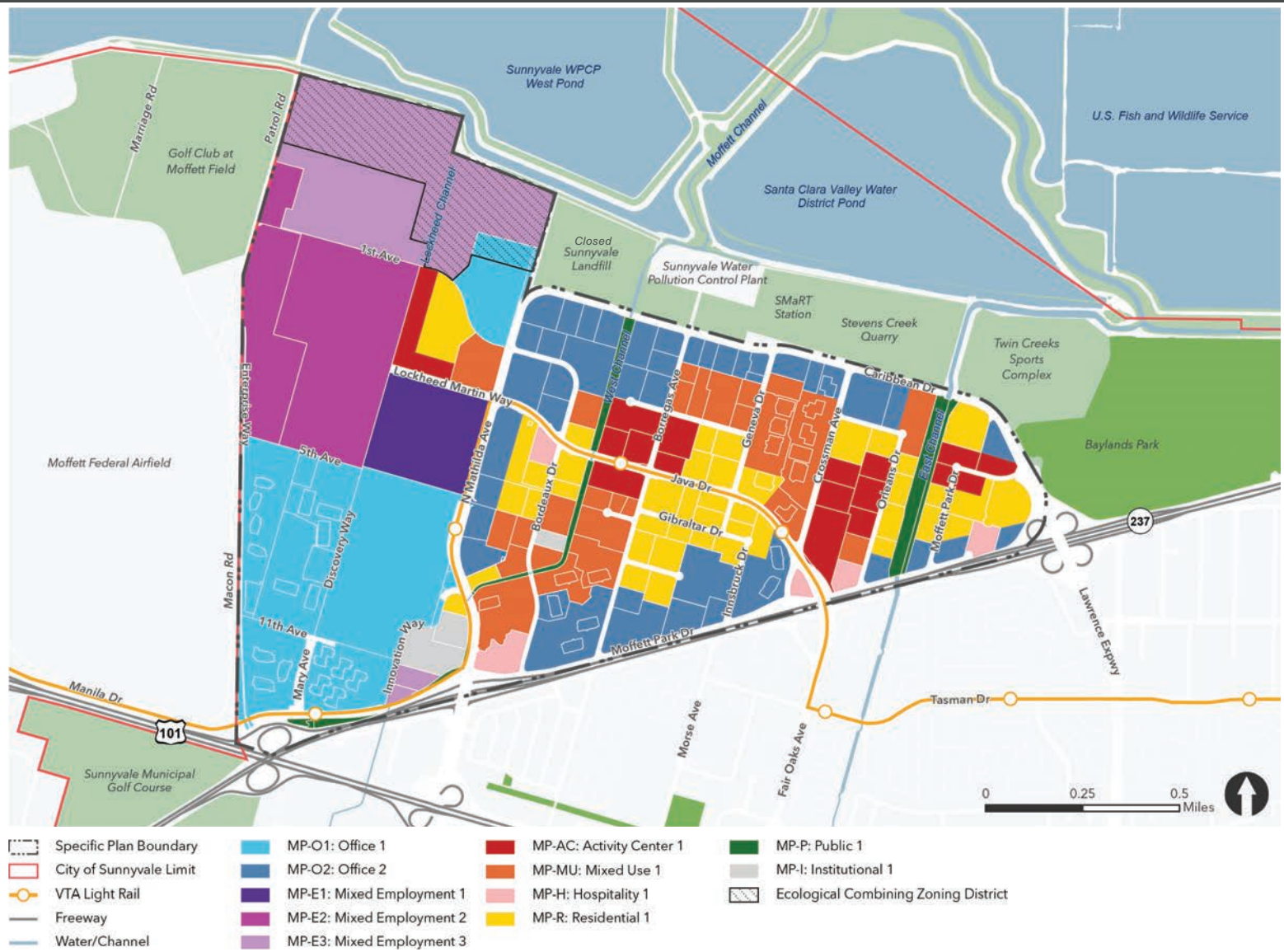
The Specific Plan includes maximum building heights allowed for future developments in Moffett Park. The tallest buildings would primarily be allowed in the central and eastern areas of Moffett Park, with maximum building heights ranging from 160 to 275 feet above the ground surface. The maximum building heights in other areas of Moffett Park would be 130 to 150 feet above the ground surface. The maximum building heights allowed under the Specific Plan are shown on Figure 2.3-2.

2.3.3 Neighborhoods

The Specific Plan divides Moffett Park into the following six neighborhoods that define future districts: (1) North Java, (2) South Java, (3) Crossman, (4) Chesapeake, (5) West Mathilda, and (6) Discovery. The neighborhoods are shown on Figure 2.3-3 and a summary of the proposed land uses by neighborhood is provided in Table 2.3-4.

2.3.4 Streets Network

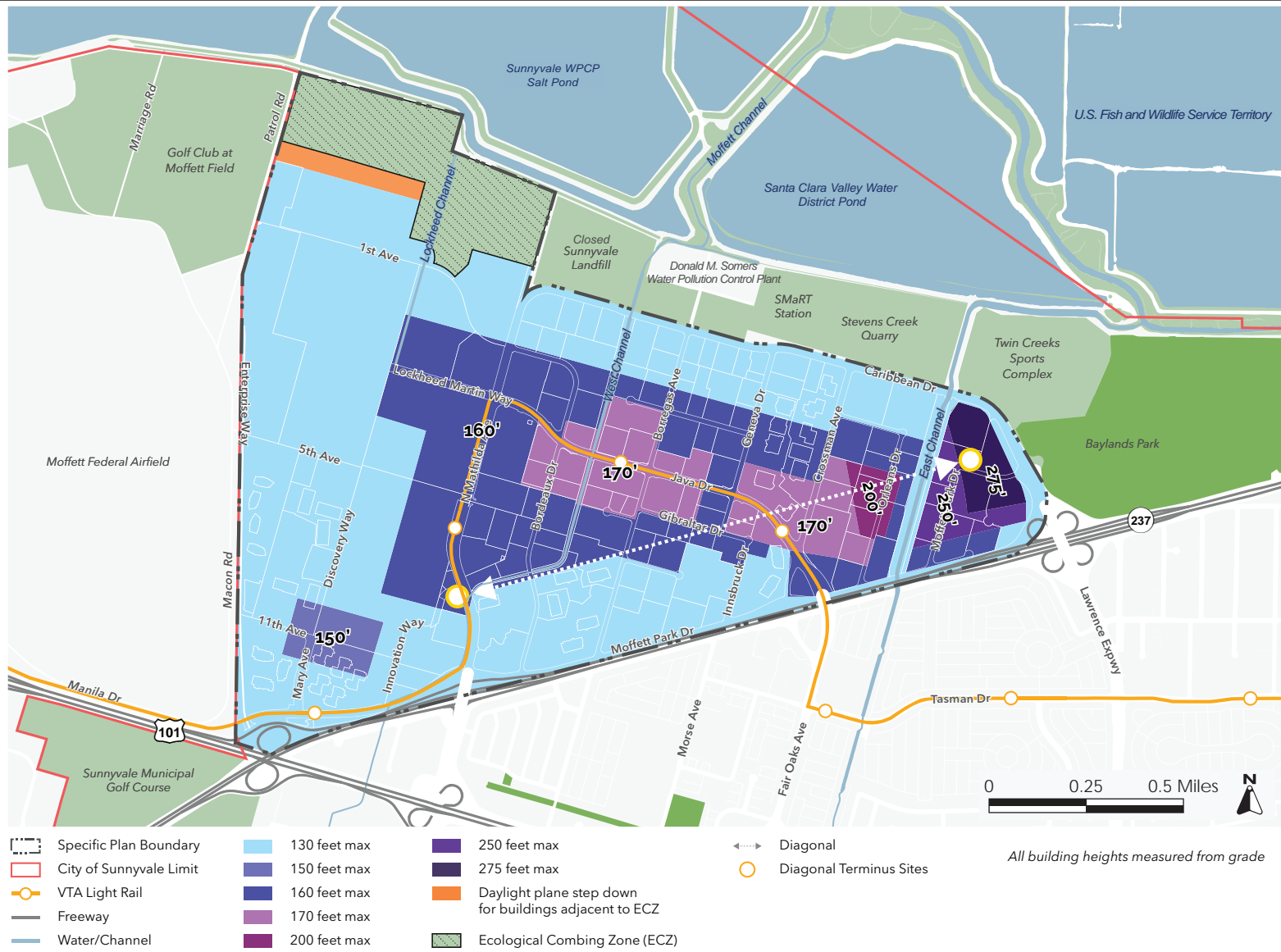
The proposed street network for Moffett Park would consist of existing streets (public and private) and new streets for vehicles and/or people who would walk or bike in Moffett Park. The proposed street network is shown on Figure 2.3-4.



Source: City of Sunnyvale, County of Santa Clara, ESRI, July 2022.

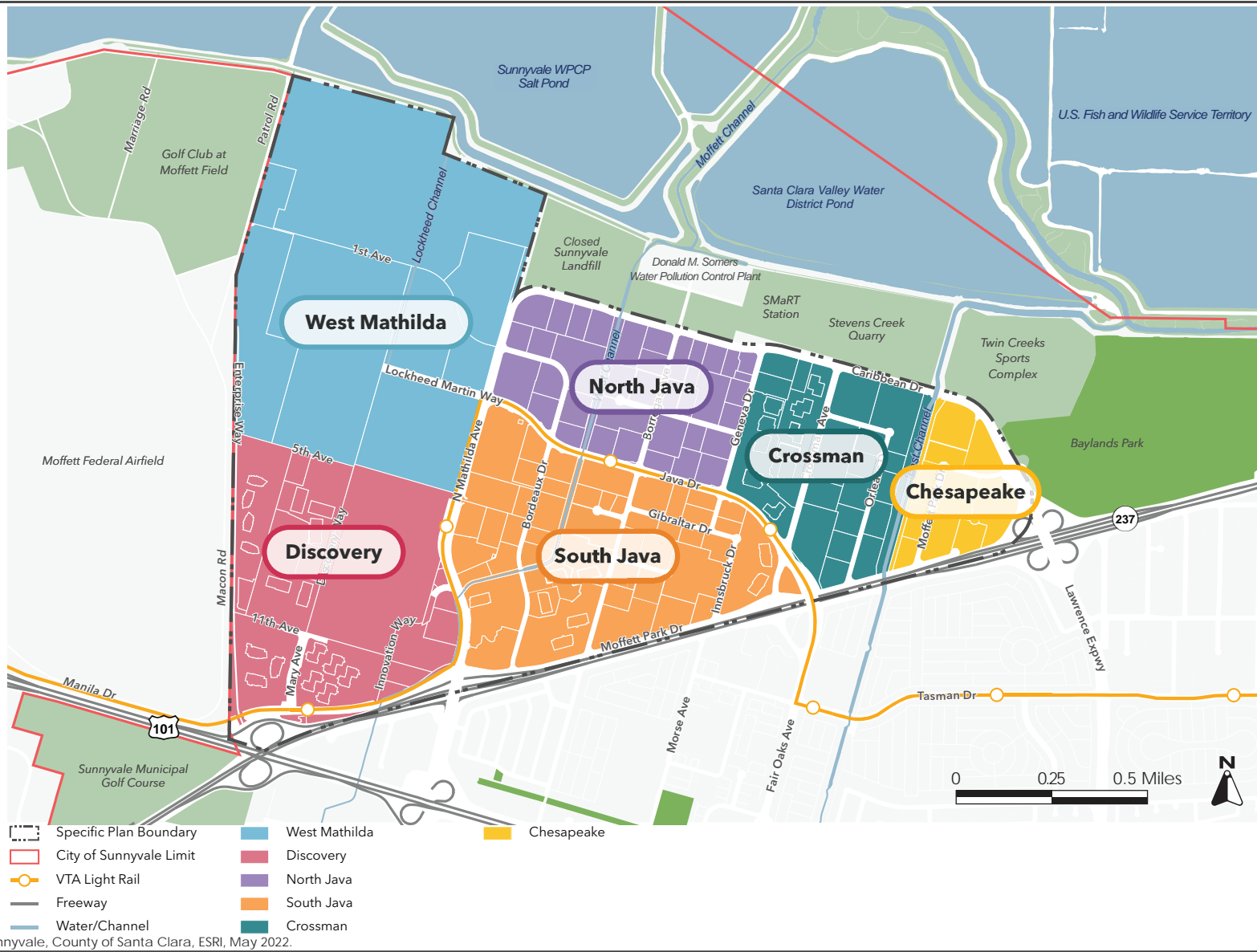
PROPOSED LAND USE MAP

FIGURE 2.3-1



MAXIMUM BUILDING HEIGHTS IN MOFFETT PARK

FIGURE 2.3-2



Source: City of Sunnyvale, County of Santa Clara, ESRI, May 2022.

PROPOSED NEIGHBORHOODS MAP

FIGURE 2.3-3

Table 2.3-4: Land Uses by Neighborhood

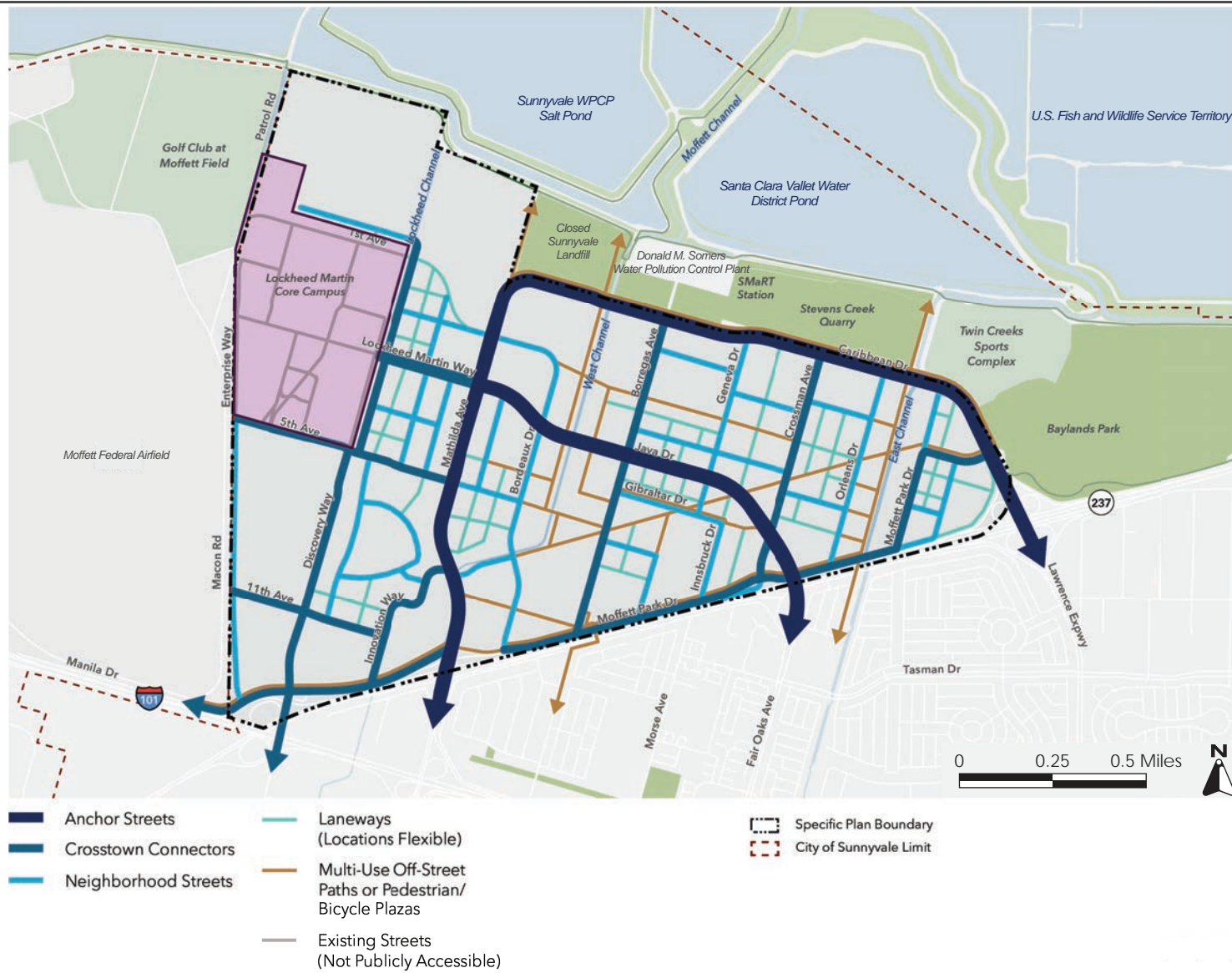
Neighborhood	Total Area	Office (MP-O1, MP-O2)	Mixed Employment (MP-E1, E2, E3)	Activity Center (MP- AC)	Mixed Use (MP-MU)	Residential (MP-R)	Hospitality (H)	Public (P)	Institutional (I)
	(acres)								
North Java	131.7	70.2	0	20.3	21.7	14.3	0	5.2	0
South Java	224.8	81.3	0	8.2	55.1	62.5	11.5	4.1	2
Crossman	132.1	21.5	0	17.2	50.5	29.5	3.0	10.4	0
Chesapeake	54.7	15.8	0	10.6	0	21.4	3.6	3.3	0
West Mathilda	389.0	25	329.9	14.3	9	10.7	0	0	0
Discovery	224.5	200.3	5.1	0	0	1.6	0	17.5	13.6
Totals	1,156.7³	414.1	335	70.6	136.3	140	18.1	26.9	15.7

¹ The institutional area in the Discovery subdistrict includes the existing 9.4-acre Foothill College and 4.2-acre VA facility.

² The institutional area in the South Java subdistrict includes the existing 1.5-acre Sunnyvale Fire Station #5.

³ The total land area of Moffett Park is 1,275 acres: 1,156.7 acres is privately-owned land, institutional uses, Santa Clara Valley Transportation Authority (VTA)/Caltrans parcels, and Valley Water parcels. Public street rights-of-way make up the remaining 118.3 acres.

Source: City of Sunnyvale. *Draft Moffett Park Specific Plan*. December 2022.



STREET NETWORK

FIGURE 2.3-4

2.3.5 Open Space and Urban Ecology

The Specific Plan would construct over 200 acres of open space. The Specific Plan defines open space as publicly accessible open spaces, parks, and natural areas which serve the community by providing public access, active transportation, recreational, cultural programs, and ecosystem services. These may include undeveloped natural areas, areas of ecological and ecosystem value, greenbelts and trails, recreation areas, community and neighborhood parks, areas of cultural historic significance, public plazas and squares. They may be publicly owned and managed, or privately owned publicly accessible spaces. The proposed open space areas are broken down by type in Table 2.3-5 below

Table 2.3-5: Proposed Park and Open Space Acreage	
Type of Open Space	Proposed Acreage
Greenbelt – Ecological Corridor	40-45
Natural Area – Biodiversity Hub (including ECD)	120-125
Community Park – Ecological Corridor	20-25
Neighborhood Park – Habitat Patch	18-20
Mini Park, Plazas, and Laneways	14-15
Total	212-230
Source: City of Sunnyvale. <i>Draft Moffett Park Specific Plan</i> . December 2022.	

In addition, the Specific Plan would integrate ecology into parks and open spaces within Moffett Park through ecological infrastructure such as green roofs, protected wetlands, urban forests, and well-connected parks into parks and open spaces. The Specific Plan establishes an Ecological Combining District (ECD) in the northwest corner of Moffett Park for the purpose of expanding and enhancing the ecological value of existing and potential wetlands. The ECD is identified on Figure 2.3-1 and makes up approximately 81 acres of the Natural Area open space type identified in Table 2.3-5.

2.3.6 Policies, Requirements, and Development Standards

The Specific Plan includes policies and development standards in seven of its 10 chapters: (1) Chapter 4 Land Use, (2) Chapter 5 Development Standards, (3) Chapter 6 Open Space and Urban Ecology, (4) Chapter 7 Mobility, (5) Chapter 8 Transportation Demand Management and Parking, and (6) Chapter 9 Infrastructure and Utilities. Chapter 10 Implementation includes project requirements, implementation actions, capital improvements, and monitoring programs. A summary of the key requirements and policies with environmental implications is provided below. Refer to Appendix B of this EIR for a complete list of policies, standards, and actions.

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

Air Quality

Construction Emissions

- **Requirement 10.3.3-1: BAAQMD Construction Management Practices.** All future construction projects under the Specific Plan shall implement the following BAAQMD basic best management practices (BMPs) to reduce DPM, PM_{2.5}, and PM₁₀ emissions during construction:
 - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples of moisture probe.
 - All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
 - All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
 - All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
 - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
 - All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
 - Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.
 - All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 miles per hour and visible dust extends beyond site boundaries.
 - Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction adjacent to sensitive receptors. Wind breaks should have at maximum 50 percent air porosity.
 - Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
 - The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities in the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
 - Avoid tracking of visible soil material on to public roadways by employing the following measures if necessary: (1) site accesses to a distance of 100 feet from public paved roads shall be treated with a six to 12-inch compacted layer of wood chips, mulch, or gravel and (2) washing truck tires and construction equipment of prior to leaving the site.
 - Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- **Requirement 10.3.3-2: Construction and Operations Modeling.** If future construction projects do not meet the screening level size identified by the Bay Area Air Quality Management District (BAAQMD) for less than significant construction criteria air pollutant emissions,

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

future construction projects shall estimate construction and operation period emissions using modeling methodologies recommended BAAQMD and approved by the City. Average daily emissions predicted for construction projects shall be estimated and compared against project level thresholds identified in Table 3.3-4 above. Projects that have emissions exceeding the thresholds shall implement appropriate measures to achieve emissions that are below the thresholds, such as the following:

- Use construction equipment that has zero or low diesel particulate matter exhaust and NO_x emissions. Exhaust emission (NO_x and PM) control measures include:
 - All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for NO_x and PM (PM₁₀ and PM_{2.5}), if feasible, otherwise,
 - If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 2 or 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve an 85-percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).
 - Use of alternatively fueled equipment with lower NO_x emissions that meet the NO_x and PM reduction requirements above.
 - Special equipment that cannot meet the above requirements must be approved as exempt by the City after considering reasons for requesting an exemption.
 - Use electric equipment such as aerial lifts, air compressors, cement mortar mixers, concrete/industrial saws, cranes, and welders
 - Diesel engines, whether for off road equipment or on road vehicles, shall not be left idling for more than two minutes, except as provided in exceptions to the applicable state regulations (e.g., traffic conditions, safe operating conditions). The construction sites shall have posted legible and visible signs in designated queuing areas and at the construction site to clearly notify operators of idling limit.
 - Provide line power to the site during the early phases of construction to minimize the use of diesel-powered stationary equipment.
 - Use of zero emission construction equipment.
- Use low volatile organic compound or VOC (i.e., reactive organic compounds) coatings, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 80 percent of all residential and non-residential interior paints and 80 percent of exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project's operational lifetime. At least 80 percent of coatings applied must meet a "super-compliant" VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project's operational lifetime, the Declaration of Covenants, Conditions, and Restrictions shall contain a stipulation for low VOC coatings to be used. Examples of "super-compliant" coatings are contained on the South Coast Air Quality Management District's website.

Operational Emissions

- **Policy TDMP-2.1:** Establish a Moffett Park Transportation Management Association (TMA) to oversee mobility improvements, coordinate efforts, and manage a district-wide TDM strategy.
- **Policy TDMP-2.2:** Ensure new development reduces vehicle trips through a required TDM Plan and TMA membership.
- **Policy TDMP-2.3:** Establish clear metrics, data points, and processes for applying TDM measures at the site level across Moffett Park.
- **Policy TDMP-2.4:** Continue to collaborate with Santa Clara Valley Transportation Authority (VTA) to align local development with transit infrastructure improvements.
- **Policy TDMP-2.5:** Work with TMA to achieve a 50 percent single-occupancy vehicle rate at full buildout.
- **Requirement 10.3.3-3:** Generator Emissions. All diesel standby emergency generators powered by diesel fuel shall meet US EPA Tier 4 engine standards.
 - Future development projects in Moffett Park that include installation of permanent stationary emergency generators shall ensure generators have engines that meet or exceed US EPA Tier 4 standards for particulate matter emissions.

Construction Health Risks

- **Requirement 10.3.3-4:** Health Risk Assessment. Future development proposed within 1,000 feet of existing or planned sensitive receptors as defined by the BAAQMD (e.g., residences, schools) shall prepare a site-specific construction and operational health risk assessment (HRA) pursuant to the BAAQMD CEQA Air Quality Guidelines. If the HRA demonstrates, to the satisfaction of the City, that the health risk exposures for adjacent receptors would be less than the BAAQMD project-level and cumulative thresholds, then no further study or measures are required. If the HRA demonstrates the health risks would exceed BAAQMD project-level thresholds or the project results in a considerable contribution to a significant cumulative health risk impact, additional feasible on- and off-site mitigation shall be analyzed to reduce risks to a less than significant level. Measures to avoid and/or reduce significant construction health risk impacts, could include the following:
 - Use Tier 4 engines for all off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities.
 - Use diesel trucks with 2010 or later compliant model year engines during construction.
 - Use renewable diesel during construction.
 - Use low-VOC coatings during construction.
 - Implement fugitive dust best management practices and if necessary, enhanced measures recommended by BAAQMD.
 - Use portable electrical equipment where commercially available and practicable to complete construction. Construction contractors shall utilize electrical grid power instead of diesel generators when (1) grid power is available at the construction site; (2) when construction of temporary power lines are not necessary in order to provide power to portions of the site distant from existing utility lines; (3) when use of portable extension lines is practicable given construction safety and operational limitations; and (4) when use of electrical grid power does not compromise construction schedules.
 - Phase construction appropriate to lower the intensity of emissions at any one location with sensitive receptors.

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

- Provide enhanced air filtration for sensitive receptors adversely affected by project emissions

Operational Odor

- **Requirement 10.3.3-4:** Odor Control Plan. Future projects that would generate odors shall develop an odor control plan that addresses plant design to control odors, operating and maintenance procedures to prevent odors, and an action plan to respond to upset conditions that could cause odors and measures to respond to odor complaints. The odor control plan shall describe the design elements and BMPs built into the facility that include:
 - Ventilation of the system using carbon absorption, biofiltration, ammonia scrubbers, or other effective means to treat exhausted air from the enclosed facility;
 - Odor proofing of refuse containers used to store and transport any odorous materials (e.g., biosolids); and
 - Injection of chemicals to control odorous compounds (e.g., hydrogen sulfide).

The plan shall describe procedures to address upset conditions caused by equipment failures, power outages, flow control, or treatment issues. A publicly visible sign with the telephone number and person to contact regarding odor complaints shall be posted. This person shall respond and take corrective action within 48 hours. The Air District’s phone number shall also be visible to ensure compliance with applicable regulations. A log of odor complaints and procedures implemented to respond to complaints shall be maintained and provided to the City upon request.

Biological Resources

Special-Status Plants

- **Requirement 10.3.5-1:** Special Status Plants. At the time development is proposed, focused special status plant surveys shall be completed by a qualified biologist for alkali milk-vetch and Congdon’s tarplant in the grasslands and vernal mesic areas (e.g., areas with a moderate supply of moisture) of Moffett Park’s northwestern corner. These surveys shall be completed prior to ground disturbance and shall be timed to occur during the appropriate blooming season for each species. Surveys conducted in or around April, June, and September would be sufficient to confirm their presence or absence; the timing and number of surveys shall be adjusted based on environmental conditions that may affect blooming in a particular year. The surveys shall follow protocols outlined in the “California Native Plant Society Botanical Survey Guidelines” and the California Department of Fish and Wildlife’s (CDFW’s) “Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities.” If the alkali milk-vetch and Congdon’s tarplant are determined absent, no additional measures are required.

If the alkali milk vetch and/or Congdon’s tarplant are present, to the maximum extent practicable, the project shall be designed to avoid populations of special status plants. If the project cannot be redesigned to avoid impacts to the identified species, and these impacts are found to be significant as defined by CEQA, then compensation measures shall include development of an on-site restoration plan for these species. The determination of the significance of impacts shall be based on, but not limited to, criteria such as the nature of the habitat impacts (i.e., temporary versus permanent impacts), extent of the species’ range,

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

relative abundance of regional populations of the species in its range, and the number of plant populations in Moffett Park. Areas to be preserved on-site as open space are expected to be able to fully accommodate any compensation measures for these species. If compensation measures cannot be fully accommodated on-site, then off-site compensatory mitigation (in the immediate vicinity of the identified populations(s), where feasible) would need to be considered. At a minimum, the restoration plan shall contain the following elements:

- Location of restoration areas,
- Propagation and planting techniques to be employed for the restoration effort,
- Timetable for implementation,
- Monitoring plan and performance criteria,
- Adaptive management techniques, and
- A site maintenance plan.

A report would be prepared summarizing the results of the surveys and submitted to the City, along with the restoration plan (if required). The restoration plan shall be reviewed and approved by the City for approval prior to the start of project construction. The objective of the restoration plan would be to replace the special status plants and habitat lost during project buildout at proportional basis to the impact. This would incorporate both the spatial and relative density of the impacted plant and its habitat. Success of the restoration effort would be based on a five-year monitoring program.

Burrowing Owl

- **Requirement 10.3.5-2: Burrowing Owl Survey.** Preconstruction surveys shall be completed by a qualified biologist in areas where burrowing owl habitat occurs such as ruderal lots (not including impervious surfaces) no more than 14 days in advance of the on-set of ground-disturbing activity. These surveys shall be conducted in accordance with the methods described in the Staff Report on Burrowing Owl Mitigation or the most recent California Department of Fish and Wildlife (CDFW) guidelines at the time development is proposed. The surveys shall cover all areas of suitable burrowing owl habitat within the construction zones.
 - If preconstruction surveys are undertaken during the non-breeding season (September 1 through January 31), any burrows occupied by resident owls in areas planned for construction shall be protected by a construction-free buffer with a radius of 150 to 250 feet around each active burrow, with the required buffer distance to be determined in each case by a qualified biologist. Passive relocation of resident owls is not recommended by the CDFW where it can be avoided. If passive relocation is unavoidable, resident owls may be passively relocated according to a relocation plan prepared by a qualified biologist.
 - If preconstruction surveys are undertaken during the breeding season (February 1 through August 31) and active nest burrows are located within or near construction zones, a construction-free buffer of 250 feet shall be established around all active owl nests. The buffer areas shall be enclosed with temporary fencing, and construction equipment and workers shall not be allowed to enter the enclosed setback areas. Buffers shall remain in place for the duration of the breeding season. After the breeding season (i.e., once all young have left the nest), passive relocation of any remaining owls may take places but only under the conditions described below.

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

If breeding owls are detected, suitable compensation shall be provided. Compensation could include collaborating with existing protected areas for the burrowing owls along the San Francisco Bay or collaborating and interacting with the Santa Clara Valley Habitat Plan (Habitat Plan) burrowing owl program. Although the City of Sunnyvale is not within the Habitat Plan area, it is within the extended area for preserving habitat to assist with conservation of burrowing owls for the Habitat Plan; the applicant should collaborate with the Santa Clara Valley Habitat Agency to define a suitable and acceptable compensation strategy. This most likely would result in the applicant funding a defined conservation need for the Habitat Plan. Providing protection in the form of deed restrictions or establishing a conservation easement in the northwestern “natural” area would also help to provide suitable compensation for breeding owls observed within the developed portion of Moffett Park.

Crotch and Western Bumble Bees

- **Requirement 10.3.5-3: Bumble Bees Survey.** At the time development is proposed in the potentially suitable habitat in the natural lands on the northern side of the Lockheed Martin property, four separate surveys shall be completed by a qualified biologist when the ambient temperatures are greater than 60 degrees Fahrenheit, wind speeds are ideally less than eight miles per hour (mph), and skies are clear enough to see your shadow. Bumble bees typically have an active season, or flight period in warmer months. The flight periods of the two different bumble bees which have potential to occur in Moffett Park are: (1) the Crotch bumble bee’s flight period is typically late February through late October, peaking in early April with a second pulse in July; and 2) the western bumble bee’s flight period is typically early April to early November, with workers peaking in early August and males peaking in late September; the queens’ flight period is early February through late November, peaking in late June and late September. The survey period should be from March through September and should aim for a survey in April, July, August, and September at the least; surveys will depend on local temperatures to identify the specific active season for any given area.

The surveys shall be completed between 12:00 PM and 4:00 PM, but may be completed earlier if the weather conditions are good. The surveys shall be completed by walking transects spaced up to approximately 100 feet apart within the affected habitat. Transect widths shall be reduced if needed, so there is complete visual coverage of potential nest, overwintering, and forage sites. These bumblebees are typically found in potential nesting, overwintering, and forage habitat within brush piles, in un-mowed or overgrown areas, hollow logs, abandoned rodent burrows, but can also nest above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees, as well as milkweeds, daisies, lupines, burclovers, phacelias, and salvias. To the degree any of this habitat exists onsite, focused surveys shall occur within suitable habitat. If possible, bumble bee species shall be determined, the location of potential or known Crotch bumble bees and western bumble bees shall be recorded via a handheld GPS unit, and a representative picture shall be taken. No bumble bees shall be handled to determine species.

If protected bumble bees are observed on the project site, they shall be avoided via buffer zones (the size of which would be determined at the time surveys are prepared). If protected bumble bees are observed on the site or adjacent to the site and they cannot be fully avoided, construction shall occur during a period of time that minimizes the effect of dust on their

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

lifecycles (which would be determined at the time surveys are prepared). If protected bumble bees are observed on the site, compensation may be necessary; any habitat compensation should protect suitable habitat proportional to the impact.

Following completion of the surveys, a report shall be prepared that documents the methods and summarizes the results of the survey which would identify any buffer zones, and measures to prevent impacts to protected bumble bees. The report shall be submitted to the City prior to issuance of grading permits.

Steelhead Central Coast ESU

- **Requirement 10.3.5-4:** Steelhead. Plans shall contain the following elements:
 - All work adjacent to waterways which may support steelhead shall use adequate silt fencing and Stormwater Pollution Prevention Plan (SWPPP) measures to ensure debris (i.e., soil) does not enter the waterway.
 - All work over waterways (e.g., bridge work) shall use netting to ensure items such as tools and pollutants do not fall into the waterway.
 - All work in or around waterways shall ensure an appropriate spill kit is onsite to avoid polluting the waterway.

Western Pond Turtle

- **Requirement 10.3.5-5:** Western Pond Turtle. Pre-construction surveys shall be completed by a qualified biologist within 250 feet of a waterway if development is proposed in or within 250 feet of a waterway within/no sooner than 48 hours of construction to ensure that western pond turtles are absent from the construction area. If western pond turtles are present, the turtle shall be able to leave on its own, or a biologist possessing all necessary permits shall relocate them.

A report shall be prepared summarizing the results of the pre-construction survey which outlines recommended next steps, including the following measures to prevent impacts to the western pond turtle. The report shall be submitted to the City prior to the issuance of grading permits.

Immediately following the pre-construction surveys, the construction zone shall be cleared, and silt fencing shall be erected and maintained around construction zones to prevent western pond turtles from moving into these areas.

A biological monitor shall be present onsite during particular construction activities, including initial silt fence installation along water features, to ensure western pond turtles are not harmed, injured, or killed during project buildout.

Roosting Bats

- **Requirement 10.3.5-6:** Roosting Bat Assessment. A bat assessment shall be completed by a qualified biologist and submitted to the City for approval, no more than 30 days prior to removal of trees or buildings. If a non-breeding bat colony is found, or if the tree supports

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

suitable roosting habitat that cannot be fully visibly surveyed (such as peeling bark or cavities in trees, especially high up in trees), the individuals shall be humanely evicted via two-step removal as directed by a qualified biologist to ensure no harm or “take” would occur to any bats as a result of demolition activities. Two-step removal shall occur during the volant seasons in fair weather and outside of the maternity season for bats (March 1 to April 15 or September 1 to October 15). Two-step removal consists of one day of disturbance and removing portions of buildings or trees, as directed by a qualified biologist, followed by the removal of that building or tree the following day; the goal is to disturb the bats and render the trees and structures unsuitable for them. This passive effort allows bats using these structures or trees to nocturnally relocate to a suitable nearby roost. Measures would not be required for the loss of roosting or foraging habitat for bats, as such habitat is abundantly available regionally.

If a breeding colony is observed, two-step removal shall not occur until breeding season is over (September 1) or until all young are independent of their parents. An appropriate buffer, as determined by a qualified biologist, based on the site conditions and location of the maternity colony would be established. This buffer may be up to 350 feet, depending on site-specific conditions, and shall remain until breeding season is over (September 1) or until all young are independent of their parents.

A report shall be submitted to the City summarizing the results of the survey, any buffer zones, and measures to prevent impacts to roosting bats.

Salt-Marsh Harvest Mouse

- **Requirement 10.3.5-7:** Salt-marsh Harvest Mouse Survey. A habitat survey shall be completed by a qualified biologist 30 days prior to work within 250 feet of the emergent wetland habitat located in the northeastern corner of Moffett Park to confirm current habitats. If pickleweed or salt grass habitats are within the work area, these areas shall be avoided, and a report shall be submitted to the City summarizing the results of the habitat survey which would identify any buffer zones and expected monitoring efforts to prevent impacts to the salt-marsh harvest mouse and their habitat.

A qualified biologist shall monitor work occurring within 50 feet of habitat identified as suitable for the salt-marsh harvest mouse. This monitor shall stop work should a salt-marsh harvest mouse be detected in the work area until the individual moves out of the construction area and into suitable habitat on its own.

Should monitoring be required, a report shall be submitted to the City summarizing the results of the monitoring, including any observation of the salt-marsh harvest mouse.

San Francisco Dusky-Footed Woodrat

- **Requirement 10.3.5-8:** San Francisco Dusky-Footed Woodrat Survey. A qualified biologist shall conduct a preconstruction survey for San Francisco dusky-footed woodrat nests no more than 30 days and no less than 14 days prior to the onset of construction activities. This survey timing allows for the scheduling of and deconstruction of any woodrat nests which need

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

relocating. The survey shall encompass all construction zones and surrounding lands within 50 feet. If no woodrat nests are present, no additional measures are required.

Identified nests shall be avoided, where possible. If avoidance is not possible, the nest(s) shall be manually deconstructed by a qualified biologist when helpless young are not present, typically during the non-breeding season (October 1 through January 31). The nest shall be reconstructed in a nearby suitable area.

If it is determined during the preconstruction survey that young may be present, a suitable buffer, delineated with flagging, depending on the timing within the breeding season (ranging from 15 to 50 feet) shall be established around the nest by a qualified biologist and maintained during construction until the young are independent and have successfully moved from the nest on their own.

A report shall be submitted to the City summarizing the results of the survey and identifies any buffer zones and measures implemented to prevent impacts to San Francisco dusky-footed woodrats.

Migratory Nesting Birds and Raptors

- **Requirement 10.3.5-9:** Construction During Migratory Bird and Raptor Nesting Season. To the extent feasible, construction activities shall be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts to nesting birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code shall be avoided. The nesting season for most birds in Santa Clara County extends from February 1 through August 31.

If initial site disturbance activities, including tree, shrub, or vegetation removal, are to occur during the bird breeding season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey for nesting migratory birds and raptors. The survey for nesting migratory birds shall cover the project site itself and the immediate vicinity of the site, with the survey for nesting raptors encompassing the site and surrounding lands within 250 feet, where accessible. The survey shall occur within seven days prior to the onset of ground disturbance.

If active nests are detected, appropriate construction-free buffers shall be established. The buffer sizes shall be determined by the project biologist based on species, topography, and type of activity occurring in the vicinity of the nest. Typical buffers are 25 to 50 feet for passerines and up to 250 feet for raptors. The project buffer shall be monitored periodically by the project biologist to ensure compliance. After the nesting is completed, as determined by the biologist, the buffer shall no longer be required.

A report shall be submitted to the City summarizing the results of the survey, identifies any buffer zones, and outlines measures implemented to prevent impacts to nesting birds.

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

Riparian Habitat

- **Requirement 10.3.5-10:** Riparian Habitat. During the environmental review process for future developments proposed within 250 feet of riparian areas, a qualified biologist shall determine if the project would impact riparian habitat and the project shall be designed to avoid impacts. If impacts cannot be avoided, the project shall mitigate for impacts to riparian habitat by a measure of at least 1:1. This can consist of on-site or off-site planting mitigation or fees paid to a suitable mitigation bank. For on- or off-site mitigation plantings, a restoration plan, including success criteria, must be written, which would include a minimum monitoring period of five years. Regulatory permits may be required for impacts to riparian habitat from the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (RWQCB).

State or Federally Protected Wetlands

- **Requirement 10.3.5-11:** State or Federally Protected Wetlands. During the environmental review process for future developments containing a wetland or potential wetland on the project site, a formal aquatic resources delineation shall be completed and submitted to the USACE for verification of the presence and extent of jurisdictional waters within Moffett Park. Information about the riparian habitat shall be collected during the site visit for this work as well to evaluate potential impacts to riparian habitat on a project-specific level.

Future development must comply with all state and federal laws and regulations related to disturbance to jurisdictional waters. If it is determined that wetlands within Moffett Park under the USACE's and/or RWQCB's jurisdiction, future project developers would be required to obtain a Section 404 Clean Water Act permit from the USACE, Section 401 water quality certification from the RWQCB, and/or Section 1602 Streambed Alteration Agreement from the CDFW or demonstrate that such permits are not necessary prior to initiating any construction-related activities within jurisdictional waters. Future project developers shall satisfy all agency requirements to mitigate aquatic impacts. These may include avoidance of aquatic resources, measures to minimize impacts, or compensation (e.g., habitat enhancement) for impacts.

Cultural Resources

Historical Resources

- **Requirement 10.3.2-1:** Historic Resource Evaluation. A Historic Resource Evaluation shall be required for future development that would impact properties that may meet the CEQA definition of historic resources, including resources 45 years of age or older and not currently listed/identified.
 - At a minimum, the supplemental review effort shall include preparation of a site-specific historic resources report that involves a records search at the Northwest Information Center (NWIC), a review of the Sunnyvale Heritage Resources Inventory, and where there is no evaluation within the last five years (using the Department of Parks and Recreation 523A and B forms), evaluation by a qualified historian or architectural historian to determine if the property meets the CEQA definition of a historic resource.

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

– If the supplemental review effort does not identify any site or structure that meets the definition of a historic resource that could be affected by construction activities, then no further study or protection is necessary prior to project implementation.

- **Requirement 10.3.2-2:** Standards for the Treatment of Historic Properties. New construction within historic districts or adjacent to a historic resource, rehabilitation of a historic resource, replacement of an existing historic resource, addition to a historic resource, or a renovation of a historic resource shall conform to the Secretary of the Interior’s Standards for the Treatment of Historic Properties, California Historic Building Code, and other applicable regulations.

Archaeological Resources

- **Requirement 10.3.2-3:** Archaeological Literature Review. For any new proposed development or improvements within Moffett Park, an archaeological literature review shall be completed at the Northwest Information Center of the California Historical Resources Information System. If the site, prior to development, contains any visible soils, a field inspection shall also be conducted. Recommendations for additional archaeological efforts beyond these initial studies shall be commensurate with the scale of the project and range of proposed impacts. Development shall include subsurface exploration and monitoring as warranted by a qualified archaeologist.
- **Requirement 10.3.2-4:** Finding of Archaeological Deposits or Materials. If buried, or previously unrecognized archaeological deposits or materials of any kind are inadvertently exposed during any monitoring work, work within 50 feet of the find shall cease until a qualified archaeologist can assess the find and provide recommendations for further treatment, if warranted. Construction and potential impacts to the area(s) within a radius determined by the archaeological shall not recommence until the assessment is complete.
- **Requirement 10.3.2-5:** Finding of Human Remains During Excavation. In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the NAHC immediately. Once the NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.

Energy

Operation

- **Policy DS-4.1:** Decarbonize new developments with low embodied carbon materials, renewable energy generation, and resource efficient design (energy, water, and waste) through development standards and incentives for higher performing new developments.
- **Policy DS-4.8:** Encourage the productive use of roof space for PV, solar thermal, and vegetation.
- **Policy DS-5.4:** Provide the use of vegetation at the site and building level to provide natural shade, reduce energy consumption, reduce reliance on indoor climate control systems, and address urban heat island effects.

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area
<ul style="list-style-type: none"> • Policy IU-5.1: Prohibit new natural gas services in all buildings and infrastructure to transition to all electric. • Policy IU-5.2: Encourage the installation of solar arrays on roofs, parking lots, and as shade structures paired with battery storage. • Policy IU-5.3: Plan energy systems collaboratively with SVCE, PG&E, property owners, and the City to ensure that Moffett Park maintains affordable, resilient, reliable, and 100 percent renewable energy. • Policy IU-5.4: Increase energy infrastructure to build capacity for Moffett Park, with a clear phasing program.
Geology and Soils
<p>Paleontological Resources</p> <ul style="list-style-type: none"> • Requirement 10.3.2-6: Fossil Review. Future development projects involving excavation at depths of eight feet or greater, shall retain a qualified paleontologist to inspect cuts more than eight feet deep for fossils at all times during original grading. In the event paleontological resources are discovered, all work within 25 feet of the find shall be halted and a Principal Paleontologist (M.S. or PhD in paleontology or geology familiar with paleontological procedures and techniques) shall evaluate the find and prepare a Paleontological Resource Mitigation (PRM) plan. As part of the PRM plan, discovered fossil(s), along with copies of all pertinent field notes, photos, and maps, shall be deposited in a scientific institution with paleontological collections. A final report documenting any found resources, their recovery, and disposition shall be prepared and filed with the local repository and the City.
Greenhouse Gas Emissions
<p>Operation</p> <ul style="list-style-type: none"> • Requirement 8.3.3-4: Electric Vehicle Parking. The number, design, and infrastructure for electric vehicle parking shall be provided per Table 15 of the Specific Plan or CALGreen Tier 2, whichever is more stringent. • Requirement 10.4-20: Develop solid waste minimization programs that include increased rates of recycling, composting of food, reuse of construction materials. • Requirement 10.6: Update Specific Plan polies and implementing measures on a regular basis (e.g., every five years) to measure progress and incorporate new measures to show progress toward achieving carbon neutrality. Updates to Specific Plan would address the goals of new local and state plans (e.g., state's upcoming scoping plan) to achieve GHG emissions reductions as well as new methods to more accurately model GHG emissions and implement innovative measures or project designs.
Hazards and Hazardous Materials
<p>Contaminated Groundwater, Soil, and Soil Vapor</p> <ul style="list-style-type: none"> • Requirement 10.3.1-1: Environmental Site Assessment. For any renovation, modification, or redevelopment of a property within Moffett Park that includes subsurface disturbance and requires City review, a property-specific Phase I Environmental Site Assessment (ESA) shall be completed in accordance with American Society for Testing and Materials (ASTM) Standard Designation E 1527-13 (or the standard that is effective at the time the Phase I ESA is completed) to identify Recognized Environmental Conditions, evaluate the property history, and establish if the property has been or is likely to have environmental impacts. The City or

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

its designated environmental professional shall review the Phase I ESA to determine if additional investigation is required based on currently available information, which may supersede the designated property's risk value.

- **Requirement 10.3.1-2: Site Management Plan.** At properties with known or suspected minor environmental impacts that can be addressed safely and effectively during subsurface disturbance activities, a Site Management Plan (SMP) shall be prepared prior to development activities to establish management practices for handling contaminated soil, soil vapor, groundwater, or other materials during construction activities. The SMP shall also address management of site risks and previously unknown conditions during earthwork activities in areas where impacted soil, soil vapor, and/or groundwater are present or suspected. Recommendations for elements to be included in site-specific Health and Safety Plans (HSPs), to be prepared by individual contractors for their employees' safety based on their work scope, may also be included in the SMP. Worker training requirements and health and safety shall be described in the SMP. The SMP shall be reviewed and approved by a qualified environmental regulatory agency such as California Department of Toxic Substances Control (DTSC), San Francisco Bay Regional Water Quality Control Board (RWQCB), or Santa Clara County Department of Environmental Health (SCCDEH).
- **Requirement 10.3.1-3: Phase II Environmental Site Assessment.** At properties with known or suspected environmental impacts that require additional investigation prior to subsurface disturbance activities, a Phase II ESA shall be prepared and implemented prior to development activities to determine the nature and extent of impacts. The Phase II ESA shall be reviewed and approved by a qualified environmental regulatory agency such as DTSC, RWQCB, or SCCDEH. Consideration should be given to obtaining approval for an investigation plan from the oversight agency prior to completing the Phase II investigation. The scope of work shall include soil, groundwater, and/or soil vapor sampling in areas of potential concern to evaluate if site-specific measures are needed to protect the health and safety of property occupants and construction workers. Field techniques that may be employed under include but are not limited to:
 - Collecting samples of soil, soil vapor, groundwater, sediment, indoor air, outdoor air, and other media of interest for laboratory analysis;
 - Drilling using methods such as direct-push, hollow-stem auger, vibrocore, air rotary, and mud rotary;
 - Trenching, potholing, and excavating;
 - Constructing temporary or permanent soil vapor or groundwater wells or sampling points; and
 - Profiling geologic, hydrologic, geophysical, and chemical parameters of the subsurface using invasive and noninvasive tools.
- **Requirement 10.3.1-4: Remediation and/or Management Measures.** At properties with known environmental impacts that must be addressed to make the property compatible with its future use, appropriate remediation and/or management measures must be implemented under the oversight and to the satisfaction of a qualified environmental regulatory agency such as DTSC, RWQCB, or SCCDEH. Remediation techniques may include but are not limited to excavation, extraction, bioremediation, oxidation, reduction, phytoremediation, and thermal treatment. Management measures may include engineering and administrative controls such as but not limited to impermeable surface caps, vapor intrusion mitigation systems, permeable reactive

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

barriers, land use covenants, and deed restrictions. Field techniques that may be employed under include but are not limited to:

- Excavation, extraction, or removal of impacted material for off-site disposal or temporary on-site storage or treatment;
- Ex-situ (i.e., above-ground) treatment of impacted material via physical and/or chemical processing; and
- In-situ (i.e., below-ground) treatment of impacted material via intrusive physical and/or chemical processing.

These field techniques include those currently known and used (e.g., dig-and-haul, landfarming, groundwater and soil vapor extraction and treatment, subsurface injection, etc.) and those that will become state of the art in the future.

- **Requirement 10.3.1-5: Dewatering Management Plan.** For future development projects that require dewatering, a Dewatering Management Plan shall be prepared to determine how the dewatering activities will affect local groundwater quality, especially regarding movement of known or interpolated contaminated groundwater plumes. The Dewatering Management Plan also shall include protocols to evaluate extracted water quality and perform proper disposal of the water. Compliance with permitting requirements shall be described if required by the disposal method. The Dewatering Management Plan shall be prepared by a California Certified Hydrogeologist and approved by a qualified environmental regulatory agency such as DTSC, RWQCB, or SCCDEH.

Asbestos-Containing Materials, Lead-Based Paint, and Polychlorinated Biphenyls

- **Requirement 10.3.1-6: Asbestos Survey.** Prior to issuance of demolition permits, an asbestos survey shall be completed on all structures proposed for demolition that are known or suspected to have been constructed prior to 1978 in accordance with National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines. NESHAP guidelines require the removal of potentially friable asbestos-containing materials (ACMs) prior to building demolition or renovation that may disturb the ACM.
- **Requirement 10.3.1-7: Lead-Based Paint Survey.** Prior to issuance of a demolition permit, a lead-based paint (LBP) survey shall be completed on all structures proposed for demolition that are known or suspected to have been constructed prior to 1978. If LBP is identified, then federal and state construction worker health and safety regulations shall be followed during renovation or demolition activities. If loose or peeling LBP is identified at the building, it shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations. Requirements set forth in the CCR Title 8, Section 1532.1 shall be followed during demolition activities, including employee training, employee air monitoring, and dust control. Any debris or soil containing LBP or coatings shall be disposed of at landfills that meet acceptance criteria for the waste being disposed.

Noise and Vibration

Construction Noise

- **Requirement 10.3.4-1: Construction Noise Measures.** Future development projects shall implement site-specific noise attenuation measures during construction to reduce the generation of construction noise and vibration. These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the City prior to issuance of

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

demolition, grading, and/or building permits. Measures specified in the Noise Control Plan and implemented during construction shall include the following noise control strategies:

- Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds).
- Impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools.
- Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other similar measures.
- Noise and vibration reducing pile-driving techniques shall be implemented during construction and shall be monitored to ensure no damage to nearby structures occurs (i.e., vibrations above PPVs of 0.25 in/sec at nearby structures). These techniques shall include:
 - Installing intake and exhaust mufflers on pile-driving equipment
 - Vibrating piles into place when feasible, and installing shrouds around the pile-driving hammer where feasible
 - Implementing “quiet” pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions
 - Using cushion blocks to dampen impact noise, if feasible based on soil conditions.⁹
 - At least 48 hours prior to pile-driving activities, notifying building owners and occupants within 600 feet of the project area of the dates, hours, and expected duration of such activities
- Prohibit unnecessary idling of internal combustion engines.
- Construction staging areas shall be established at locations that create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. Material stockpiles, as well as maintenance/equipment staging and parking areas, shall be located as far as feasible from residential receptors.
- Control noise from construction workers’ radios to a point where they are not audible at existing residences bordering the project site.
- Where feasible, temporary power service from local utility companies shall be used instead of portable generators.
- Locate cranes as far from adjoining noise-sensitive receptors as possible.
- During final grading, substitute graders for bulldozers, where feasible. Wheeled heavy equipment are quieter than track equipment and should be used where feasible.

⁹ Cushion blocks are blocks of material that are used with impact hammer pile drivers. They consist of blocks of material placed atop a piling during installation to minimize noise generated when driving the pile. Materials typically used for cushion blocks include wood, nylon, and micarta.

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

- Maintain smooth vehicle pathways for trucks and equipment accessing the site, and avoid local residential neighborhoods as much as possible.
- During interior construction, the exterior windows facing noise-sensitive receptors should be closed.
- During interior construction, locate noise-generating equipment within the building to break the line-of-sight to the adjoining receptors.
- The contractor shall prepare a detailed construction schedule for major noise-generating construction activities (including pile driving, removal of existing structures; site grading and excavation; installation of utilities; construction of building foundations, cores, and shells; paving; and landscaping). The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a “disturbance coordinator” who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

Operational Noise

- **Requirement 10.3.4-2: Operational Noise.** Prior to the issuance of building permits, a qualified acoustical consultant shall be retained to review mechanical equipment systems during final design of future projects. The consultant shall review selected equipment and determine specific noise reduction measures necessary to reduce noise to comply with the City’s noise level requirements (including SMC Section 19.42.030 requires that operational noise not exceed 75 dBA along the property line, and that the noise levels not exceed 60 dBA during daytime hours or 50 dBA during nighttime hours at any point on adjacent residential properties). Noise reduction measures could include, but are not limited to, selection of equipment that emits low noise levels and/or installation of noise barriers, such as enclosures and parapet walls, to block the line-of-sight between the noise source and the nearest receptors. Additionally, enclosures and interior wall treatments shall be considered to reduce noise exposure within the on-site units. Alternate measures may include locating equipment in less noise-sensitive areas, where feasible. The specific equipment shall be included on the approved building permit plan set.

Construction Vibration

- **Requirement 10.3.4-3: Heavy Vibration-Generating Construction Equipment.** Prohibit the use of heavy vibration-generating construction equipment within 25 feet of residences and hotels/motels. Use a smaller vibratory roller, such as the Caterpillar model CP433E vibratory compactor, when compacting materials within 25 feet of residences and hotels/motels adjoining the site.
- **Requirement 10.3.4-4: Dropping Heavy Equipment.** Avoid dropping heavy equipment within 25 feet of residences and hotels/motels. Use alternative methods for breaking up existing

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pavement, such as a pavement grinder, instead of dropping heavy objects within 25 feet of residences and hotels/motels adjoining the site.

- **Requirement 10.3.4-5: Pile-Driving Techniques.** Noise and vibration reducing pile-driving techniques shall be employed during construction and monitored to ensure no damage to nearby structures occurs (i.e., vibrations above PPVs of 0.25 in/sec at nearby structures). These techniques shall include:
 - Installing intake and exhaust mufflers on pile-driving equipment
 - Vibrating piles into place when feasible, and installing shrouds around the pile-driving hammer where feasible
 - Implementing “quiet” pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions
 - Using cushion blocks to dampen impact noise, if feasible based on soil conditions¹⁰
 - At least 48 hours prior to pile-driving activities, notifying building owners and occupants within 600 feet of the project area of the dates, hours, and expected duration of such activities
- **Requirement 10.3.4-6: Heavy Equipment Communications.** The contractor shall alert heavy equipment operators to the proximity of the adjacent structures so they can exercise extra care.
- **Requirement 10.3.4-7: Construction Vibration Monitoring, Treatment, and Reporting Plan.** For projects requiring impact or vibratory pile driving, a Construction Vibration Monitoring, Treatment, and Reporting Plan shall be implemented to document conditions prior to, during, and after vibration-generating construction activities. All plan tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of California and be in accordance with industry-accepted standard methods. The construction vibration monitoring plan shall include, but not be limited to, the following measures:
 - Document conditions at all structures located within 100 feet of pile driving activities and at historic structures located within 275 feet of pile driving activities prior to, during, and after vibration-generating construction activities. All plan tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of California and be in accordance with industry-accepted standard methods. Specifically:
 - Vibration limits shall be applied to vibration-sensitive structures located within 100 feet of any high impact construction activities, such as pile driving, and 275 feet of historic buildings.
 - Performance of a photo survey, elevation survey, and crack monitoring survey for each structure of normal construction within 100 feet of any high impact construction activities and each historic structure within 275 feet of pile driving activities. Surveys shall be performed prior to any construction activity, in regular intervals during construction, and after project completion, and shall include internal and external crack monitoring in structures, settlement, and distress, and shall document the condition of foundations,

¹⁰ Cushion blocks are blocks of material that are used with impact hammer pile drivers. They consist of blocks of material placed atop a piling during installation to minimize noise generated when driving the pile. Materials typically used for cushion blocks include wood, nylon, and micarta

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walls and other structural elements in the interior and exterior of said structures.

- Develop a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies shall be identified for when vibration levels approached the limits.
- At a minimum, vibration monitoring shall be conducted during all pile driving activities.
- If vibration levels approach limits, suspend construction, and implement contingency measures to either lower vibration levels or secure the affected structures.
- Designate a person responsible for registering and investigating claims of excessive vibration. The contact information of such person shall be clearly posted on the construction site.
- Conduct a post-construction survey on structures where either monitoring has indicated high vibration levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of construction activities.

Airport Land Use Plan Compatibility

- **Requirement 10.3.4-8:** CLUP Noise Levels. Future developments under the Specific Plan exposed to conditionally acceptable and generally unacceptable aircraft noise levels, as defined by the Moffett Federal Airfield CLUP, shall complete a detailed noise analysis that includes the required noise reduction measures and noise insulation features included in the design to ensure compatibility with the CLUP noise standards.

Future Exterior Noise Environment (Non-CEQA Effect)

- **Requirement 10.3.4-9:** Residential, hotel/motel, and school projects shall be designed in such a way to locate noise-sensitive outdoor use areas away from major roadways or other significant sources of noise.
 - Projects shall shield noise-sensitive outdoor use spaces with buildings or noise barriers to reduce exterior noise levels.
 - The final detailed design of the heights and limits of proposed noise barriers shall be completed at the time that the final site and grading plans are submitted.

Future Interior Noise Environment (Non-CEQA Effect)

- **Requirement 10.3.4-10:** A project-specific acoustical analysis shall be prepared, in compliance with State Building Codes and City noise standards, to ensure that the design incorporates controls to reduce interior noise levels to 45 dBA L_{dn} or lower within the residential units and to 50 dBA $L_{eq(1-hr)}$ or lower within nonresidential interiors. Additionally for residential units located adjacent to the VTA light-rail tracks, maximum instantaneous noise levels shall be at or below 50 dBA L_{max} within bedrooms and at or below 55 dBA L_{max}

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within all other residential rooms. The project applicant shall conform with any special building construction techniques requested by the City’s Building Department, which may include sound-rated windows and doors, sound-rated wall constructions, and acoustical caulking.

If future projects do not meet the 45 dBA L_{dn} (for residential interiors) or 50 dBA $L_{eq(1-hr)}$ (for nonresidential interiors) standards, other site-specific measures, such as increasing setbacks of the buildings from the adjacent roadways, using shielding by other buildings or noise barriers to reduce noise levels, implementing additional sound treatments to the building design shall be considered to reduce interior noise levels to meet the State and City standards.

Train Vibration and Land Use Compatibility (Non-CEQA Effect)

- **Requirement 10.3.4-11:** Vibration Analysis Near VTA Light Rail. Project-specific vibration analyses shall be prepared for future residential developments within 35 feet of the VTA light rail lines within Moffett Park and within 20 feet of the VTA light rail lines for commercial, office/industrial/R&D, or institutional developments. These analyses shall include vibration measurements at future project sites and a comparison of the measurements to the established FTA standards to verify vibration and land use compatibility. If FTA vibration standards are not met at future project sites, measures (such as requiring greater setback distances from the rail lines) to reduce vibration effects will be determined by the City at the time a specific development is proposed.

Public Services

Recreational Facilities

- **Policy OSE-2.1:** Provide a minimum of one tot lot for ages two to five within each residential neighborhood or one per 7,000 residents.
- **Policy OSE-2.2:** Provide a minimum of one inclusive, all-abilities and ages play space within each residential neighborhood or one per 7,000 residents.
- **Policy OSE-2.4:** Provide a minimum of four dog parks or dog walking areas located within 10-minute walk of residential buildings or one per 10,500 residents.
- **Policy OSE-2.5:** Provide a minimum of one multi-use/flexible field area, 50 by 100 yards minimum or equivalent to a high school soccer field as defined by the US Youth Soccer Association.
- **Policy OSE-2.6:** Provide a minimum of three open field/flexible recreation areas, 35 by 65 yards minimum or equivalent to a U10 soccer field as defined by the US Youth Soccer Association. Fields may be synthetic or natural turf with grading and drainage to allow for regular use for informal/drop-in, youth sports, and community events.
- **Policy OSE-2.7:** When and where possible, increase the quantity of multi-use flex fields to include more opportunities for informal and youth athletics.
- **Policy OSE-2.8:** Co-locate a community or neighborhood park with potential school site(s).

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

Transportation

Transit Facilities

- **Policy M-3.1:** Work with the Santa Clara Valley Transportation Authority (VTA) to maintain high frequency, high-capacity transit services.
- **Policy M-3.2:** Prioritize public transit networks within the complete streets typology as illustrated on the attached Street Typology and Modal Networks maps.
- **Policy M-3.3:** Work towards obtaining and providing right-of-way for public transit and priority lanes.
- **Policy M-3.4:** Make public transit a convenient and reliable option for daily trip making.
- **Policy M-3.5:** Prioritize investments that reduce first/last-mile barriers to transit stops.
- **Policy M-4.1:** Prioritize and implement transportation investments and strategies that reduce vehicle miles traveled (VMT) per capita and per employee.
- **Policy M-4.2:** Strategically and opportunistically increase person capacity at the district gateways.

Multi-Modal Transportation

- **Policy LU-4.2:** Prioritize walking and biking by breaking up large blocks into a finer-grained network and through complete streets improvements.
- **Policy M-1.3:** Plan for and provide a transportation system that is flexible and appropriately accommodates all modes of traffic.
- **Policy M-2.1:** Prioritize implementing improved bicycle and pedestrian access within the complete streets typology as illustrated on the Street Typology and Modal Networks maps.
- **Policy M-2.2:** Designate street space for people who walk and bike.
- **Policy M-2.3:** Prioritize mobility and safety for non-motorized modes when considering intersection capacity increases.
- **Policy M-2.4:** Keep the street network dense with short blocks to support connections for people who walk and bike.
- **Policy M-2.5:** Minimize pedestrian crossing distances and maximize pedestrian connections.
- **Policy TDMP-1.3:** Promote biking by establishing standards for bicycle parking facilities and infrastructure.
- **Policy TDMP-1.6:** Promote and support flexible approaches to parking supply and management by coordinating parking infrastructure and prioritizing shared facilities.
- **Policy OSE-1.1:** Establish a network of greenbelt, parks, and trails that are an integral part of the active non-vehicular transportation network and promote safe pedestrian and bicycle use throughout the district.
- **Policy OSE-1.3:** Provide open spaces that are well distributed and located adjacent to transit, and activity and community centers.
- **Policy OSE-1.5:** Locate open spaces to provide a universally accessible route from all residential buildings to a neighborhood-serving park within a half-mile or 10-minute average walking distance.

Table 2.3-6: Summary of Key Specific Plan Requirements and Policies by Resource Area

Utilities and Service Systems

Water Conservation

- **Policy IU-3.2:** Prioritize water conservation and the use of recycled water for all outdoor, non-drinkable uses, including in street, open spaces, and landscaped areas.
- **Policy IU-3.3:** Encourage sustainable development practices for development projects to reduce the demands on the water supply and sanitary sewer systems, including use of recycled water indoors, installation of localized blackwater systems, regenerative and high efficiency landscape practices that reduce water and energy use, development of private district utility systems, and increased building efficiency beyond City standards.
- **Policy IU-3.5:** Require new development to provide recycled water infrastructure in new streets, connect to the recycled water system, and use recycled water for outdoor water use at a minimum.

2.4 PROJECT OBJECTIVES

Pursuant to CEQA Guidelines Section 15124(a), the City’s objectives for the Specific Plan are as follows:

1. **Maintain Moffett Park as an integral part of Sunnyvale.** Moffett Park remains a natural extension of the City’s built landscape, providing residents, workers, and visitors an integrated and cohesive connection between the San Francisco Bay and the wider neighborhoods of Sunnyvale. Through enhanced multimodal mobility connections, including transit, pedestrian, and bicycle improvements, and accessible parks and open space that support underserved neighborhoods in northern Sunnyvale, Moffett Park connects and serves all Sunnyvale residents with new amenities and destinations. Maximize new employment and housing growth to support the fiscal health of Sunnyvale through increased property, hotel, and sales tax revenues.
2. **Establish Moffett Park as a model community through its commitment to comprehensively addressing resilience, climate protection, and equity in all activities.** Moffett Park is a safeguard for the community in the face of climate change, as well as a model for equitable and sustainable development at the building, block, and neighborhood scale. New residential and neighborhood commercial uses support a sustainable land use mix in Moffett Park, improving the regional jobs-housing balance, lowering travel distances, and improving access to daily goods and services. Measures are designed to reduce greenhouse gas emissions from water and energy use and minimize air and water pollution. The City prioritizes walking, biking and public transit and requires aggressive single-occupancy vehicle trip reduction for all new developments. The City promotes the social and physical needs of all visitors, workers, and future residents.
3. **Evolve Moffett Park into a vibrant and inclusive community where all people can thrive.** Moffett Park establishes a network of active and unique neighborhoods that serve a broad range of users and cohesively integrate with the rest of Sunnyvale. Moffett Park transitions from an office and industrial area into an adaptable environment that accommodates residential, neighborhood-serving commercial, and recreational activities. Through the Specific Plan, the City establishes target numbers to guide the transition of Moffett Park into a series of complete neighborhoods. Each neighborhood has targets for

neighborhood-serving commercial square footage, housing, employment square footage, and parks and open space. New park and open space types promote recreation, active transportation, and social gathering. The City targets twenty percent of the future housing in Moffett Park to be reserved for lower-income households, providing much needed housing for a diverse workforce at all income levels.

4. **Maintain and strengthen Moffett Park as a diverse economic engine that supports economic prosperity for all.** Moffett Park continues to be a hub of economic activity and technological innovation, supporting a diverse economic base to ensure the long-term fiscal health of the area and the City. This includes a mix of large, established high-tech companies, smaller spaces for start-ups, and a range of retail, services, hotels, and entertainment. The City supports a wide range of businesses, including small, local companies as well as large, multinational firms through the continued growth of Moffett Park. Policies to support the retention of existing local businesses through community benefits, and to encourage essential services, such as a grocery store help maintain economy diversity. The City promotes the training and continued education of workers, residents, and students to support economic prosperity for all.
5. **Create a connected, accessible district that prioritizes the movement of people over vehicles to reduce climate pollution and to support a healthy community.** Moffett Park uses multimodal strategies and district-wide policy to redesign the district around people rather than vehicles. Streets are designed to promote a safe and comfortable mobility network for all individuals, regardless of which mobility option they use. All streets within the Moffett Park are “Complete Streets,” balancing space for bicycles, pedestrians, transit vehicles, and other mobility options. New bicycle and pedestrian connections into and out of Moffett Park are essential to improving circulation and overall connectivity. Moffett Park supports existing operations of public transit and facilitates opportunities for expansion and new connections like the Moffett Park Circulator. An emphasis on walking, biking, and transit use shifts travel away from single-occupant vehicles and lowers greenhouse gases.
6. **Cultivate dynamic and connected public spaces that accommodate the physical and social needs of all users.** Moffett Park cultivates a network of welcoming, connected, and accessible parks and open spaces that support recreation, social gathering, health, and urban ecology. Moffett Park provides a high level of service with ample parks and open space through the development of new Natural Areas-Ecological Patches, Greenbelt-Ecological Corridors, Community Parks, Neighborhood Parks, and Mini Parks and Plazas. The interconnected spaces maintain and expand connections to the San Francisco Bay, while enhancing ecological value and resilience. The variety of open space types ensure recreational and social opportunities support different activities, age groups, and uses throughout the day and evenings.
7. **Create a healthy, resilient, and biodiverse environment.** The open space and urban ecology plan for Moffett Park creates an interconnected system of habitat areas that are supported by surrounding green features integrated into streetscapes and new development. Habitat patches are distributed across Moffett Park and connected by corridors along the channels and streets. Continuous canopy cover along streets facilitates wildlife movement across Moffett Park while providing vital shade over multi-modal routes, reducing stormwater runoff, enhancing the character of Moffett Park, and adding to the overall resilience of the area. Additionally, new developments enhance ecosystems and support biodiversity through bird safe design, an Ecological Overlay Zone and transfer of development rights policy, and increased building setbacks along the East, West, and

Lockheed Martin Channels. Infrastructure improvements and both active and passive strategies at the site and building level provide opportunities to manage stormwater and future challenges associated with climate change and sea level rise.

8. **Integrate innovative and emerging technologies in the district to support community-wide goals.** Moffett Park continues to leverage its position as an innovative hub to establish itself as a regional center for thought leadership and emerging technologies. The City accelerates Smart City design and district-scale infrastructure systems, fostering collaboration among regional agencies, community, and property owners to develop innovative, multi-benefit solutions to complex challenges facing the San Francisco Bay Area.

SECTION 3.0 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION

This section presents the discussion of impacts related to the following environmental subjects in their respective subsections:

3.1	Aesthetics	3.11	Land Use and Planning
3.2	Agriculture and Forestry Resources	3.12	Mineral Resources
3.3	Air Quality	3.13	Noise
3.4	Biological Resources	3.14	Population and Housing
3.5	Cultural Resources	3.15	Public Services
3.6	Energy	3.16	Recreation
3.7	Geology and Soils	3.17	Transportation
3.8	Greenhouse Gas Emissions	3.18	Tribal Cultural Resources
3.9	Hazards and Hazardous Materials	3.19	Utilities and Service Systems
3.10	Hydrology and Water Quality	3.20	Wildfire

The discussion for each environmental subject includes the following subsections:

Environmental Setting – This subsection (1) provides a brief overview of relevant plans, policies, and regulations that compose the regulatory framework for the project and (2) describes the existing, physical environmental conditions at Moffett Park and the surrounding area, as relevant.

Impact Discussion – This subsection includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts.

- **Project Impacts** – This subsection discusses the project’s impact on the environmental subject as related to the checklist questions. For significant impacts, feasible mitigation measures are identified. “Mitigation measures” are measures that will minimize, avoid, or eliminate a significant impact (CEQA Guidelines Section 15370). Each impact is numbered to correspond to the checklist question being answered. For example, Impact BIO-1 answers the first checklist question in the Biological Resources section. Mitigation measures are also numbered to correspond to the impact they address. For example, MM BIO-1.3 refers to the third mitigation measure for the first impact in the Biological Resources section.
- **Cumulative Impacts** – This subsection discusses the project’s cumulative impact on the environmental subject. Cumulative impacts, as defined by CEQA, refer to two or more individual effects, which when combined, compound or increase other environmental impacts. Cumulative impacts may result from individually minor, but collectively significant effects taking place over a period of time. CEQA Guideline Section 15130 states that an EIR should discuss cumulative impacts “when the project’s incremental effect is cumulatively considerable.” The discussion does not need to be in as great detail as is necessary for project impacts, but is to be “guided by the standards of practicality and reasonableness.” The purpose of the cumulative analysis is to allow decision makers to better understand the

impacts that might result from approval of past, present, and reasonably foreseeable future projects, in conjunction with the proposed project addressed in this EIR.

The CEQA Guidelines advise that a discussion of cumulative impacts should reflect both their severity and the likelihood of their occurrence (CEQA Guidelines Section 15130(b)). To accomplish these two objectives, the analysis should include either a list of past, present, and probable future projects or a summary of projections from an adopted general plan or similar document (CEQA Guidelines Section 15130(b)(1)). This EIR uses a projection approach.

The analysis must determine whether the project's contribution to any cumulatively significant impact is cumulatively considerable, as defined by CEQA Guideline Section 15065(a)(3). The cumulative impacts discussion for each environmental issue accordingly addresses the following issues: (1) would the effects of all of past, present, and probable future (pending) development result in a significant cumulative impact on the resource in question; and, if that cumulative impact is likely to be significant, (2) would the contribution from the proposed project to that significant cumulative impact be cumulatively considerable?

3.1 AESTHETICS

3.1.1 Environmental Setting

3.1.1.1 *Regulatory Framework*

State

Senate Bill 743

Senate Bill (SB) 743 was adopted in 2013 and requires lead agencies to use alternatives to level of service (LOS) for evaluating transportation impacts, specifically vehicle miles traveled (VMT). SB 743 also included changes to CEQA that apply to transit-oriented developments, as related to aesthetics and parking impacts. Under SB 743, a project's aesthetic impacts will no longer be considered significant impacts on the environment if:

- The project is a residential, mixed-use residential, or employment center project, and
- The project is located on an infill site within a Transit Priority Area (TPA).¹¹

SB 743 also clarifies that local governments retain their ability to regulate a project's aesthetics impacts outside of the CEQA process.

Streets and Highway Code Sections 260 through 263

Streets and Highway Code, Sections 260 through 263 (California Scenic Highway Program) is managed by the California Department of Transportation (Caltrans). The program is intended to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment.

Local

Sunnyvale General Plan

The Sunnyvale General Plan (General Plan), adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to General Plan aesthetic policies including the ones listed below.

¹¹ An "infill site" is defined as "a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses." A "Transit Priority Area" is defined as "an area within 0.5 mile of a major transit stop that is existing or planned, if the planned stop is scheduled to be completed within the planning horizon included in a Transportation Improvement Program adopted pursuant to Section 450.216 or 450.322 of Title 23 of the Code of Federal Regulations." A "major transit stop" means "a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods." Source: Office of Planning and Research. "Changes to CEQA for Transit Oriented Development – FAQ." October 14, 2014. Accessed December 10, 2020. <http://www.opr.ca.gov/ceqa/updates/sb-743/transit-oriented.html>.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-4.3	Enforce design review guidelines and zoning standards that ensure the mass and scale of new structures are compatible with adjacent structures, and also recognize the City’s vision of the future for transition areas such as neighborhood village centers and El Camino Real nodes.
LT-4.4	Avoid monotony and maintain visual interest in newly developing neighborhoods, and promote appropriate architectural diversity and variety. Encourage appropriate variations in lot sizes, setbacks, orientation of homes, and other site features.
LT-13.2	Improve the visual appearance of business areas and districts by applying high standards of architectural design, landscaping, and sign standards for new development and the reuse or remodeling of existing buildings.
LT-13.8	Require high design standards for office, industrial, and research and development (R&D) buildings in all business districts.
<i>Community Character Element</i>	
CC-1.3	Ensure that new development is compatible with the character of special districts and residential neighborhoods.
CC-2.1	Maintain and provide attractive landscaping in the public right-of-way to identify the different types of roadways and districts, make motorists more comfortable and improve the enjoyment of residential neighborhoods.
CC-2.2	Minimize elements which clutter the roadway and look unattractive.
CC-3.2	Ensure site design is compatible with the natural and surrounding built environment.

Sunnyvale Development Review Process

The City’s development review process includes the review of preliminary plans and the consideration of public input by the Zoning Administrator, the Planning Commission, and the City Council. The City reviews private and public development applications for conformance with City plans, ordinances, and policies related to zoning, urban design, and CEQA.

3.1.1.2 Existing Conditions

The built landscape of Moffett Park varies considerably in both age and composition. Moffett Park consists of a mix of building types, heights, and architectural styles. Most of the existing buildings are largely reflective of the type of work and industry of each building’s respective tenants. Older buildings consist of mostly one- and two-story offices, warehouses, and R&D facilities with concrete, brick, and stucco facades, and decorated with columns. More recently developed buildings depart substantially from this typology, with new office towers typically eight-stories (or approximately 130 feet tall) and having a more contemporary style with glass expanses, stone facades, and metal detailing.

Buildings in Moffett Park are typically surrounded by a ring of surface parking. Much of the existing land in Moffett Park is allocated to surface parking facilities. Parking garages are limited. The

minimal landscaping present, generally consisting of mostly of lawns and non-native ornamental plants, are along building and site perimeters. No parks or open spaces are located within Moffett Park.

Scenic Vistas and Landmarks

A scenic vista is the view of an area that is visually or aesthetically pleasing. Aesthetic components of a scenic vista include scenic quality, sensitivity level, and view access. A scenic vista is a view of natural environmental, historic, and/or architectural features possessing visual and aesthetic qualities of value to the community. The term “vista” generally implies an expansive view, usually from an elevated point or open area. There are no designated scenic vistas within or around Moffett Park, as identified in the General Plan¹² and Moffett Park is located in an urbanized area that is relatively flat in nature. Distant views of the Santa Cruz Mountains towards the west and the Diablo Mountain Range towards the east are intermittent and obscured by existing development and improvements.

Visual landmarks within Sunnyvale include the Moffett Federal Airfield dirigible hangars, located adjacent to Moffett Park.¹³ The hangars reach up to 200 feet in height and are intermittently visible, between trees and buildings, from the western boundary of Moffett Park. Other landmarks in Sunnyvale include the Libby Water Tower (approximately 1.4 miles south of Moffett Park) and the Murphy Avenue Commercial District (approximately 1.7 miles south of Moffett Park), which are not visible from Moffett Park.

Scenic Highways and Roadways

There are no state-designated scenic highways in Sunnyvale. Interstate 280 (I-280) from the San Mateo County line to State Route (SR) 17, which includes segments in Sunnyvale, is an eligible, but not officially designated, State Scenic Highway.¹⁴

In Santa Clara County, the one state-designated scenic highway is SR 9 from the Santa Cruz County line to the Los Gatos city limit. Eligible State Scenic Highways (not officially designated) include: SR 17 from the Santa Cruz County line to SR 9, SR 35 from Santa Cruz County line to SR 9, I-280 from the San Mateo County line to SR 17, and the entire length of SR 152 within the County. SR 9 is located approximately 10 miles south of Moffett Park.

Light and Glare

Lighting nuisances are typically categorized as follows:

- *Spillover lighting*: Artificial lighting that spills over onto adjacent properties, which could interrupt sleeping patterns or cause other nuisances to neighboring residents

¹² City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. SCH #2012032003. August 2016. Page 3.12-1.

¹³ Ibid.

¹⁴ California Department of Transportation. “Scenic Highways.” Accessed May 20, 2022.

<https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>.

- *Skyglow or Nighttime Illumination*: Artificial lighting from urbanized sources that alters the rural landscape in sufficient quantity to cause lighting of the nighttime sky and reduction of visibility of stars and other astronomical features
- *Glare*: Intense light that shines directly or is reflected from a surface into a person's eyes ¹⁵

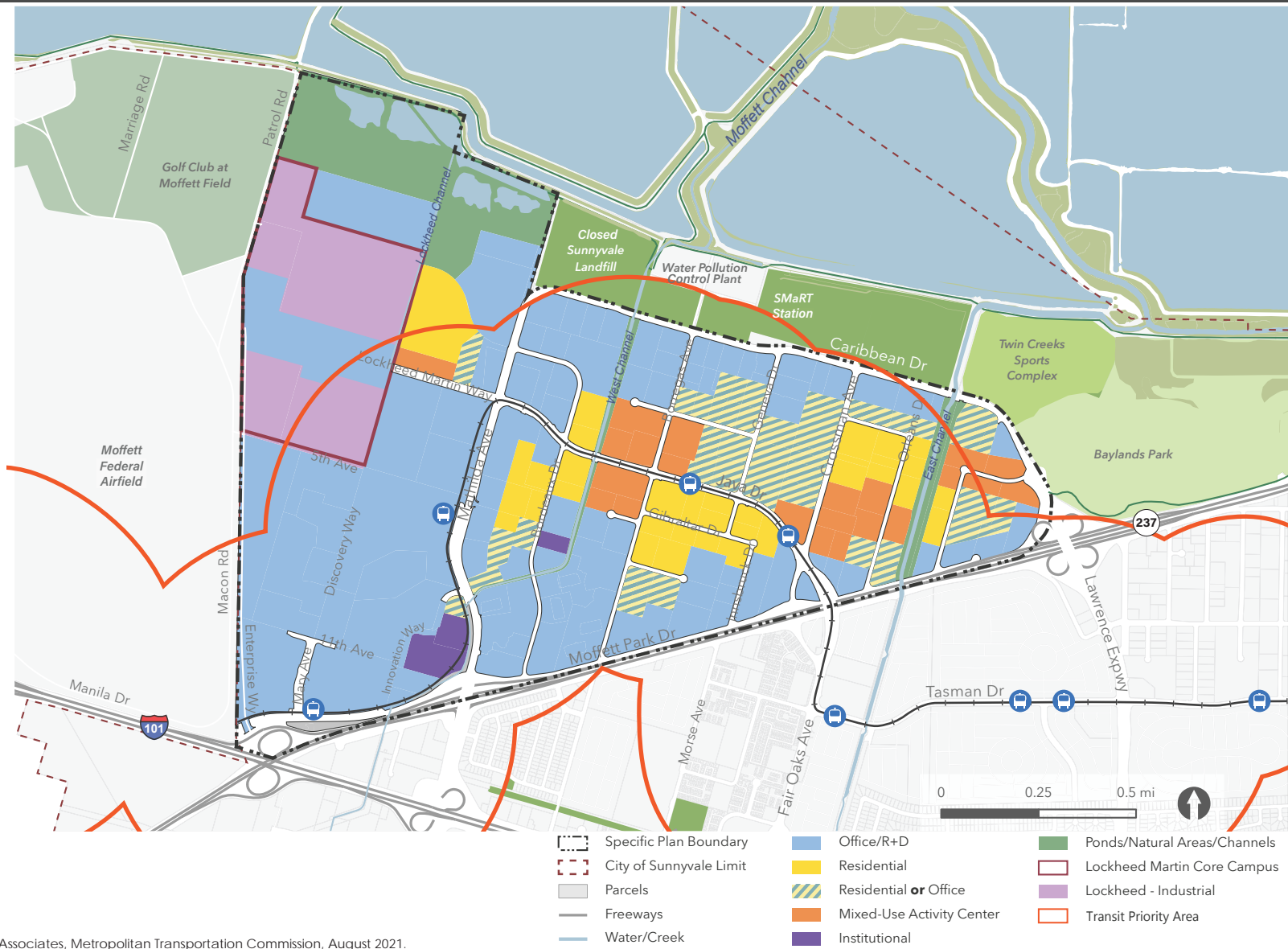
Existing sources of ambient nighttime lighting in Moffett Park include streetlights, illuminated signage, exterior security lighting along buildings and in parking lots, interior lighting to illuminate nighttime operations, and vehicle headlights. Aircraft flying overhead to and from the Moffett Federal Airfield create occasional sources of light. The Twin Creeks Sports Complex, located northeast of Moffett Park, contains large stadium lights that contribute to nighttime lighting when in use.

Glare is generally created by the reflection of natural (i.e., sunlight) and artificial light off existing windows and building surfaces. Sources of glare in Moffett Park include reflective windows from office buildings, parking lot lights, and vehicle headlights.

Location within a Transit Priority Area

Most of Moffett Park is located within a TPA, pursuant to SB 743. Some northwestern and eastern portions of Moffett Park are not located in a TPA, as shown on Figure 3.1-1.

¹⁵ City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. SCH #2012032003. August 2016. Page 3.12-10.



Source: Raiml + Associates, Metropolitan Transportation Commission, August 2021.

TRANSIT PRIORITY AREA

FIGURE 3.1-1

3.1.2 Impact Discussion

For the purpose of determining the significance of the project's impact on aesthetics, except as provided in Public Resources Code Section 21099, would the project:

- 1) Have a substantial adverse effect on a scenic vista?
- 2) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?
- 3) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings?¹⁶ If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
- 4) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

3.1.2.1 *Project Impacts*

The implementation of the Specific Plan would transform Moffett Park from a collection of offices, industrial warehouses, and associated surface parking lots with minimal landscaping to a cohesive mixed-use development containing offices, residential, and commercial buildings, and open space/recreational amenities. Pursuant to SB 743, "aesthetic and parking impacts of a residential, mixed-use residential, or employment center on an infill site within a TPA shall not be considered significant impacts on the environment." The Specific Plan is a mixed-use residential and employment center project in an infill location. As shown on Figure 3.1-1, most of Moffett Park is within a TPA. As a result, future Specific Plan development projects located within a TPA would have less than significant aesthetic impacts. The following discussion would apply to future development projects in the northwestern and eastern portions of Moffett Park, as shown on Figure 3.1-1, outside of a TPA.

Impact AES-1: The project would not have a substantial adverse effect on a scenic vista.
(Less than Significant Impact)

As discussed under Section 3.1.1.2 Existing Conditions, there are no designated scenic vistas within or around Moffett Park. The topography of Moffett Park is relatively flat, with intermittent and obscured views of mountains to the east and west, and views of the Bay to the north. These views of the mountains and Bay do not constitute broad or expansive views due to the topography, distance, and intervening development in the area. The views of the Moffett Park Federal Airfield dirigible hangars, considered city landmarks as discussed under Section 3.1.1.2 Existing Conditions, are intermittently visible from the western boundary of Moffett Park. Views of the hangars are obscured by existing buildings and trees. For these reasons, future Specific Plan development in the northwestern and eastern portions of Moffett Park (located outside of a TPA) would not substantially block views of scenic vistas or landmarks. **(Less than Significant Impact)**

¹⁶ Public views are those that are experienced from publicly accessible vantage points.

Impact AES-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway. **(No Impact)**

There are no designated state scenic highways within Moffett Park, and no portions of Moffett Park are within the viewshed of a state scenic highway. Therefore, implementation of the Specific Plan would not damage scenic resources within a state scenic highway. **(No Impact)**

Impact AES-3: The project would not conflict with applicable zoning and other regulations governing scenic quality. **(Less than Significant Impact)**

Implementation of the Specific Plan would change the visual conditions of Moffett Park by introducing residential buildings, additional office and commercial buildings, and increased open space/recreational amenities. Future development projects under the Specific Plan would comply with General Plan policies requiring that new development be compatible with the architecture and scale of surrounding land uses, avoid monotony in neighborhoods, and generally improve the visual appearance of business areas.

Future development would be subject to the City's development review process, which would ensure compliance with applicable regulations (including General Plan policies) governing scenic quality. Therefore, the Specific Plan would not conflict with applicable regulations governing scenic quality. **(Less than Significant Impact)**

Impact AES-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 Impact)**

As discussed under Section 3.1.1.2 Existing Conditions, existing sources of light in Moffett Park include streetlights, signage, security lighting, interior lighting used during nighttime, and vehicle headlights. Implementation of the Specific Plan would introduce a new street network and new uses that would create additional sources of light in Moffett Park, including additional streetlights, exterior and interior lighting, and vehicle headlights. Implementation of the Specific Plan could result in spillover lighting, skyglow or nighttime illumination, or glare.

Future development projects in Moffett Park would comply with Specific Plan guidelines and standards to avoid large expanses of glass, reflective or transparent glass, and up lighting, preventing light and glare impacts (see standards 1 through 6 and guidelines 1 through 9 in the discussion under Impact BIO-4 in Section 3.4 Biological Resources for more detail). Therefore, implementation of the Specific Plan would not substantially adversely affect day or nighttime views in the area because of new sources of light and glare. **(Less than Significant Impact)**

3.1.2.2 *Cumulative Impacts*

Impact AES-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant aesthetics impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative aesthetics impacts is Moffett Park. As discussed under Impact AES-2, there are no state scenic highways within or around Moffett Park; therefore, implementation of the Specific Plan would not result in a significant cumulative impact to state scenic highways.

All future development projects in the City of Sunnyvale, including in Moffett Park, would comply with all existing regulations (i.e., General Plan and Specific Plan guidelines and standards if within Moffett Park) and be subject to the City’s development review process. During the development review process, projects would be evaluated under CEQA and mitigation to reduce significant aesthetic impacts would be identified. Future development projects would also be required to obtain City design approval, prior to issuance of any demolition of building permits, which involves review of development applications for conformance with City plans, ordinances, and policies related to zoning, urban design, and CEQA. For these reasons, the cumulative aesthetics impacts would be less than significant. **(Less than Significant Cumulative Impact)**

3.2 AGRICULTURE AND FORESTRY RESOURCES

3.2.1 Environmental Setting

3.2.1.1 *Regulatory Framework*

State

Farmland Mapping and Monitoring Program

The California Department of Conservation’s Farmland Mapping and Monitoring Program (FMMP) assesses the location, quality, and quantity of agricultural land and conversion of these lands over time. Agricultural land is rated according to soil quality and irrigation status. The best quality land is identified as Prime Farmland. In CEQA analyses, the FMMP classifications and published county maps are used, in part, to identify whether agricultural resources that could be affected are present on-site or in the project area.

California Land Conservation Act

The California Land Conservation Act (Williamson Act) enables local governments to enter into contracts with private landowners to restrict parcels of land to agricultural or related open space uses. In return, landowners receive lower property tax assessments. In CEQA analyses, identification of properties that are under a Williamson Act contract is used to also identify sites that may contain agricultural resources or are zoned for agricultural uses.

Fire and Resource Assessment Program

The California Department of Forestry and Fire Protection (Cal Fire) identifies forest land, timberland, and lands zoned for timberland production that can (or do) support forestry resources. Programs such as Cal Fire’s Fire and Resource Assessment Program and are used to identify whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a project site.

3.2.1.2 *Existing Conditions*

According to the Santa Clara County Important Farmland 2018 map (which is prepared pursuant to the FMMP), Moffett Park is designated as Urban and Built-Up Land, meaning the land contains a building density of at least six units per ten-acre parcel or is used for industrial or commercial purposes, golf courses, landfills, airports, or other utilities.¹⁷ Moffett Park does not include forest land or timberland.¹⁸

¹⁷ California Department of Conservation. “California Important Farmland Finder.” Accessed June 5, 2022. <https://maps.conservation.ca.gov/DLRP/CIFF/>

¹⁸ Per Sections 12220(g) and 4526 of the California Public Resources Code, “Forest land” is defined as land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits. “Timberland” is defined as land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees.

Moffett Park has a General Plan land use designation of Moffett Park Specific Plan. The adopted Specific Plan includes three land use categories and zoning districts (MP-TOD, MP-I, and MP-C) for office, R&D, industrial, and commercial uses. None of the sites within or adjacent to Moffett Park are used for agricultural or forestry uses. Most of the sites are developed with urban uses including office/R&D/industrial, commercial, and institutional uses.

3.2.2 Impact Discussion

For the purpose of determining the significance of the project's impact on agriculture and forestry resources, would the project:

- 1) 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?
- 2) Conflict with existing zoning for agricultural use, or a Williamson Act contract?
- 3) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?
- 4) Result in a loss of forest land or conversion of forest land to non-forest use?
- 5) 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?

3.2.2.1 *Project Impacts*

Impact AG-1: The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. **(No Impact)**

As discussed above in Section 3.2.1.2 Existing Conditions, Moffett Park is designated as Urban and Built-Up Land in the Santa Clara County Important Farmland 2018 map. None of the sites within Moffett Park are designated as farmland pursuant to FMMP maps. Therefore, implementation of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural uses. **(No Impact)**

Impact AG-2: The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. **(No Impact)**

As discussed above in Section 3.2.1.2 Existing Conditions, none of the sites within Moffett Park are zoned for agricultural use. None of the sites within Moffett Park are subject to a Williamson Act

contract.¹⁹ Therefore, implementation of the Specific Plan would not conflict with existing zoning for agricultural use or a Williamson Act contract. **(No Impact)**

Impact AG-3: The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No Impact)**

As discussed in Section 3.2.1.2 Existing Conditions, the sites within Moffett Park do not meet the definition of forest land or timberland, nor are the sites used or zoned for forest land, timberland, or timberland zoned Timberland Production. Therefore, implementation of the proposed project would not conflict with existing zoning for, or cause the rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(No impact)**

Impact AG-4: The project would not result in a loss of forest land or conversion of forest land to non-forest use. **(No Impact)**

The sites within and adjacent to Moffett Park are not designated as forest land, as discussed in Section 3.2.1.2 Existing Conditions. The Specific Plan, therefore, would not result in a loss of forest land or a conversion of forest land to non-forest use. **(No Impact)**

Impact AG-5: The project would not 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. **(No Impact)**

As discussed in Section 3.2.1.2 Existing Conditions and under Impact AG-1 through Impact AG-4 above, the sites within and adjacent to Moffett Park are not designated for agricultural use or forest land. Therefore, implementation of the Specific Plan would not result in the conversion of farmland or forest land to a non-agricultural or non-forest use. **(No Impact)**

3.2.2.2 *Cumulative Impacts*

Impact AG-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant agricultural and forestry resources impact. **(No Cumulative Impact)**

The geographic area for cumulative agricultural impacts is Moffett Park. The implementation of the Specific Plan would not impact agricultural, forestry, and/or timberland (see discussions under Impact AG-1 through AG-5); therefore, implementation of the Specific Plan would not contribute to a cumulative impact to those resources. **(No Cumulative Impact)**

¹⁹ Santa Clara County Planning Department. "Williamson Act Properties." Accessed May 26, 2022. <https://sccplanning.maps.arcgis.com/apps/webappviewer/index.html?id=1f39e32b4c0644b0915354c3e59778ce>

3.3 AIR QUALITY

The following discussion is based, in part, on an Air Quality Analysis completed by Illingworth & Rodkin, Inc. dated November 23, 2022. This report is included as Appendix D to this DEIR.

3.3.1 Environmental Setting

3.3.1.1 *Background Information*

Criteria Pollutants

Air quality in the Bay Area is assessed related to six common air pollutants (referred to as criteria pollutants), including ground-level ozone (O₃), nitrogen oxides (NO_x), particulate matter (PM), carbon monoxide (CO), sulfur oxides (SO_x), and lead.²⁰ Criteria pollutants are regulated because they result in health effects. An overview of the sources of criteria pollutants and their associated health are summarized in Table 3.3-1. The most commonly regulated criteria pollutants in the Bay Area are discussed further below.

Table 3.3-1: Health Effects of Air Pollutants		
Pollutants	Sources	Primary Effects
Ozone (O ₃)	Atmospheric reaction of organic gases with nitrogen oxides in sunlight	<ul style="list-style-type: none"> • Aggravation of respiratory and cardiovascular diseases • Irritation of eyes • Cardiopulmonary function impairment
Nitrogen Dioxide (NO ₂)	Motor vehicle exhaust, high temperature stationary combustion, atmospheric reactions	<ul style="list-style-type: none"> • Aggravation of respiratory illness • Reduced visibility
Fine Particulate Matter (PM _{2.5}) and Coarse Particulate Matter (PM ₁₀)	Stationary combustion of solid fuels, construction activities, industrial processes, atmospheric chemical reactions	<ul style="list-style-type: none"> • Reduced lung function, especially in children • Aggravation of respiratory and cardiorespiratory diseases • Increased cough and chest discomfort • Reduced visibility
Toxic Air Contaminants (TACs)	Cars and trucks, especially diesel-fueled; industrial sources, such as chrome platers; dry cleaners and service stations; building materials and products	<ul style="list-style-type: none"> • Cancer • Chronic eye, lung, or skin irritation • Neurological and reproductive disorders

High O₃ levels are caused by the cumulative emissions of reactive organic gases (ROG) and NO_x. These precursor pollutants react under certain meteorological conditions to form high O₃ levels. Controlling the emissions of these precursor pollutants is the focus of the Bay Area's attempts to

²⁰ The area has attained both state and federal ambient air quality standards for CO. The project does not include substantial new emissions of sulfur dioxide or lead. These criteria pollutants are not discussed further.

reduce O₃ levels. The highest O₃ levels in the Bay Area occur in the eastern and southern inland valleys that are downwind of air pollutant sources.

PM is a problematic air pollutant of the Bay Area. PM is assessed and measured in terms of respirable particulate matter or particles that have a diameter of 10 micrometers or less (PM₁₀) and fine particulate matter where particles have a diameter of 2.5 micrometers or less (PM_{2.5}). Elevated concentrations of PM₁₀ and PM_{2.5} are the result of both region-wide emissions and localized emissions.

Toxic Air Contaminants

Toxic air contaminants (TACs) are a broad class of compounds known to have health effects. They include, but are not limited to, criteria pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, diesel fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway).

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs. Diesel exhaust is a complex mixture of gases, vapors, and fine particles. Medium- and heavy-duty diesel trucks represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (most susceptible to injury).²¹ Chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the California Air Resources Board (CARB).

Sensitive Receptors

Some groups of people are more affected by air pollution than others. CARB has identified the following persons who are most likely to be affected by air pollution: children under 16, the elderly over 65, athletes, and people with cardiovascular and chronic respiratory diseases. These groups are classified as sensitive receptors. Locations that may contain a high concentration of these sensitive population groups include residential areas, hospitals, daycare facilities, elder care facilities, and elementary schools.

3.3.1.2 Regulatory Framework

Federal and State

Clean Air Act

At the federal level, the United States Environmental Protection Agency (EPA) is responsible for overseeing implementation of the Clean Air Act and its subsequent amendments. The federal Clean

²¹ California Air Resources Board. "Overview: Diesel Exhaust and Health." Accessed November 8, 2022. <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

Air Act requires the EPA to set national ambient air quality standards for the six common criteria pollutants discussed previously): PM, O₃, CO, SO_x, NO_x, and lead.

CARB is the state agency that regulates mobile sources throughout the state and oversees implementation of the state air quality laws and regulations, including the California Clean Air Act. The EPA and the CARB have adopted ambient air quality standards establishing permissible levels of these pollutants to protect public health and the climate. Violations of ambient air quality standards are based on air pollutant monitoring data and are determined for each air pollutant. Attainment status for a pollutant means that a given air district meets the standard set by the EPA and/or CARB.

Risk Reduction Plan

To address the issue of diesel emissions in the state, CARB developed the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles. In addition to requiring more stringent emission standards for new on-road and off-road mobile sources and stationary diesel-fueled engines to reduce particulate matter emissions by 90 percent, the plan involves application of emission control strategies to existing diesel vehicles and equipment to reduce DPM (in addition to other pollutants). Implementation of this plan, in conjunction with stringent federal and CARB-adopted emission limits for diesel fueled vehicles and equipment (including off-road equipment), will significantly reduce emissions of DPM and NO_x.

California Department of Education School Site Selection Criteria

Pursuant to Section 17251(b) of the Education Code, the CDE developed the School Site Selection and Approval Guide to assist school districts in (1) selecting appropriate sites in compliance with regulations and CDE policies and (2) gaining state approval for the selected sites. The guide refers to the standards for school site selection as outlined in CEQA, California Education Code, Title 5 of the CCR, and other state codes. The guide includes site selection criteria based on a variety of factors such as location, size, and cost; however, it focuses on safety as the most important criteria to be considered during site selection.

According the guide, the following safety factors shall be considered when evaluating a potential school site: (1) proximity to airports; (2) proximity to high-voltage power transmission lines; (3) presence of toxic and hazardous substances; (4) hazardous air emissions and facilities within a quarter mile; (5) other health hazards; (6) proximity to railroads; (7) proximity to high-pressure natural gas lines, gasoline lines, pressurized sewer lines, or high-pressure water pipelines; (8) proximity to propane tanks; (9) proximity to major roadways; (10) noise; (11) results of geological studies and soils analyses; (12) condition of traffic and school bus safety; (13) safe routes to school; and (14) safety issues for joint-use projects.

Regional

2017 Clean Air Plan

The Bay Area Air Quality Management District (BAAQMD) is the agency primarily responsible for assuring that the federal and state ambient air quality standards are maintained in the San Francisco Bay Area. Regional air quality management districts, such as BAAQMD, must prepare air quality

plans specifying how state and federal air quality standards will be met. BAAQMD’s most recently adopted plan is the Bay Area 2017 Clean Air Plan (2017 CAP). The 2017 CAP focuses on two related BAAQMD goals: protecting public health and protecting the climate. To protect public health, the 2017 CAP describes how BAAQMD will continue its progress toward attaining state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 CAP includes control measures designed to reduce emissions of methane and other super-greenhouse gases (GHGs) that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.²²

CEQA Air Quality Guidelines

The 2017 BAAQMD CEQA Air Quality Guidelines are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. Jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing air quality impacts developed by BAAQMD within their CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

Local

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the proposed Specific Plan would be subject to the General Plan air quality policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-2.1	Enhance the public’s health and welfare by promoting the City’s environmental and economic health through sustainable practices for the design, construction, maintenance, operation, and deconstruction of buildings, including measures in the climate action plan.
<i>Environmental Management Element</i>	
EM-11.2	Utilize land use strategies to reduce air quality impact, including opportunities for citizens to live and work in close proximity.
EM-11.3	Require all new development to utilize site planning to protect citizens from unnecessary exposure to air pollutants.
EM-11.4	Apply the indirect source rule to new development with significant air quality impacts. Indirect source review would cover commercial and residential projects as well as other land uses that produce or attract motor vehicle traffic.
EM-11.6	Contribute to a reduction in regional vehicle miles traveled.

²² BAAQMD. *Final 2017 Clean Air Plan*. April 19, 2017. <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>.

Policy	Description
EM-11.8	Assist employers in meeting requirements of Transportation Demand Management (TDM) plans for existing and future large employers and participate in the development of TDM plans for employment centers in Sunnyvale.

City of Sunnyvale Climate Action Playbook

The City of Sunnyvale Climate Action Playbook (August 2019) sets a vision for the City to reduce carbon emissions by 2050. The playbook includes six strategies with “plays” that identify areas for action to reduce GHG emissions (including air pollutant emissions). The following plays from the plan are related to air quality and are applicable to future projects under the Specific Plan.

Strategy	Description
<i>Strategy 2: Decarbonizing Buildings</i>	
Play 2.3	Achieve all-electric new construction
<i>Strategy 3: Decarbonizing Transportation & Sustainable Land Use</i>	
Play 3.1	Increase opportunities for and encourage development of mixed-use sites to reduce vehicle miles per person
Play 3.2	Increase Transportation Options and Support Shared Mobility

Sunnyvale Municipal Code

SMC Chapter 10.60 contains existing Transportation Demand Management (TDM) requirements for both non-residential and multi-family residential projects that would apply to MPSP.

- Non-residential: Projects are required to set a trip reduction target and develop a plan to achieve that target.²³ Trip reduction targets are set on a project-by-project basis and the TDM Plan is incorporated into the conditions of approval.
- Multi-family residential (10+ units): Projects are required to create a TDM program with a points-based system.²⁴ Many of the points are for infrastructure and design improvements that are already included in the MPSP.

3.3.1.3 Existing Conditions

The Bay Area is considered a non-attainment area for ground-level O₃ and PM_{2.5} under both the federal Clean Air Act and state Clean Air Act. The area is also considered non-attainment for PM₁₀ under the state act, but not the federal act. The area has attained both state and federal ambient air quality standards for CO. As part of an effort to attain and maintain ambient air quality standards for O₃ and PM₁₀, BAAQMD has established thresholds of significance for these air pollutants and their

²³ City of Sunnyvale. “Municipal Code: Title 10 Vehicles and Traffic, Chapter 10.60 Transportation Demand Management.” Accessed November 28, 2022.

https://library.qcode.us/lib/sunnyvale_ca/pub/municipal_code/item/title_10-chapter_10_60?view=all.

²⁴ City of Sunnyvale. “City of Sunnyvale Multi-family Transportation Demand Management Program.”

<https://www.sunnyvale.ca.gov/home/showpublisheddocument/1466/637820846932070000>.

precursors. These thresholds are for O₃ precursor pollutants (ROG and NO_x), PM₁₀, and PM_{2.5}, and apply to both construction period and operational period impacts.

Stationary and Mobile Source Emissions

Within Moffett Park, existing industrial sources of TACs and other air pollutants are located in the northwest portion of the area. BAAQMD frequently updates the permitted stationary sources as development and stationary sources change or move. For example, there are multiple projects that have been recently approved or are currently under construction in Moffett Park, which could include new stationary sources of TACs.

Roadways including US 101, SR 237, North Mathilda Avenue, Caribbean Avenue, and Java Drive are mobile sources of TACs.

Sensitive Receptors

The closest existing sensitive receptors are residences located approximately 200 feet south of Moffett Park, across SR 237 (see Figure 2.2-3).

Odors

Significant sources of offending odors are typically identified based on complaint histories received and compiled by BAAQMD. Typical large sources of odors that result in complaints are wastewater treatment facilities, landfills including composting operations, food processing facilities, and chemical plants. Other sources, such as restaurants, paint or body shops, and coffee roasters typically result in localized sources of odors.

The WPCP and SMaRT Station® located north of Moffett Park are sources of odor near Moffett Park. The WPCP and SMaRT Station® have existing odor control plans in place that include fan systems for dispersion of odor molecules. With construction of the Secondary Treatment project, control systems will be updated with bioscrubbers that remove odorous molecules.²⁵

3.3.2 Impact Discussion

For the purpose of determining the significance of the project's impact on air quality, would the project:

- 1) Conflict with or obstruct implementation of the applicable air quality plan?
- 2) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?
- 3) Expose sensitive receptors to substantial pollutant concentrations?
- 4) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

²⁵ City of Sunnyvale. *Sunnyvale Water Pollution Control Plant Master Plan – Secondary Treatment and Dewatering Facilities Project. Addendum to the Program Environmental Impact Report*. December 2020. Page 2-8.

3.3.2.1 *Project Impacts*

Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. **(Less than Significant Impact)**

The BAAQMD CEQA Air Quality Guidelines set forth criteria for determining consistency with the 2017 CAP. A project is considered generally consistent with the CAP if it: (1) supports the primary goals of the 2017 CAP; (2) includes relevant control measures; and (3) does not interfere with implementation of CAP control measures.

The goals of the 2017 CAP are: 1) protecting public health and 2) protecting the climate. An analysis of the project's consistency with the 2017 CAP goal of protecting the climate is discussed separately in Section 3.6 Greenhouse Gas Emissions. Public health is protected by progress towards attaining air quality standards for criteria air pollutants and eliminating health risk. BAAQMD has different thresholds of significance for protecting public health when evaluating land use plans versus projects. The BAAQMD Air Quality Guidelines do not have thresholds related to direct and indirect regional criteria pollutant emissions resulting from plan implementation; rather, they only require emissions computations for project-level analysis. An assessment of the Specific Plan and future Specific Plan development under both the BAAQMD plan- and project-level thresholds is provided below.

Plan-Level Consistency

The BAAQMD thresholds of significance for protecting public health for land use plans such as the proposed Specific Plan are:

- Consistency with Current Air Quality Plan control measures, and
- Projected VMT or vehicle trip increase is less than or equal to projected population increase.

Consistency with 2017 CAP Control Measures

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

- Adoption and enforcement of rules to reduce emissions from stationary sources, area sources, and indirect sources
- Revisions to the BAAQMD's permitting requirements for stationary sources
- Enforcement of CARB rules to reduce emissions from heavy-duty diesel engines
- Allocation of grants and other funding by the Air District and/or partner agencies
- Promotion of best policies and practices that can be implemented by local agencies through guidance documents, model ordinances, and other measures
- Partnerships with local governments, other public agencies, the business community, non-profits, and other groups
- Public outreach and education
- Enhanced air quality monitoring

- Development of land use guidance and CEQA guidelines, and Air District review and comment on Bay Area projects pursuant to CEQA
- Leadership and advocacy

This approach relies upon lead agencies to assist in implementing some of the control measures. A key tool for local agency implementation is the development of land use policies and implementing measures that address new development or redevelopment in local communities.

Table 3.3-2 below includes applicable 2017 CAP control measures and a discussion of how the proposed Specific Plan would be consistent with the CAP control measures to reduce automobile trips, conserve energy, and conserve water. Future development under the Specific Plan would comply with existing regulations and Specific Plan policies that support and are consistent with applicable 2017 CAP control measures. As such, the Specific Plan does not interfere with implementation of the 2017 CAP control measures.

Table 3.3-2: Specific Plan Consistency with BAAQMD Control Strategy Measures	
Applied BAAQMD Control Strategy Measures	Consistency
Transportation Control Measures	
TR1: Clean Air Teleworking Initiative	Consistent. The Specific Plan requires all new residential projects with 10 or more units and new non-residential projects of 5,000 square feet or more to prepare a TDM Plan. TDM Plans could include measures such as increased support for telecommuting. Supported by General Plan policy EM-11.8 and CAP measure CTO-4.1.
TR2: Trip Reduction Programs	Consistent. The Specific Plan requires implementation of TDM Plans that would include measures to reduce single-occupancy vehicle trips. TDM measures required for future project include the participation a Transportation Management Association (TMA), Transportation Coordinator to serve as a point of contact for the City or TMA, unbundled parking, carpool/vanpool parking, bicycle parking, showers, and lockers, and annual travel survey and reporting. Future residential and non-residential project TDM Plans would be required to include trip reduction goals and targets, which would be submitted to the TMA. Supported by General Plan policies LT-1.7, LT-3.4a, LT-3.5a, LT-3.6, EM-11.5, and EM-11.6, and CAP measures CTO-4 and CTO-3.5.
TR5: Transit Efficiency and Use	Consistent. While this is mostly a regionally implemented control measure, the Specific Plan would provide connections to regional and local transit with its convenient location near the Moffett Park, Lockheed Martin, Borregas, and Crossman light rail stations. Supported by General Plan policies LT-3.1, LT-3.2, LT-3.5a, LT-3.11, and LT-3.28, and CAP measure CTO-3.

Table 3.3-2: Specific Plan Consistency with BAAQMD Control Strategy Measures	
Applied BAAQMD Control Strategy Measures	Consistency
Transportation Control Measures	
TR7: Safe Routes to Schools and Safe Routes to Transit	<p>Consistent. The Specific Plan a bicycle and pedestrian network that is safe, connected and comfortable for all travelers and to create a public transit network that is convenient and connected. Consistent with General Plan Policies LT-3.18, LT-3.23a, future projects would be designed to facilitate safe traffic flow and promote school and bicycle safety and safe access to transit.</p> <p>Supported by General Plan policies LT-3.18, LT-3.23, and LT-14.15b, and CAP measure CTO-5.</p>
TR8: Ridesharing, Last-Mile connection	<p>Consistent. The Specific Plan would require future projects to implement a TDM program, which may include measures such as carpool and/or vanpools incentives.</p> <p>Supported by General Plan policies LT-3.23a, LT-3.30b, LT-3.30c, and CAP measure OVT-2.</p>
TR9: Bicycle and Pedestrian Access and Facilities	<p>Consistent. Implementation of the Specific Plan would result in a walkable environment and ensure clear and safe bicycle and pedestrian circulation through implementation in accordance with Specific Plan mobility design standards.</p> <p>Supported by General Plan policies LT-3.1a, LT-3.3a, LT-3.6, LT-3.15a, LT-3.18, LT-3.22e, LT-3.23b, and LT-8.5, and CAP measure CTO-1 and CTO-1.4.</p>
TR10: Land Use Strategies	<p>Consistent. The Specific Plan is consistent with the goals of Plan Bay Area by proposing mixed-use residential development in proximity to transit, creating employment opportunities within the City and regionally, providing affordable housing options, increasing connectivity by improving transportation infrastructure, and conserving natural resources and contributing additional parks/open space and recreation areas.</p> <p>Supported by General Plan policies LT-1.6a, LT-1.6b, LT-1.10d, LT-2.2, LT-3.1, and LT-3.2.</p>
TR13: Parking Policies	<p>Consistent. Future projects would be required to implement Specific Plan Parking Policies TDMP-1.1 through TDMP-1.6 to limit the supply of off-street parking in a transit-oriented area (Moffett Park). Future projects would be required to implement TDM measures such as providing unbundled parking spaces.</p> <p>Supported by General Plan policies LT-3.1b, LT-3.7, LT-3.9, LT-3.10, LT-3.13, and LT-3.16.</p>
Building Control Measures	
BL1: Green Buildings	<p>Consistent. Future projects under the Specific Plan would be constructed consistent with CALGreen and Title 24 requirements.</p>

Table 3.3-2: Specific Plan Consistency with BAAQMD Control Strategy Measures	
Applied BAAQMD Control Strategy Measures	Consistency
Transportation Control Measures	
	Supported by General Plan policies LT-2.1a, LT-2.1b, and LT-2.1c, and CAP action items EC-2.1, EC-2.2, and EC-2.3.
BL2: Decarbonize Buildings	<p>Consistent. Electricity is provided to the site by Silicon Valley Clean Energy (SVCE). SVCE customers are automatically enrolled in the GreenStart plan, which generates its electricity from 100 percent carbon free sources; with 50 percent from solar and wind sources, and 50 percent from hydroelectric. Customers have the option to enroll in the GreenPrime plan, which generates its electricity from 100 percent renewable sources such as wind and solar.</p> <p>Supported by General Plan policies LT-2.1a, LT-2.1b, LT-2.1c, and LT-2.7c, and CAP action items EC-2.1, EC-2.2, EC-2.3, EC-3.1, EC-4.3, and EC-6.2.</p>
BL4: Urban Heat Island Mitigation	<p>Consistent. Future development shall use materials with high reflectivity for all new parking lots and sidewalks to reduce the heat island effect. Future development would also be subject to provisions for reduced parking standards, and constructed in compliance with CALGreen, which requires installation of cool roofs for commercial buildings.</p> <p>Supported by General Plan policies LT-2.3a, LT-2.3c, and LT-2.3d, and CAP measure EC-6.</p>
Natural and Working Lands Control Measures	
NW2: Urban Tree Planting	<p>Consistent. Future projects under the Specific Plan would provide a well-shaded environment defined by consistent, tree plantings along streets and a variety of trees in parks and open space areas.</p> <p>Supported by General Plan policies LT-2.3a, LT-2.3b, LT-2.3c, and LT-2.3d, and CAP measure OS-3.</p>
Waste Management Control Measures	
WA4: Recycling and Waste Reduction	<p>Consistent. Future projects under the Specific Plan shall provide on-site recycling services and recycle and/or salvage for reuse a minimum of 65 percent of nonhazardous construction and demolition waste.</p> <p>Supported by General Plan policies LT-11.5, EM-14.1, EM-14.2, EM-14.3, and EM-14.4, and CAP action items LW-1 and LW-2.</p>
Water Control Measures	
WR2: Support Water Conservation	<p>Consistent. Future projects would be constructed consistent with CALGreen and Title 24 requirements, which require incorporation of water conservation measures.</p> <p>Supported by General Plan policies LT-1.9a, EM-1.1, EM-1.2, and EM-1.2b, and CAP measures WC-1 and WC-2.</p>

Projected VMT/Vehicle Trip and Population Increase

In formulating compliance strategies to protect public health and climate, BAAQMD relies on planned land uses established by local general plans. Land use planning affects vehicle travel which in turn affects region-wide emissions of air pollutants and GHG. As part of the consistency determination of a plan with the 2017 CAP, the plan’s projected VMT or vehicle trip increase should be less than or equal to projected population increase.

Table 3.3-3 provides population and traffic conditions for existing land uses, the buildout of the adopted Specific Plan, and the buildout of the proposed Specific Plan. Compared to existing conditions, the proposed Specific Plan would increase traffic by 162,312 daily trips that result in an additional 2.19 million daily VMT. Additionally, the proposed Specific Plan would result in an increase of 60,471 new jobs and the addition of 42,000 new residents in Moffett Park. Because there is no population in Moffett Park under existing conditions, this analysis used the per capita VMT to address changes in traffic with respect to population. This changes from 35.15 miles per capita to 24.92 miles per capita, which is computed as a 29 percent decrease.

Table 3.3-3: Moffett Park Traffic and Population Projections					
Scenario	Population	Jobs	Daily Trips	Daily VMT	VMT per Service Population¹
A. Existing Conditions	0	35,212	98,217	1,237,695	35.15
B. Adopted Specific Plan	0	51,584	127,792	1,592,494	30.87
C. Proposed Specific Plan	42,000	95,683	260,529	3,432,442	24.93
<i>Net difference between Adopted Specific Plan and Existing Conditions (B-A)</i>	<i>N/A</i>	<i>16,372</i>	<i>29,575</i>	<i>354,799</i>	<i>-12%</i>
<i>Net difference between Proposed Specific Plan and Existing Conditions (C-A)</i>	<i>42,000</i>	<i>60,471</i>	<i>162,312</i>	<i>2,194,747</i>	<i>-29%</i>
Source: Illingworth & Rodkin, Inc. <i>Moffett Park Specific Plan Air Quality and Greenhouse Gas Report</i> . November 23, 2022. Page 34.					

While the proposed Specific Plan would increase traffic trips, the rate of increase in traffic measured as the rate of trips or VMT would be less than the increase in service population.

Incorporation and Implementation of Relevant Control Measures

In addition to supporting the goals of the 2017 CAP, a plan’s consistency with the 2017 CAP is determined based on if it includes relevant control measures and does not interfere with implementation of CAP control measures. As discussed above and in Table 3.3-2, the Specific Plan (and future development under the Specific Plan) would support and be consistent with the 2017 CAP control measures.

In summary, based on the discussion above, the Specific Plan is consistent with the 2017 CAP. **(Less than Significant Impact)**

Project-Level Consistency

The BAAQMD thresholds of significance for protecting public health for future development projects under the proposed Specific Plan pertain to construction and operational criteria air pollutant emissions, fugitive dust, and health risk and are identified in Table 3.3-4 below.

Table 3.3-4: BAAQMD Air Quality Significance Thresholds			
Pollutant	Construction Thresholds	Operation Thresholds	
	Average Daily Emissions (pounds/day)	Annual Daily Emissions (pounds/day)	Annual Average Emissions (tons/year)
Criteria Pollutants			
ROG, NO _x	54	54	10
PM ₁₀	82 (exhaust)	82	15
PM _{2.5}	54 (exhaust)	54	10
CO	Not Applicable	9.0 ppm (eight-hour) or 20.0 ppm (one-hour)	
Fugitive Dust	Dust Control Measures/Best Management Practices	Not Applicable	
Health Risks and Hazards for New Sources (within a 1,000-foot Zone of Influence)			
Health Hazard	Single Source	Combined Cumulative Sources	
Excess Cancer Risk	10 per one million	100 per million	
Incremental Annual PM _{2.5}	0.3µg*/m ³	0.8 µg/m ³ (average)	
Hazard Index	<1.0	<10.0	
<u>Note:</u> µg = micrograms			

Construction Criteria Pollutant Emissions

Buildout of the Specific Plan, which would occur over a span of 20 years, would consist of numerous construction projects that would occur at various times. Construction of future development under the Specific Plan would result in temporary emissions from construction activities associated with subsequent development, including demolition, site grading, asphalt paving, building construction, and architectural coating. Emissions commonly associated with construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel- and gasoline-powered equipment, portable auxiliary equipment, and worker commute trips.

Construction activities, particularly during site preparation, would temporarily generate fugitive dust in the form of PM₁₀ and PM_{2.5}. Sources of fugitive dust would include disturbed soils at the construction site and trucks carrying uncovered loads of soils. Unless properly controlled, vehicles leaving the site would deposit mud on local streets, which could be an additional source of airborne dust after it dries. The BAAQMD CEQA Air Quality Guidelines consider these impacts to be less than significant if BMPs are implemented to reduce these emissions. Compliance with General Plan policies EM-11.3 and EM-11.4 and Specific Plan Project Requirements below would ensure future projects implement these BMPs, thereby reducing fugitive dust to a less than significant level.

Construction exhaust emissions include those from equipment (i.e., off-road) and traffic (i.e., on-road vehicles and trucks). Off-road construction equipment is often diesel-powered and can be a substantial source of NO_x emissions, in addition to PM₁₀ and PM_{2.5} emissions. Architectural coatings and application of asphalt pavement are dominant sources of ROG emissions. No specific development is proposed at this time; therefore, no construction details are available to make valid, quantified estimates of construction impacts.

Future development projects in Moffett Park would be required to comply with the following proposed Specific Plan Project Requirements to reduce construction-related emissions.

Construction and Operational Management Project Requirements:

- **10.3.3-1: BAAQMD Construction Management Practices.** All future construction projects under the Specific Plan shall implement the following BAAQMD basic best management practices (BMPs) to reduce DPM, PM_{2.5}, and PM₁₀ emissions during construction:
 - All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered at a frequency adequate to maintain minimum soil moisture of 12 percent. Moisture content can be verified by lab samples of moisture probe.
 - All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
 - All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
 - All vehicle speeds on unpaved roads shall be limited to 15 miles per hour.
 - All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
 - All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
 - Post a publicly visible sign with the telephone number and person to contact at the Lead Agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations.

- All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 miles per hour and visible dust extends beyond site boundaries.
- Wind breaks (e.g., trees, fences) shall be installed on the windward side(s) of actively disturbed areas of construction adjacent to sensitive receptors. Wind breaks should have at maximum 50 percent air porosity.
- Vegetative ground cover (e.g., fast-germinating native grass seed) shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established.
- The simultaneous occurrence of excavation, grading, and ground-disturbing construction activities in the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time.
- Avoid tracking of visible soil material on to public roadways by employing the following measures if necessary: (1) site accesses to a distance of 100 feet from public paved roads shall be treated with a six to 12-inch compacted layer of wood chips, mulch, or gravel and (2) washing truck tires and construction equipment of prior to leaving the site.
- Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.
- **10.3.3-2: Construction and Operations Modeling.** If future construction projects do not meet the screening level size identified by the Bay Area Air Quality Management District (BAAQMD) for less than significant construction criteria air pollutant emissions, future construction projects shall estimate construction and operation period emissions using modeling methodologies recommended BAAQMD and approved by the City. Average daily emissions predicted for construction projects shall be estimated and compared against project level thresholds identified in Table 3.3-4 above. Projects that have emissions exceeding the thresholds shall implement appropriate measures to achieve emissions that are below the thresholds, such as the following:
 - Use construction equipment that has zero or low diesel particulate matter exhaust and NO_x emissions. Exhaust emission (NO_x and PM) control measures include:
 - All construction equipment larger than 25 horsepower used at the site for more than two continuous days or 20 hours total shall meet U.S. EPA Tier 4 emission standards for NO_x and PM (PM₁₀ and PM_{2.5}), if feasible, otherwise,
 - If use of Tier 4 equipment is not available, alternatively use equipment that meets U.S. EPA emission standards for Tier 2 or 3 engines and include particulate matter emissions control equivalent to CARB Level 3 verifiable diesel emission control devices that altogether achieve an 85-percent reduction in particulate matter exhaust in comparison to uncontrolled equipment; alternatively (or in combination).
 - Use of alternatively fueled equipment with lower NO_x emissions that meet the NO_x and PM reduction requirements above.
 - Special equipment that cannot meet the above requirements must be approved as exempt by the City after considering reasons for requesting an exemption.

- Use electric equipment such as aerial lifts, air compressors, cement mortar mixers, concrete/industrial saws, cranes, and welders
- Diesel engines, whether for off road equipment or on road vehicles, shall not be left idling for more than two minutes, except as provided in exceptions to the applicable state regulations (e.g., traffic conditions, safe operating conditions). The construction sites shall have posted legible and visible signs in designated queuing areas and at the construction site to clearly notify operators of idling limit.
- Provide line power to the site during the early phases of construction to minimize the use of diesel-powered stationary equipment.
- Use of zero emission construction equipment.
- Use low volatile organic compound or VOC (i.e., reactive organic compounds) coatings, that are below current BAAQMD requirements (i.e., Regulation 8, Rule 3: Architectural Coatings), for at least 80 percent of all residential and non-residential interior paints and 80 percent of exterior paints. This includes all architectural coatings applied during both construction and reapplications throughout the project’s operational lifetime. At least 80 percent of coatings applied must meet a “super-compliant” VOC standard of less than 10 grams of VOC per liter of paint. For reapplication of coatings during the project’s operational lifetime, the Declaration of Covenants, Conditions, and Restrictions shall contain a stipulation for low VOC coatings to be used. Examples of “super-compliant” coatings are contained on the South Coast Air Quality Management District’s website.

With the implementation of the above proposed Specific Plan Project Requirements, future developments in Moffett Park would result in construction emissions below the average daily BAAMD thresholds. Given specific construction details are not available at this time, future projects in Moffett Park would be required to complete supplemental environmental review with a construction criteria pollutant emissions analysis to identify impacts and include measures to reduce emissions below the applicable BAAQMD construction thresholds. **(Less than Significant Impact)**

Operational Criteria Pollutant Emissions

Operational air emissions from buildout of the Specific Plan would be generated primarily from vehicles driven by future residents, employees, customers, and vendors. Evaporative emissions from architectural coatings and maintenance products (classified as consumer products) are typical emissions from these types of uses. The California Emissions Estimator Model (CalEEMod) was used to estimate emissions from operation associated with buildout of the Specific Plan and the results are summarized and compared to BAAQMD’s project-level criteria in Table 3.3-5 below. Refer to Appendix D for details about the model and model inputs.

Table 3.3-5: Moffett Park Operational Period Emissions				
Scenario	ROG	NOx	PM₁₀	PM_{2.5}
Operational Emissions Per Year (tons/year)				
A. 2020 Existing Land Uses	153.06	99.80	57.27	16.17
B. 2040 Specific Plan ¹	342.97	69.94	174.97	45.60

Table 3.3-5: Moffett Park Operational Period Emissions				
Scenario	ROG	NO_x	PM₁₀	PM_{2.5}
Net Increase between 2020 Existing Land Uses and 2040 Specific Plan (B-A)	189.91	-29.86	117.70	29.43
<i>Exceed Threshold?</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>Yes</i>
Annualized Daily Operational Emissions² (pounds/day)				
C. 2020 Existing Emissions	838.70	546.80	313.80	88.60
D. 2040 Annual Operational Emissions ¹	1,879.30	383.20	958.70	249.90
Net Increase between 2020 Existing Land Uses and 2040 Specific Plan (D-C)	1,040.60	-163.60	644.90	161.30
<i>Exceed Threshold?</i>	<i>Yes</i>	<i>No</i>	<i>Yes</i>	<i>Yes</i>
<p><u>Notes:</u> Bold text shows significant emissions</p> <p>¹ The emissions shown in the table are reflective of operational emissions prior to implementation of Specific Plan Policy Requirements 10.3.3-1 and 10.3.3-2.</p> <p>² Assumes 365-day operation.</p> <p>Source: Illingworth & Rodkin, Inc. <i>Moffett Park Specific Plan Air Quality and Greenhouse Gas Report</i>. November 23, 2022. Page 45.</p>				

As shown in Table 3.3-5 above, operational criteria pollutant emissions from buildout of the Specific Plan would not exceed BAAQMD’s project-level significance threshold for NO_x when compared to 2020 emissions from existing land uses. Buildout of the Specific Plan would result in a decrease in NO_x emission rates for vehicles by 75 percent between 2020 and 2040 (due to more efficient fuel standards). The buildout of the Specific Plan, however, would exceed BAAQMD’s project-level significance thresholds for ROG, PM₁₀, and PM_{2.5}. The significant operational ROG emissions are attributed to the use of architectural coatings (i.e., paint) for the additional buildings resulting from implementation of the Specific Plan. The significant levels of PM₁₀ and PM_{2.5} primarily result from the increase in traffic and associated tailpipe exhaust emissions.

To reduce the impact of ROG emissions, future development in Moffett Park would implement Specific Plan Policy Requirement 10.3.3-2, described under Construction Emissions above, requiring the use of low VOC coatings in future construction. While it is feasible and enforceable for the City to require super compliant VOC coatings be applied initially, the City cannot ensure that future occupants or tenants use super compliant VOC coatings during reapplication for the lifetime of the development project. In addition, there is no feasible mitigation measure to ensure consumer products (such as inks, coatings, and adhesive) used by future residents and tenants would be low in VOCs.

Mobile emissions account for 89 percent of emissions from Specific Plan buildout. The Specific Plan includes the following TDM policies to reduce vehicle trips, which would reduce mobile emissions.

Proposed Specific Plan Policies:

- **TDMP-2.1:** Establish a Moffett Park Transportation Management Association (TMA) to oversee mobility improvements, coordinate efforts, and manage a district-wide TDM strategy.
- **TDMP-2.2:** Ensure new development reduces vehicle trips through a required TDM Plan and TMA membership.
- **TDMP-2.3:** Establish clear metrics, data points, and processes for applying TDM measures at the site level across Moffett Park.
- **TDMP-2.4:** Continue to collaborate with Santa Clara Valley Transportation Authority (VTA) to align local development with transit infrastructure improvements.
- **TDMP-2.5:** Work with TMA to achieve a 50 percent single-occupancy vehicle rate at full buildout.

With implementation of the TDM requirements in Specific Plan policies TDMP-2.1 through TDMP-2.5, future non-residential uses of 5,000 square feet or more would be required to include a trip reduction target as a part of the TDM Plan and future multi-family residential projects with 10 units or more would be required to create a TDM Plan with a points-based system to reduce vehicle trips. The TDM plans for these projects are required to include the below TDM measures:

- Participation in the Transportation Management Association
- Transportation Coordinator (TC): The project applicant and/or property owner shall designate a TC to serve as the point of contact for the City and/or TMA and provide the City and/or TMA with materials and data showing compliance with approved TDM Plan and monitoring requirements
- Unbundled parking
- Carpool/vanpool parking
- Bicycle parking, showers, and lockers
- Annual travel survey and reporting
- Parking cash out program, as applicable and required per California Health and Safety Code 43845
- New metrics as needed and determined by the TMA

Future projects may supplement the required TDM measures with other feasible measures including the following:

- Reduction of parking below the parking maximum
- Pre-tax transportation benefits, including employer contributions to transit and bike benefit programs
- Shared parking facilities and/or public access to parking facilities
- On-site bicycle repair stations
- Multimodal wayfinding
- Transportation welcome packet and/or website
- Guaranteed ride home service and/or subsidy
- Free or subsidized transit passes
- Car share service and/or subsidy

- Bike share service and/or subsidy
- Carpool/Vanpools matching service and/or subsidy
- Free/preferential Carpool/Vanpool parking above minimum requirements
- Flex and other alternative work schedules or work from home programs
- Shuttle service
- Parking cash-out program (if not already subject to California Health and Safety Code 43845)

In accordance with SMC Chapter 10.60, the reduction in trips from implementation of TDM Plans for future projects would be identified on a project-by-project basis.

Furthermore, future projects may include installation of permanent emergency diesel generators, which primarily contribute to NO_x emissions. The Specific Plan includes the following requirement to reduce emissions associated with diesel generators.

Construction and Operational Management Project Requirements:

- **10.3.3-3: Generator Emissions.** All diesel standby emergency generators powered by diesel fuel shall meet US EPA Tier 4 engine standards.
 - Future development projects in Moffett Park that include installation of permanent stationary emergency generators shall ensure generators have engines that meet or exceed US EPA Tier 4 standards for particulate matter emissions.

During project-level review of future development projects, the project would be evaluated for consistency with Specific Plan Project Requirement 10.3.3-3 and Specific Plan Policies TDMP-2.1 through TDMP-2.4 and all feasible and applicable measures to reduce operational criteria air pollutants would be required as part of the project or as conditions of approval.

The operational emissions for the Specific Plan shown in Table 3.3-5 are conservative and do not reflect the reduction in emissions that would occur from the implementation of the Specific Plan policies and measures discussed above. The Specific Plan could substantially reduce emissions of regional air pollutants over the long-term through implementation of the above policies and measures, however, the policies and measures would not be capable of reducing the impact to a less than significant level given the magnitude of the impact. Therefore, it is concluded that the buildout of the Specific Plan would result significant and unavoidable operational criteria pollutant emissions.

Health Effects Associated with Significant Operational Emissions

Emissions of ROG (as well as NO_x) from individual sources (such as future projects under the Specific Plan) throughout the Bay Area contribute to high O₃ levels in the region and as stated in Section 3.3.1.3 Existing Conditions, the project region is in non-attainment for O₃. O₃ is an oxidant that is harmful to public health at high concentrations. O₃, at high levels, can damage the tissues of the lungs and respiratory tract. High concentrations of O₃ irritate the nose, throat, and respiratory system and constrict the airways. O₃ can also aggravate other respiratory conditions such as asthma, bronchitis, and emphysema, causing increased hospital admissions. Repeated exposure to high O₃ levels can make people more susceptible to respiratory infection and lung inflammation and

permanently damage lung tissue. O₃ can also have negative cardiovascular impacts, including chronic hardening of the arteries and trigger heart attacks. Children are most at risk, as they tend to be active and outdoors in the summer, when O₃ levels are highest. Seniors and people with respiratory illnesses are also especially sensitive to O₃'s effects. Healthy adults working or exercising outdoors during high O₃ levels can also be affected.

Because emissions in one part of the region can impact air quality miles downwind, efforts to reduce O₃ levels focus on reducing emissions of ROG and NO_x throughout the region. The relationship between ROG and NO_x in O₃ formation is complex; the ratio between the precursor pollutants influences how O₃ forms. Modeling suggests that large reductions in ROG and NO_x emissions will be needed to achieve the O₃ reductions required to attain the current health-based ozone standards. A certain amount of O₃ formation occurs naturally, even in the absence of anthropogenic emissions of ROG and NO_x.

No single project by itself would be sufficient in size to result in regional non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulative adverse air quality impacts and, while its emissions may be individually limited, it could be cumulatively considerable when taken in combination with past, present, and future development projects. The thresholds for criteria air pollutants are based on levels at which new sources are not anticipated to contribute to an air quality violation or result in a considerable net increase in criteria air pollutants. Therefore, if a future project leads to a significant impact individually, the project would also be considered to contribute significantly to the cumulative impact.

The Specific Plan buildout would result in a reduction in operational NO_x emissions. Therefore, operational NO_x emissions would not result in a significant impact to public health. However, Specific Plan buildout would result in an increase of 205 tons per day in ROG emissions which is well above the 10 tons per day threshold. To evaluate the Specific Plan's effects on O₃ levels in the region, the operational ROG emissions at buildout were compared to regional emissions that lead to elevated concentrations of O₃ (refer to Table 3.3-6 below).

Table 3.3-6: Comparison of Project Emissions to Air Basin Emissions			
Scenario	ROG (tons/day)	PM₁₀ (tons/day)	PM_{2.5} (tons/day)
Bay Area Air Basin in 2020	205	88.6	37.7
Bay Area Air Basin in 2035 ¹	203	96.1	39.9
Project Operational Emissions in 2035	0.52	0.32	0.08
Percentage of Emissions in Air Basin in 2040	0.25 percent	0.24 percent	0.15 percent
Notes:			
¹ CARB emission inventories are reported out to year 2035, which is the closest year of analysis to the proposed operational year of 2040.			
Source: Illingworth & Rodkin, Inc. <i>Moffett Park Specific Plan Air Quality and Greenhouse Gas Report</i> . November 23, 2022. Page 48.			

As shown in Table 3.3-6, the Specific Plan's operational emissions would constitute a small enough portion of the regional inventory (0.25 percent for ROG) that the effect of the Specific Plan buildout would not cause regional pollutant levels to measurably change. As a result, buildout of the Specific Plan would not measurably increase O₃ levels and the health effects associated with the Specific Plan's ROG emissions would not be measurable.

Construction and Operational Health Risks

The construction and operational health risk resulting from future development under the Specific Plan is discussed under Impact AIR-3 and concluded to be less than significant.

Incorporation and Implementation of Relevant Control Measures

In addition to evaluating a project's construction and operational criteria air pollutants emissions, fugitive dust, and health risk, a project's consistency with the 2017 CAP is determined based on if it includes relevant control measures and does not interfere with implementation of CAP control measures. As discussed above and in Table 3.3-2, future development under the Specific Plan would support and be consistent with the 2017 CAP control measures.

In summary, based on the discussion above, future development under the Specific Plan is not wholly consistent with the 2017 CAP because it would result in significant operational criteria air pollutant emissions. **(Significant and Unavoidable Impact)**

Impact AIR-2: The project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard. **(Significant and Unavoidable Impact)**

As discussed in Section 3.3.1.2, the Bay Area is considered a non-attainment area for ground-level O₃, PM_{2.5}, and PM₁₀ under the state and/or federal standards. High O₃ levels are caused by cumulative emissions of ROG and NO_x. Controlling the emissions of these precursor pollutants would reduce O₃ levels.

Construction Period Emissions

As discussed in detail under Impact AQ-1, buildout of the Specific Plan would result in less than significant construction period air pollutant emissions. Future projects would implement Specific Plan Project Requirements 10.3.3-1 and 10.3.3-2 to reduce DPM, PM_{2.5}, and PM₁₀ emissions from fugitive dust and use of construction equipment with zero or low NO_x and PM exhaust emissions. Thus, impacts would be less than significant. **(Less than Significant Impact)**

Operational Period Emissions

As discussed in detail under Impact AQ-1, buildout of the Specific Plan would result in significant operational period criteria air pollutant emissions. Future projects would implement Specific Plan Project Requirements 10.3.3-2 and 10.3.3-3 requiring use of low VOC architectural coatings on future buildings and implementation of TDM policies to reduce mobile emissions. However, even

with the implementation of these requirements, future projects could result in operational criteria pollutant emissions above BAAQMD thresholds, resulting in a cumulatively considerable net increase of criteria pollutants in the region (i.e., Bay Area). **(Significant and Unavoidable Impact)**

Impact AIR-3: The project would not expose sensitive receptors to substantial pollutant concentrations. **(Less than Significant Impact)**

Project impacts related to increased community risk would occur by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors in the project vicinity or by significantly exacerbating existing cumulative TAC impacts. Buildout of the Specific Plan would introduce new sources of TACs during construction (i.e., on-site construction activity and truck hauling emissions) and operation (i.e., mobile sources and stationary sources). Construction activity would generate dust and equipment exhaust that would affect nearby sensitive receptors. Operation of the new MPSP developments would increase traffic in the area that would increase the air pollutant and TAC emissions in the area. In addition, the new buildings may include the installation of emergency generators powered by diesel engines and cooling towers that would also have TACs and air pollutants emissions.

There are also several sources of existing TACs and localized air pollutants within and near MPSP. The risk from these existing sources of TACs were also assessed in terms of the health risk. The nearest existing sensitive receptors are located approximately 200 feet south of Moffett Park.

Construction Health Risks

In addition to the existing sensitive receptors, buildout of the Specific Plan would introduce new sensitive receptors that could be exposed to construction activity and their TAC and air pollutant emissions. Construction equipment and associated heavy-duty truck traffic generates diesel exhaust, which is a known TAC. The construction exhaust emissions may pose community risks for sensitive receptors. The primary community risk impact issues associated with construction emissions are cancer risk and exposure to PM_{2.5}. Diesel exhaust poses both a potential health and nuisance impact to nearby receptors. Since specific construction plans and schedules for future development are not known, it is not possible to quantify the impacts.

Future development projects in Moffett Park would be required to comply with the following proposed Specific Plan Project Requirements to minimize potential community health risk impacts.

Construction and Operational Management Project Requirements:

- **10.3.3-4: Health Risk Assessment.** Future development proposed within 1,000 feet of existing or planned sensitive receptors as defined by the BAAQMD (e.g., residences, schools) shall prepare a site-specific construction and operational health risk assessment (HRA) pursuant to the BAAQMD CEQA Air Quality Guidelines. If the HRA demonstrates, to the satisfaction of the City, that the health risk exposures for adjacent receptors would be less than the BAAQMD project-level and cumulative thresholds, then no further study or measures are required. If the HRA demonstrates the health risks would exceed BAAQMD project-level thresholds or the project results in a considerable contribution to a significant

cumulative health risk impact, additional feasible on- and off-site mitigation shall be analyzed to reduce risks to a less than significant level. Measures to avoid and/or reduce significant construction health risk impacts, could include the following:

- Use Tier 4 engines for all off-road equipment greater than 25 horsepower (hp) and operating for more than 20 total hours over the entire duration of construction activities.
- Use diesel trucks with 2010 or later compliant model year engines during construction.
- Use renewable diesel during construction.
- Use low-VOC coatings during construction.
- Implement fugitive dust best management practices and if necessary, enhanced measures recommended by BAAQMD.
- Use portable electrical equipment where commercially available and practicable to complete construction. Construction contractors shall utilize electrical grid power instead of diesel generators when (1) grid power is available at the construction site; (2) when construction of temporary power lines are not necessary in order to provide power to portions of the site distant from existing utility lines; (3) when use of portable extension lines is practicable given construction safety and operational limitations; and (4) when use of electrical grid power does not compromise construction schedules.
- Phase construction appropriate to lower the intensity of emissions at any one location with sensitive receptors.
- Provide enhanced air filtration for sensitive receptors adversely affected by project emissions.

Implementation of Specific Plan Project Requirement 10.3.3-4 would reduce construction TAC and PM_{2.5} emissions by at least 85 percent below existing emission rates, by requiring the use of efficient and cleaner construction equipment, renewable/alternative fuel, and low-VOC coatings. For the purposes of this analysis, it is assumed construction health risk impacts to sensitive receptors would be reduced to a less than significant level with the implementation of the above Specific Plan Project Requirement 10.3.3-4. **(Less than Significant Impact)**

If the HRA for a future project determines a significant health risk impact cannot be reduced to a less than significant level, all feasible mitigation measures and alternatives shall be considered.

Operational Health Risks

Operation of future development under the Specific Plan would result in long-term emissions from mobile sources (e.g., traffic) and stationary sources (e.g., generators). While these emissions would not be as intensive at or near Moffett Park as construction activity, they would contribute to long-term effects to sensitive receptors, and are discussed below.

Traffic Emissions

The Specific Plan buildout would increase traffic on local roadways. Modeling was completed to evaluate the health risk to existing off-site sensitive receptors associated with TAC and PM_{2.5} emissions generated from Specific Plan-generated trips. Most of the vehicle trips generated from the

buildout of the Specific Plan would occur on US 101, SR 237, North Mathilda Avenue, Caribbean Drive, and Java Drive. Refer to Appendix D for details about the model and model inputs.

Table 3.3-7 below shows the modeled cancer risks, annual PM_{2.5} concentrations, and hazard index from the primary traffic sources at existing off-site receptors south of Moffett Park (see Figure 3.3-1).

Table 3.3-7: Impacts from Traffic Sources to Off-site Receptors			
Roadway, Average Daily Traffic Count	Cancer Risk (per million)	Annual PM_{2.5} (µg/m³)	Hazard Index
US 101, ADT 9,795	<0.01	<0.01	<0.01
SR 237, ADT 29,763	2.07	0.11	<0.01
North Mathilda Avenue, ADT 20,701	0.02	<0.01	<0.01
Caribbean Drive, ADT 14,085	0.03	<0.01	<0.01
Java Drive, ADT 5,445	0.13	0.01	<0.01
Combined Sources	<2.26	<0.15	<0.05
<i>BAAQMD Single Source Threshold</i>	<i>10</i>	<i>0.3</i>	<i><1.0</i>
Exceed Single Source Threshold?	No	No	No
<i>BAAQMD Cumulative Source Threshold</i>	<i>100</i>	<i>0.8</i>	<i>10.0</i>
Exceed Cumulative Threshold?	No	No	No
Source: Illingworth & Rodkin, Inc. <i>Moffett Park Specific Plan Air Quality and Greenhouse Gas Report</i> . November 23, 2022. Page 54.			

As shown in Table 3.3-7, the cancer risk and hazard index resulting from operational traffic resulting from the buildout of the Specific Plan at the maximally exposed individual (MEI) would not exceed the single-source or cumulative source significance thresholds. **(Less than Significant Impact)**

Additionally, the PM_{2.5} concentration resulting from operational traffic (Specific Plan buildout) at the MEI is below the BAAQMD single source threshold of 0.3 µg/m³. Thus, the impacts from the Specific Plan’s operational traffic emissions to existing sensitive receptors would be less than significant. **(Less than Significant Impact)**

Emergency Generators

Buildout of the Specific Plan would likely include stationary equipment such as backup power generators powered by diesel engines. Operation of diesel generators would be a source of TAC emissions in the form of DPM. No development is proposed at this time, therefore, no stationary equipment details are available. Detailed plans would be available at the time a specific development is proposed. Implementation of Specific Plan Project Requirement 10.3.3-3 would ensure future generators have engines that meet or exceed US EPA Tier 4 standards for particulate matter emissions.



Source: Illingworth & Rodkin, Inc., November 7, 2022.

LOCATIONS OF MODELED PROJECT ROADWAY SOURCES AND OFF-SITE SENSITIVE RECEPTORS

FIGURE 3.3-1

Diesel engines would be subject to CARB's Stationary Diesel Airborne Toxics Control Measure (ATCM) and require permits from the BAAQMD, since they would be equipped with engines larger than 25 horsepower. Best Available Control Technology for Toxics (BACT) requirements would apply to these generators that would limit DPM emissions. As part of the BAAQMD permit requirements for toxics screening analysis, the engine emissions have to meet BACT requirements and pass the toxic risk screening level of less than 10 in a million. The risk assessment would be prepared by BAAQMD. Depending on results, BAAQMD would set limits for DPM emissions (e.g., more restricted engine operation periods). Air pollutant emissions from stationary equipment complying with all applicable BAAQMD regulations do not typically result in a significant air quality community risk impact. For this reason, emissions from emergency generators would result in a less than significant impact. **(Less than Significant Impact)**

Impact AIR-4: The project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. **(Less than Significant Impact)**

Construction Odor Impacts

Future construction activities in Moffett Park could result in odorous emissions from diesel exhaust associated with construction equipment. Because of the temporary nature of these emissions and diffusive properties of diesel exhaust, exposure of sensitive receptors to these emissions would be limited. Therefore, odors related to construction of future development under the Specific Plan is not expected to cause complaints from the public and affect a substantial number of people. **(Less than Significant Impact)**

Operational Odor Impacts

Future developments under the Specific Plan would include residential, office/industrial/R&D, commercial (i.e., retail and hotel), and institutional uses. Residential, retail, hotel, and institutional uses would not generate substantial odors. Future industrial/R&D operations that could generate substantial odors (e.g., odorous chemicals or substantial exhaust) would be required to comply with the following proposed Specific Plan Policy to control odor.

Construction and Operational Management Project Requirements:

- **10.3.3-5:** Odor Control Plan. Future projects that would generate odors shall develop an odor control plan that addresses plant design to control odors, operating and maintenance procedures to prevent odors, and an action plan to respond to upset conditions that could cause odors and measures to respond to odor complaints. The odor control plan shall describe the design elements and BMPs built into the facility that include:
 - Ventilation of the system using carbon absorption, biofiltration, ammonia scrubbers, or other effective means to treat exhausted air from the enclosed facility;
 - Odor proofing of refuse containers used to store and transport any odorous materials (e.g., biosolids); and
 - Injection of chemicals to control odorous compounds (e.g., hydrogen sulfide).

The plan shall describe procedures to address upset conditions caused by equipment failures, power outages, flow control, or treatment issues. A publicly visible sign with the telephone number and person to contact regarding odor complaints shall be posted. This person shall respond and take corrective action within 48 hours. The Air District's phone number shall also be visible to ensure compliance with applicable regulations. A log of odor complaints and procedures implemented to respond to complaints shall be maintained and provided to the City upon request.

Future industrial/R&D developments that generate substantial odors would implement the above Specific Plan Project Requirement 10.3.3-5 which would reduce substantial odors on sensitive receptors to a less than significant level by implementing odor control measures and taking corrective actions when complaints are received. Therefore, the operation of future development under the Specific Plan would not result in significant odor emissions. **(Less than Significant Impact)**

3.3.2.2 *Cumulative Impacts*

Impact AIR-C: The project would result in a cumulatively considerable contribution to a cumulatively significant air quality impact. **(Significant and Unavoidable Cumulative Impact)**

The geographic area for consistency with the 2017 CAP and criteria air pollutants is the San Francisco Bay Air Basin. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to result in the region being in non-attainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

Consistency with the Clean Air Plan

Plan-Level Consistency

As discussed under Impact AQ-1, implementation of the Specific Plan would be consistent with the 2017 CAP based on BAAQMD plan-level thresholds. For this reason, the Specific Plan would not result in a significant cumulative conflict with the 2017 CAP. **(Less than Significant Cumulative Impact)**

Project-Level Consistency

Future development would not wholly be consistent with the 2017 CAP because future development would result in operational criterial air pollutant emissions exceeding BAAQMD's project-level thresholds of significance for ROG, PM₁₀, and PM_{2.5} (see discussion under Impact AQ-1) Therefore, future development under the Specific Plan would result in a significant cumulative conflict with the 2017 CAP. **(Significant and Unavoidable Impact)**

Criteria Air Pollutant Emissions

Construction Emissions

As discussed under Impact AIR-1 and Impact AIR-2 above, the construction emissions resulting from development under the Specific Plan would not be significant. Therefore, construction emissions from future development would not result in a significant cumulative impact. **(Less than Significant Cumulative Impact)**

Operational Emissions

As discussed under Impact AIR-1 and Impact AIR-2 above, buildout of the Specific Plan would in a significant and unavoidable impact by exceeding the project-level thresholds for criteria pollutant ROG, PM_{2.5}, and PM₁₀ emissions. For this reason, future development under the Specific Plan would result in significant cumulative operational criteria air pollutant emissions. **(Significant and Unavoidable Cumulative Impact)**

Exposure of Sensitive Receptors

The geographic area for cumulative impacts of air pollutant emissions on sensitive receptors is within 1,000 feet of Moffett Park. This distance is recommended by BAAQMD because adverse effects are the greatest within this distance. Community risk impacts from cumulative sources were modeled and are summarized in Table 3.3-7. Refer to Appendix D for details about the modeling, data inputs, and assumptions. As discussed under Impact AIR-3, buildout of the Specific Plan would result in a significant and unavoidable operational health risk impact as a result of traffic emissions. The project, therefore, would result in a cumulatively considerable impact to sensitive receptors. **(Significant and Unavoidable Cumulative Impact)**

Odors

The geographic area for cumulative odor impacts to sensitive receptors is within 1,000 feet of a project site or plan area. Future industrial/R&D development within Moffett Park have the potential to contribute to a cumulative odor impact to sensitive receptors, however, those projects would comply with Specific Plan Project Requirement 10.3.3-5 to minimize odors. Existing odor sources, including the WPCP and SMaRT Station®, are also required to implement strict odor minimization plans. Other cumulative projects would be required to implement similar odor minimization plans and control identified through their project-level CEQA review. Thus, operations of the cumulative projects would not result in significant cumulative odor impacts to sensitive receptors. **(Less than Significant Cumulative Impact)**

3.3.3 Non-CEQA Effects

Per *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (*BIA v. BAAQMD*), effects of the environment on the project are not considered CEQA impacts. The following discussion is included for informational purposes only because the City of Sunnyvale has policies (including General Plan Policy EM-11.3) that address existing air quality conditions affecting a proposed project. The criteria used by the City of Sunnyvale for determining whether new receptors would be affected are the same as those listed in Table 3.3-4 above.

Local Sources of Toxic Air Contaminants and Exposure to Future Sensitive Receptors

Based on the BAAQMD CEQA Air Quality Guidelines, for a plan to have a less than significant effect with respect to TACs, overlay zones must be established around existing and proposed land uses that would emit these air pollutants. Overlay zones to avoid TAC impacts must be reflected in local plan policies, land use maps, or implementing ordinances.

The Specific Plan would permit and facilitate the development of land uses that may locate new sensitive receptors (e.g., new residence or daycare facilities) in proximity to arterial and collector roadways, highways, and stationary sources of TAC emissions. A 1,000-foot buffer was drawn around Moffett Park to identify which TAC sources would affect future sensitive receptors within Moffett Park. Screening levels indicate that future sensitive receptors within Moffett Park could be exposed to levels of TAC and/or PM_{2.5} that could cause an unacceptable cancer risk or hazard near highways and stationary sources. Figure 3.3-2 shows the Specific Plan boundaries and TAC sources identified within the 1,000-foot buffer.

Highways

BAAQMD provides a Highway Screening Analysis Tool that can be used to identify screening level impacts from state highways. The tool was used to screen the cancer risk, annual PM_{2.5} exposure, and non-cancer hazard index from US 101 and SR 237. Both are east-west roadways within Moffett Park with risk and hazards occurring north and south of each roadway; however, only the risks and hazards in the northly direction are considered with respect to the Specific Plan because the dominant wind flow in the area flows from north to northwest. For both US 101 and SR 237, risks and hazards would not exceed the single-source thresholds beyond 400 feet in the northly direction.

Local Roadways

BAAQMD provides a Roadway Screening Analysis Calculator to assess whether roadways with traffic volumes of over 10,000 vehicles per day may have an adverse effect on a project. Adjustments for the latest vehicle emission rates and new cancer risk guidance and average daily traffic volumes based on peak-hour existing traffic volumes in the Traffic Impact Analysis (which is included in Appendix D) were inputted into the calculator. The following roadways were identified as having existing traffic volumes over 10,000 vehicles per day: North Mathilda Avenue, Caribbean Avenue, and Java Drive.

The screening tool was used to identify the distance at which the increased cancer risk and PM_{2.5} concentration from the roadways would not exceed the BAAQMD single-source thresholds for TAC sources. Risks were identified for each side of the road (i.e., if the road is an east-west directional roadway, then the north and south side of the road were screened). In some cases, both the increased cancer risk and the annual PM_{2.5} concentration were below their BAAQMD single-source threshold at less than 10 feet. Therefore, no risk was identified from the roadway at any distance. Because existing traffic volumes were used in this screening analysis, roadways would likely need to be re-evaluated on a project-level basis because future traffic volumes are likely to increase.

Stationary Sources

Moffett Park contains numerous permitted stationary sources throughout. Air quality impacts associated with stationary sources are generally localized and can, therefore, only be addressed on a project-by-project basis. When siting new sensitive receptors, the BAAQMD Guidelines advise that lead agencies examine existing or future proposed sources of TAC and/or PM_{2.5} emissions that would adversely affect individuals within the proposed project. New residences and sensitive receptors could be located near stationary sources of TACs located throughout Moffett Park, such as gasoline dispensing stations or emergency back-up diesel generators. Without proper setbacks or design measures, these sources could result in TAC levels that exceed BAAQMD health risk thresholds at new sensitive receptors within Moffett Park.

Sources Requiring Special Focus

Several sources that warrant special attention when considering the development of new sensitive receptors were identified. The WPCP and SMaRT Station® are potential sources of odors. In addition, existing industrial sources of TACs and air pollutants are located in the northwestern portion of Moffett Park. In accordance with Specific Plan Project Requirement 10.3.3-4, project-specific health risk assessments shall be prepared for future projects that propose sensitive receptors within Moffett Park to identify appropriate measures to reduce TAC and air pollutant exposures. Such measures could include project-specific site design (e.g., increased setbacks) and use of enhanced filtration in ventilation systems.

Odor Effects on Future Sensitive Receptors

As mentioned under Section 3.3.1.2 Existing Conditions, the WPCP and SMaRT Station® are potential sources of odors in Moffett Park. The BAAQMD screening distance to avoid odor complaints from wastewater treatment plants and materials recovery resource facilities is two miles. There are no residences near these facilities; therefore, a history of complaints is not applicable. These sources have elevated emissions of TACs and air pollutants. Given the proximity of future residences in Moffett Park to the WPCP and SMaRT Station®, there is potential for implementation of the Specific Plan to result in odor complaints. New developments constructed within 1,000 feet of the WPCP and SMaRT Station® would need to assess and account for possible odor effects on future residents. Additionally, future updates to the WPCP would involve assessments of odorous emissions associated with the WPCP, and would include updates to the WPCP odor minimization control plan.

Effects of Potential Schools in Moffett Park

Educational facilities, such as a new public school, is permitted in the MP-R and I land use designations (refer to Figure 2.3-1). No school is currently proposed as part of the Specific Plan. As discussed in Section 3.17.1.1 Regulatory Framework, in accordance with the CDE School Site Selection and Approval Guide pursuant to Section 17251(b) of the Education Code, the proximity of hazardous air emissions within a quarter mile to a potential school site would need to be evaluated and considered when siting a future school. If a school is proposed within Moffett Park, it would be subject to separate environmental review and would be required to comply with existing regulations, including the California Education Code and Title 5 of the CCR.



MOFFETT PARK SPECIFIC PLAN BOUNDARIES AND NEARBY TAC SOURCES

FIGURE 3.3-2

3.4 BIOLOGICAL RESOURCES

The following discussion is based, in part, on a Biological Resources Analysis completed by Live Oak Associates, Inc. dated September 9, 2022. This report is included as Appendix E to this EIR.

3.4.1 Environmental Setting

3.4.1.1 *Regulatory Framework*

Federal and State

Endangered Species Act

Individual plant and animal species listed as rare, threatened, or endangered under state and federal Endangered Species Acts are considered special status species. Federal and state endangered species legislation has provided the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Permits may be required from both the USFWS and CDFW if activities associated with a proposed project would result in the “take” of a species listed as threatened or endangered. To “take” a listed species, as defined by the State of California, is “to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill” these species. Take is more broadly defined by the federal Endangered Species Act to include harm of a listed species.

In addition to species listed under state and federal Endangered Species Acts, Sections 15380(b) and (c) of the CEQA Guidelines provide that all potential rare or sensitive species, or habitats capable of supporting rare species, must be considered as part of the environmental review process. These may include plant species listed by the California Native Plant Society and CDFW-listed Species of Special Concern.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits killing, capture, possession, or trade of migratory birds except in accordance with regulations prescribed by the Secretary of the Interior. Hunting and poaching are also prohibited. The taking and killing of birds resulting from an activity is not prohibited by the MBTA when the underlying purpose of that activity is not to take birds.²⁶ Nesting birds are considered special status species and are protected by the USFWS. The CDFW also protects migratory and nesting birds under California Fish and Game Code Sections 3503, 3503.5, and 3800. The CDFW defines taking as causing abandonment and/or loss of reproductive efforts through disturbance.

Sensitive Habitat Regulations

Wetland and riparian habitats are considered sensitive habitats under CEQA. They are also afforded protection under applicable federal, state, and local regulations, and are generally subject to

²⁶ United States Department of the Interior. “Memorandum M-37050. The Migratory Bird Treaty Act Does Not Prohibit Incidental Take.” Accessed September 20, 2021. <https://www.doi.gov/sites/doi.gov/files/uploads/m-37050.pdf>.

regulation by the United States Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), CDFW, and/or the USFWS under provisions of the federal Clean Water Act (e.g., Sections 303, 304, 404) and State of California Porter-Cologne Water Quality Control Act.

Fish and Game Code Section 1602

Streambeds and banks, as well as associated riparian habitat, are regulated by the CDFW per Section 1602 of the Fish and Game Code. Work within the bed or banks of a stream or the adjacent riparian habitat requires a Streambed Alteration Agreement from the CDFW.

Regional and Local

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the proposed Specific Plan would be subject to the General Plan biological resource policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-1.10e	Continue to evaluate and ensure mitigation of potential biological impacts of future development and redevelopment projects in a manner consistent with applicable local, state, and federal laws and regulations.
LT-2.3	Accelerate the planting of large canopy trees to increase tree coverage in Sunnyvale in order to add to the scenic beauty and walkability of the community; provide environmental benefits such as air quality improvements, wildlife habitat, and reduction of heat islands, and enhance the health safety and welfare of residents.
LT-2.4	Maintain and regularly review and update regulations and practices for the planting, protection, removal, replacement, and long-term management of large trees on private property and City-owned golf courses and parks.
LT-2.5	Recognize the value of protected trees and heritage landmark trees (as defined in City ordinances) to the legacy, character, and livability of the community by expanding the designation and protection of large signature and native trees on private property and in City parks.

Sunnyvale Municipal Code

SMC Section 19.94.050 includes the City of Sunnyvale’s Tree Preservation Ordinance, which requires tree removal permits, and planting of replacement trees at the discretion of the Director of Community Development for any removal of protected trees. SMC Section 19.94.050 defines a protected tree as any tree of significant size. A significant size single-trunk tree is any tree measuring 38 inches or more in circumference when measured at four and one-half feet above the ground surface, or any tree more than 12 inches in diameter. A significant size multi-trunk tree is any tree with at least one trunk measuring 38 inches or more in circumference or the cumulative measurement of all the trunks added together that equals 113 inches or greater.

City of Sunnyvale Bird Safe Design Guidelines

The City's Bird Safe Design Guidelines, adopted in January 2014, stipulate that efforts must be taken to reduce bird strikes in all locations of the City. These guidelines are split into two options, described below.

Option 1 applies to projects proposed within 300 feet of a body of water larger than one acre in size or located immediately adjacent to a landscaped area, open space, or park larger than one acre in size. Bird safe design elements required for projects that fall under Option 1 include:

- Avoiding the use of multi-floor expanse of reflective or transparent glass in the first 60 feet of the building design, specifically in area(s) facing the water or open space;
- Limiting building glass to low reflectivity levels such as 25 percent or less;
- Limiting the amount of glass on ground level stories, especially in areas adjacent to landscaping;
- Adding architectural devices, such as louvers, awnings, sunshades or light shelves to building design to reduce massing of glass;
- Considering use of opaque, fritted, or etched glass on ground floor in areas adjacent to landscaped areas;
- If site is near water features, using soil berms, furniture, landscaping, or other features to prevent reflection of water in glass building facades;
- Considering using angled glass (20 to 40 degrees) instead of vertical glass to reflect ground instead of adjacent habitat or sky buildings with an expanse of glass near water or landscaping areas;
- Avoiding placing tall landscaping in front of highly reflective glass and using green roofs and water features near glass;
- Avoiding the funneling of open space towards a building face;
- Avoiding glass skyways or freestanding glass walls;
- Avoiding up lighting or spotlights on the project site;
- Ensuring all site lighting uses shielded fixtures;
- Turning off building lights at night or incorporating blinds into window treatment for use when lights are on at night;
- Creating smaller zones in internal lighting layouts to discourage wholesale area illumination;
- Placing signs at several locations near building with the telephone number of an authorized bird conservation organization or museum to aid in species identification and to benefit scientific study; and
- Monitoring efforts shall include a bird-safe program developed by the project owner of the methods to ensure necessary steps are taken to reduce bird strikes. These efforts would include how each dead bird will be handled and donated to scientific study, providing a yearly inventory to the City of the number of birds found and locations, and the steps necessary to resolve any consistent location's bird deaths. Options include shades to reduce transparency and night lighting, fritted glass, netting, stickers, etc.

Option 2 applies to all other projects that do not fall under the definition of Option 1. Bird safe design elements required for projects that fall under Option 2 include:

- Avoiding large expanses of glass near open space areas, especially when tall landscaping is immediately adjacent to the glass walls;
- Avoiding the funneling of open space towards a building face;
- Prohibiting glass skyways or freestanding glass walls;
- Avoiding transparent glass walls coming together at building corners to avoid birds trying to fly through glass;
- Reducing glass at top of building, especially when incorporating a green roof into the design;
- Prohibiting up lighting or spotlights;
- Shielding lighting to cast light down onto the area to be illuminated;
- Turning off commercial building lights off at night or incorporating blinds into window treatment for use when lights are on at night; and
- Creating smaller zones in internal lighting layouts to discourage wholesale area illumination.

For all locations (whether Option 1 or Option 2 applies), projects are required to:

- Reduce the use and night lighting in the building without incorporating blinds into the window design,
- Donation of discovered dead birds to an authorized bird conservation organization or museum, and
- Consider placing signs in several locations around the building with the telephone number an authorized bird conservation organization or museum to aid in species identification and to benefit scientific study.

3.4.1.2 Existing Conditions

Moffett Park is comprised of mostly developed property containing ruderal fields and vegetation, and more natural lands along the Bay to the north. Database searches and field visits were completed to identify the existing habitat and species in Moffett Park and the vicinity. The existing habitats and species are discussed below.

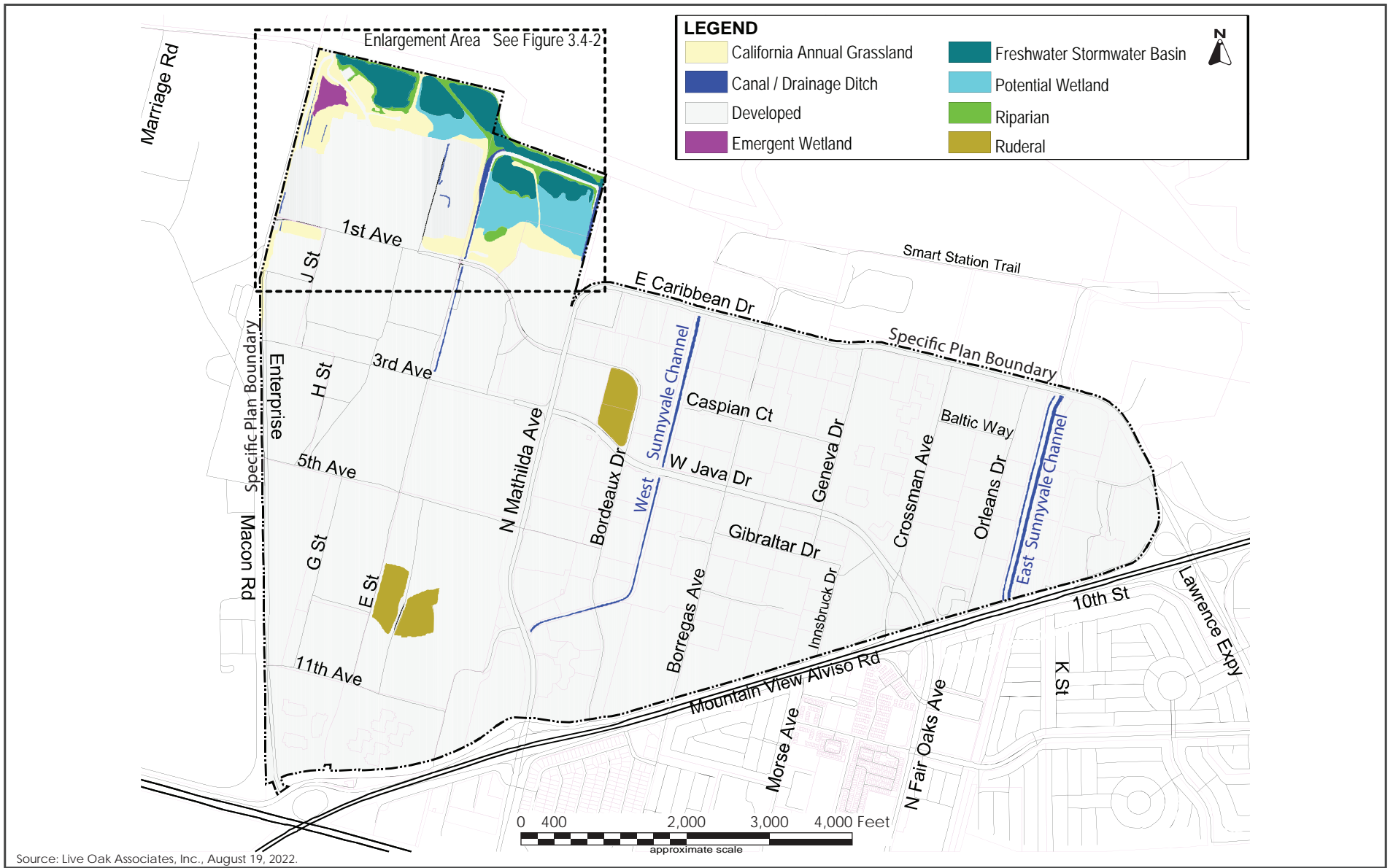
Habitats

The existing habitats in Moffett Park are briefly described below and shown on Figure 3.4-1 and Figure 3.4-2. Refer to Appendix E for additional details.²⁷

Developed

Most of Moffett Park is developed, consisting primarily of office/industrial/R&D, commercial, and institutional buildings, and hardscape. Vegetation within developed areas consists of landscaped trees, lawns, plants, and vegetated roofs. Reptiles observed within developed areas were limited to the coast range fence lizard; however, several other species (including the Pacific chorus frog,

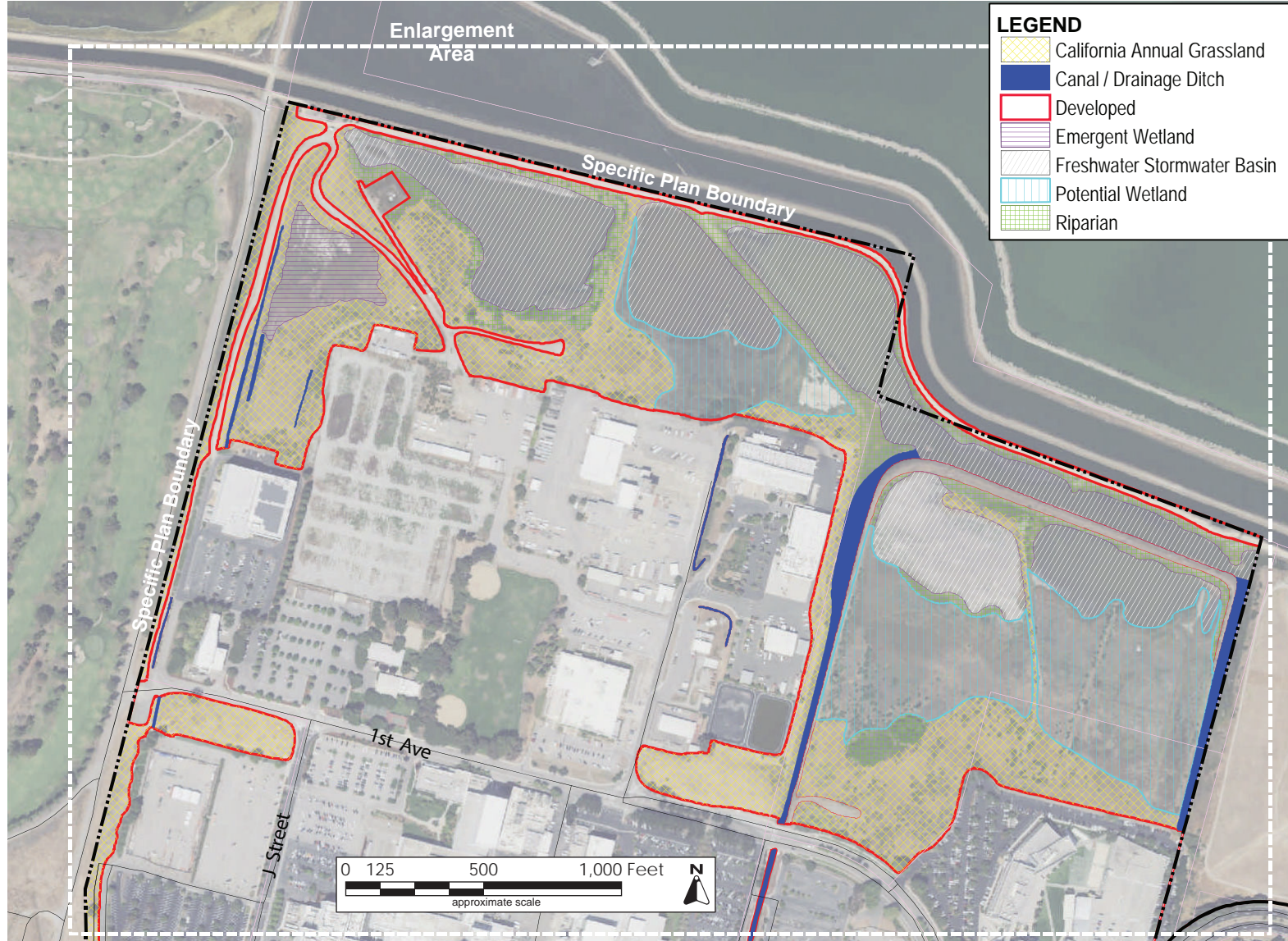
²⁷ Note that some of the areas identified as ruderal on Figure 3.4-1 may have been previous vacant site that are now developed, since the figure is dated 2020.



Source: Live Oak Associates, Inc., August 19, 2022.

EXISTING HABITATS IN MOFFETT PARK SPECIFIC PLAN AREA

FIGURE 3.4-1



EXISTING HABITATS IN NORTHWESTERN CORNER OF MOFFETT PARK

FIGURE 3.4-2

northern alligator lizard, and Pacific gopher snake) are expected to occur. Mammalian species observed within developed habitat included the California ground squirrel and Botta's pocket gopher.

A number of avian species observed in Moffett Park may nest within or outside of the area. The turkey vulture and golden eagle observed likely nest outside Moffett Park, as available nesting habitat is absent from the area. White-tailed kites and red-tailed hawks likely nest in large trees at Moffett Park. The Eurasian collared-dove, mourning dove, Anna's hummingbird, Nuttall's woodpecker, common raven, American crow, bushtit, white-breasted nuthatch, Bewick's wren, northern mockingbird, European starlings, California towhee, Bullock's oriole, house finch, lesser goldfinch, and house sparrows observed likely nest in trees and shrubs at Moffett Park. The black phoebes, cliff swallows, and barn swallows build mud nests and are expected to nest on the buildings of Moffett Park; killdeer, which nests on open ground, likely nest in the parking strips of abandoned buildings or in gravel or dirt lots of Moffett Park.

California Annual Grassland

The northwestern corner of Moffett Park supports California annual grassland. This habitat is typically dominated by wild oats and other non-native invasive grasses and weedy species. The grassland on the Lockheed Martin property, located on the northwestern section of Moffett Park, is adjacent to freshwater stormwater basins, potential wetlands, and emergent wetlands; this area is similar to a natural habitat compared to the other California annual grassland within Moffett Park since it is an intact (undisturbed) habitat and supports intermixed coyote brush and trees. Other areas identified as California annual grassland include two small areas on the Lockheed Martin property, with similar weedy vegetation, which are maintained by mowing. The easternmost portion of these two areas is on capped fill.

A variety of animal species were observed during the field visits including the turkey vulture, black phoebe, and barn swallow which likely nest outside of Moffett Park, as available nesting habitat is absent from the area. The mourning dove, Anna's hummingbird, bushtit, Bewick's wren, northern mockingbird, European starling, Northern harrier, California towhee, and house finch were also observed at Moffett Park and likely nest in shrubs. Killdeer were observed and may nest on the ground of this habitat. Botta's pocket gopher and California ground squirrel were also observed and provide potential habitat for other species including frogs, lizards, snakes, and rodents. A low density of ground squirrels was observed; their burrows provide winter and breeding habitat for burrowing owls.

Other animal species expected to occur within this habitat may include, but are not limited to, the western fence lizard, Pacific gopher snake, raccoon, striped skunk, feral cat, gray fox, coyote, feral cat, and domestic dog. Plant species found in this habitat include tree of heaven, pampas grass, fennel, bristly ox-tongue, curly dock, and hedge parsley.

Ruderal

Undeveloped parcels within Moffett Park are dominated by weedy species that offer greater habitat value than developed parcels. Ruderal parcels support a moderate density of California ground squirrel burrows which may be used by frogs, lizards, snakes, burrowing owls, and mice, which were observed during field visits.

Freshwater Stormwater Basin

Five freshwater stormwater basins are located in the northwestern corner of Moffett Park. The basins are filled with water from Lockheed Martin property wetlands, which is carried to the basins via a series of canals and ditches. Although separated from the Bay, these basins act as wetland habitat for migratory birds. Species observed either on or in the riparian habitat surrounding the freshwater stormwater basins included (but are not limited to) the mallard, cinnamon teal, ruddy duck, pied-gilled grebe, great blue heron, great egret, black-crowned night heron, Northern harrier, salt-marsh common yellowthroat, and mourning dove. Other species observed include the American coot, turkey vulture, killdeer, mourning dove, Anna's hummingbird, black phoebe, barn swallow, bushtit, Bewick's wren, marsh wren, northern mockingbird, European starling, California towhee, song sparrow, Bullock's oriole, and house finch.

Riparian

Riparian habitat exists along the margins of the freshwater stormwater basins, and includes vegetative species such as coyote brush, ice plant, cottonwood, coast live oak, willow, elderberry, and fan palm. The same animal species observed in and around the freshwater stormwater basins, and expected to occur in the California annual grassland, are expected to occur in the riparian habitat. Riparian habitat is likely used as nesting habitat by tree and shrub-nesting species identified in California annual grassland and freshwater stormwater basin habitat discussions above.

Potential Wetland

Potential wetlands exist along the margins of the freshwater stormwater basins. These areas are considered potential wetlands because they are periodically inundated (particularly during wetter months of the year). Potential wetland areas include species such as bulrush and cattail. The Northern harrier was observed to fly over this habitat.

Emergent Wetland

An emergent wetland exists in the northwestern corner of Moffett Park. The wetland is surrounded by California annual grassland and is dominated by pickleweed. This habitat also consists of Bermuda grass, dodder, and whitetop. Water is directed to the wetland via a drainage ditch/canal.

Ditches and Channels

Moffett Park contains a series of ditches and canals. The Lockheed Martin property has ditches and canals that move water to the freshwater stormwater basins to the north. These features include vegetation typical of wetlands (such as nutsedge, rabbitsfoot grass, willow, elderberry, and cattail) and upland vegetation consistent with plant species found in California annual grassland. Two large canals (described below) run through the developed portion of Moffett Park.

Sunnyvale East Channel and Associated Channel

The Sunnyvale East Channel (shown on Figure 3.10-1) is a channelized waterway that feeds into the Bay by way of the eastern branch of Guadalupe Slough into Sunnyvale and appears to be tidally

influenced. The Sunnyvale East Channel supports vegetation on the banks including, but not limited, to celery, Bermuda grass, fennel, whitetop, curly dock, bulrush, and cattail. A secondary freshwater channel parallels the Sunnyvale East Channel. The secondary channel does not appear to be tidally influenced. This feature supports vegetation including nutsedge, ash, water primrose, sweet clover, bristly ox-tongue, olive, canary palm, coast live oak, castor bean, cattail, and fan palm.

Animal species observed include Canada goose, mallard, red-breasted merganser, great blue heron, great egret, snowy egret, California gull, Eurasian collared-dove, rock pigeon, mourning dove, black phoebe, California scrub jay, northern rough-winged swallow, bushtit, song sparrow, and California ground squirrels.

Sunnyvale West Channel

The Sunnyvale West Channel (shown on Figure 3.10-1) is a channelized waterway that feeds into the Bay by way of the western branch of Guadalupe Slough into Sunnyvale and is tidally influenced. Vegetation along this channel includes agapanthus, narrow-leaf milkweed, carob, nutsedge, fennel, bristly ox-tongue, English ivy, privet, whitetop, oleander, smilo grass, English plantain, coast live oak, bulrush, nasturtium, cattail, and fan palm.

Animal species observed include carp, mallard, snowy egret, California gull, Eurasian collared-dove, mourning dove, Anna's hummingbird, white-throated swift, black phoebe, California scrub jay, northern rough-winged swallow, bushtit, Bewick's wren, California towhee, house finch, and California ground squirrels.

Special Status Plants and Animals

Several species of plants and animals within the state of California have low populations, limited distributions, or both. Such species may be considered rare and are vulnerable to extirpation as the state's human population grows and habitats are converted. Numerous special status plants and animals are known to occur in the vicinity of Moffett Park. A search for special status plant and animal species in the California Natural Diversity Database (CNDDDB) identified 21 special status plant species and 41 animal species known to occur in the within five miles of Moffett Park. Based on the results of this search, two special status plant and 18 special status animal species have the potential to occur, and four special status animal species were considered present within Moffett Park. In addition, field visits were completed to identify plants and animals within Moffett Park. The results of the CNDDDB search and field visits are discussed below.

Special Status Plants

Special status plants that have the potential to occur in Moffett Park, particularly in the northwestern corner, include the alkali milk-vetch and Congdon's tarplant. Grasslands at Moffett Park's northwestern corner support potentially suitable habitat for Congdon's tarplant. The alkali milk-vetch species has been documented in alkaline habitats near the Bay. A list of other special status plant species that were determined to be absent from or unlikely to occur within Moffett Park is available in Table 2 of Appendix E. Refer to Figure 3.4-3 for a map showing special status plants in the vicinity of Moffett Park.

Special Status Animals

The white-tailed kite, golden eagle, saltmarsh common yellowthroat, and Northern harrier were observed at Moffett Park during a field visit. Suitable annual grassland habitat for the white-tailed kite and golden eagle, annual grassland and wetland habitat for the Northern harrier, and wetland habitat for the saltmarsh common yellowthroat are present at Moffett Park. For these reasons, these species are considered present in Moffett Park. Table 3.4-1 lists the special status animal species that occur or have the potential to occur within Moffett Park and includes a brief description of suitable habitats that support these species.

Special status animals that have the potential to occur in Moffett Park include the crotch bumble bee, western bumble bee, steelhead central California coast ESU, western snowy plover, California least tern, California black rail, California Ridgway's rail, bald eagle, tricolored blackbird, salt-marsh harvest mouse, western pond turtle, yellow rail, black skimmer, burrowing owl, Alameda song sparrow, Townsend's big-eared bat, pallid bat, and San Francisco dusky-footed woodrat. It is possible for these species to occur within Moffett Park given there is suitable habitat and the species have previously been observed at or near Moffett Park.

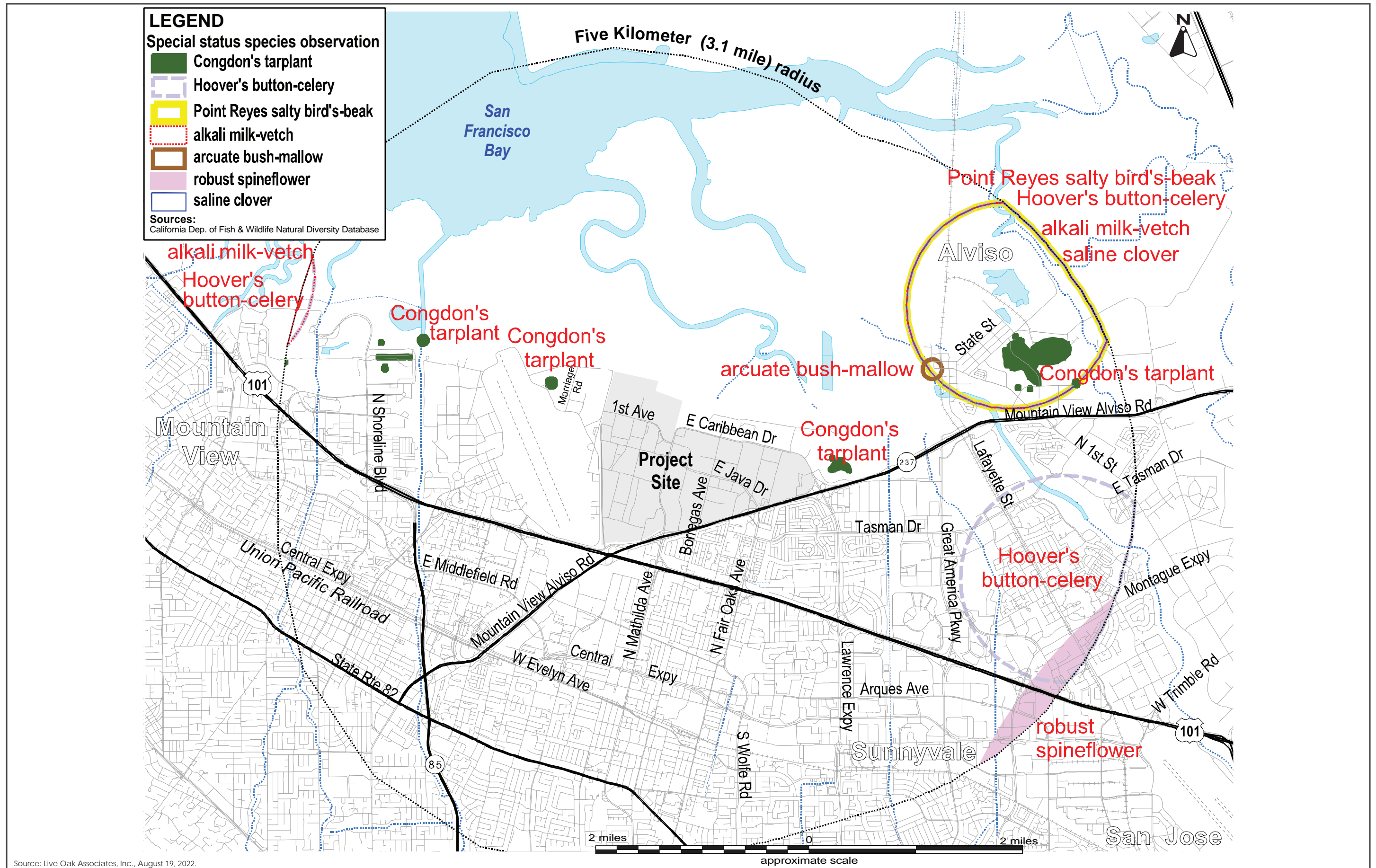
Refer to Figure 3.4-4 for a map showing special status animals within and in the vicinity of Moffett Park, based on findings of the CNDDB.

A list of other special status animal species that were determined to be absent from or unlikely to occur within Moffett Park (due to lack of suitable habitat and lack of documented occurrence in the vicinity of Moffett Park) is available in Table 2 of Appendix E.

Wildlife Movement Corridors

Habitat corridors are essential to terrestrial animals as they provide connectivity between and amongst core habitat areas (i.e., larger, intact habitat areas where species make their living). Connections between two or more habitat areas help ensure that genetic diversity is maintained, thereby diminishing the probability of demographic or geographic extinction. Movement corridors in California are typically associated with valleys, rivers, and creeks supporting riparian vegetation and ridgelines. With increasing encroachment of humans on wildlife habitats, it has become important to establish and maintain movement corridors and linkages for animals to be able to access locations containing different biotic resources that are essential to maintaining their life cycles.

The Bay supports migrating birds along the mass migration route known as the Pacific Flyaway. Moffett Park is adjacent to the Bay; thus, numerous avian species are expected to pass over or through the area for local, regional, and migratory movement on their way to and from the Bay. The Pacific Flyaway is a wide area that supports the movement of large numbers of migratory birds between the Arctic and South America. Due to Moffett Park's proximity to the Bay, Moffett Park may support seasonal movement of avian species not normally occurring in similar developed landscapes further from the Bay or other large water bodies. The Moffett Park area likely facilitates regional movements of avian species. However, Moffett Park does not facilitate large-scale movement of terrestrial animals or aquatic wildlife due to its isolation from undeveloped areas in the region.



SPECIAL STATUS PLANTS IN VICINITY OF MOFFETT PARK

FIGURE 3.4-3

Table 3.4-1: Special Status Animal Species that Occur or Potentially Occur at Moffett Park

Species (Status)	Habitat	Occurrence in Moffett Park
Alameda song sparrow (California Species of Special Concern)	Found in tidal salt marsh habitat with exposed ground for foraging with no more than 0.8 to 2.0 inches between bases of plants. Current range is generally only along the San Francisco Bay.	Not present in Moffett Park but has potential to occur. Suitable habitat for this species is present in the study area in the form of the riparian area of the settling ponds, canals, and East and West Sunnyvale Chanel. The nearest record is approximately two miles from Moffett Park.
Bald eagle (California Endangered, California Protected)	Breeding habitat is usually within 2.5 miles of a water source in a tall tree or cliffs; roosting in large numbers in winter is common.	Not present in Moffett Park but has potential to occur. The bald eagle may fly over Moffett Park occasionally to forage; this species has not been recorded breeding within three miles of Moffett Park. This species typically prefers to forage at reservoirs, lakes, and settling ponds.
Black skimmer (California Species of Special Concern)	Occurs on open sandy beaches, gravel bars, or floating vegetation/debris in saltmarshes. Nest on bare sand or gravel.	Not present in Moffett Park but has potential to occur. Black skimmers are known to occur at nearby Shoreline Lake (a little more than three miles away from Moffett Park), and although breeding habitat appears to be absent from Moffett Park, they may be expected to use the settling ponds from time to time.
Burrowing owl (California Species of Special Concern)	Found in open, dry grasslands, deserts and ruderal areas. Requires suitable burrows for nesting and cover. This species is often associated with California ground squirrels.	Not present in Moffett Park but has potential to occur. Suitable habitat for the burrowing owl exists within grasslands of Moffett Park; man-made burrow structures may also be available within Moffett Park. Additionally, a burrowing owl was recorded at Moffett Park in 1983, with a 2002 observation to the east of Moffett Park and a 2004 observation to the north of Moffett Park.
California black rail (California Protected, California Threatened)	Occurs in coastal and freshwater marshes, estuaries, and tidal slough areas.	Not present in Moffett Park but has potential to occur. The East and West Sunnyvale Channels may support some movement of the California black rail. These species may also occasionally use the settling ponds in Moffett Park due to the proximity to more suitable habitat. The nearest recorded observation is approximately 1.25 miles from Moffett Park.
California least tern	Occurs in central to southern California April to November. Found in and near coastal habitat including	Not present in Moffett Park but has potential to occur. Marginal breeding and foraging habitat is available along the settling ponds on

Table 3.4-1: Special Status Animal Species that Occur or Potentially Occur at Moffett Park

Species (Status)	Habitat	Occurrence in Moffett Park
(Federally Endangered, California Endangered, California Protected)	coasts, beaches, bays, estuaries, lagoons, lakes, and rivers.	the Lockheed Martin portion of Moffett Park. The nearest recorded observation of the California least tern is just over three miles away from Moffett Park.
California Ridgway’s rail (Federally Endangered, California Endangered, California Protected)	Occurs in tidal salt and brackish marshes of the San Francisco Bay and historically in tidal estuaries from Marin to San Luis Obispo Counties.	Not present in Moffett Park but has potential to occur. The East and West Sunnyvale Channels may support some movement of the California Ridgway’s rail. This species may also occasionally use the settling ponds due to the proximity to more suitable habitat. The nearest recorded observation is approximately one mile from Moffett Park.
Golden eagle (California Protected)	Typically frequents rolling foothills, mountain areas, sage-juniper flats, and deserts.	Present in Moffett Park. Suitable breeding habitat is largely absent from the site; however, suitable foraging habitat occurs within the grasslands in and adjacent to Moffett Park. A golden eagle was observed perched on a tall building within Moffett Park during field visits.
Northern harrier (California Species of Special Concern)	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; uncommon in wooded habitats.	Present in Moffett Park. This species was observed over Moffett Park during a field visit flying over the California annual grassland, potential wetlands, and freshwater stormwater basins.
Pallid bat (California Species of Special Concern)	Occurs in grasslands, chaparral, woodlands, and forests; most common in dry rocky open areas providing roosting opportunities. Roost sites include caves, mines, rock crevices, and large cavities of trees.	Not present in Moffett Park but has potential to occur. Suitable roosting habitat in Moffett Park includes roofs, attics, lighting fixtures, loose paneling, and other features on buildings. Some trees may also provide suitable roosting habitat. The nearest documented occurrence of the pallid bat is nearly three miles from Moffett Park.
San Francisco dusky-footed woodrat (California Species of Special Concern)	Found in hardwood forests, oak riparian, and shrub habitats.	Not present in Moffett Park but has potential to occur. Suitable riparian habitat is present in Moffett Park. The nearest documented occurrence is more than three miles from Moffett Park.
Salt-marsh common yellowthroat	Breeds in herbaceous wetlands and salt marshes of the San Francisco Bay Area, can also be found in non-breeding along the California coast. Nests in thick	Present in Moffett Park. This species was observed during a field visit at the freshwater stormwater basins in the northwestern corner of Moffett Park. Suitable habitat for this species is present in Moffett Park

Table 3.4-1: Special Status Animal Species that Occur or Potentially Occur at Moffett Park

Species (Status)	Habitat	Occurrence in Moffett Park
(California Species of Special Concern)	herbaceous vegetation up to one meter above the ground or over water.	in the form of the riparian area of the settling ponds, canals, and East and West Sunnyvale Channels.
Salt-marsh harvest mouse (Federally Endangered, California Endangered, California Protected)	Occurs in the salt and brackish marshes of Corte Madera, Richmond, and South San Francisco Bay, especially those with pickleweed and saltgrass.	Not present in Moffett Park but has potential to occur. This species is mainly restricted to areas with pickleweed and saltgrass. The emergent wetland in the northwestern corner of the site supports a large area of pickleweed, which is isolated from other pickleweed habitats outside of Moffett Park; therefore, habitat within the emergent wetland is moderately suitable for the salt-marsh harvest mouse. The nearest recorded observation of this species is within one mile from Moffett Park in a tidal marsh plain.
Steelhead Central California Coast ESU (Federally Threatened)	Spawn in freshwater rivers or streams in the spring and spend the remainder of their life in the ocean.	Not present in Moffett Park but has potential to occur. Since the East and West Sunnyvale Channels are connected to the San Francisco Bay, steelhead may move upstream within those channels on the site. These channels, however, are not considered to be critical habitat for the steelhead. The remaining hydrological features within Moffett Park lack hydrological connectivity to the San Francisco Bay and, therefore, steelhead would not be expected to occur in those areas. The closest documented observation of this species is more than three miles from Moffett Park.
Townsend’s big-eared bat (California Species of Special Concern)	Primarily a cave-dwelling bat that may also roost in buildings, bridges, rock crevices, and hollow trees. Occurs in a variety of habitats.	Not present in Moffett Park but has potential to occur. Suitable roosting habitat in Moffett Park includes roofs, attics, lighting fixtures, loose paneling, and other features on buildings. Some trees may also provide suitable roosting habitat. The nearest documented occurrence of the Townsend’s big-eared bat is nearly three miles from Moffett Park.
Tricolored blackbird (California Species of Special Concern, California Threatened)	Breeds near fresh water in dense emergent vegetation.	Not present in Moffett Park but has potential to occur. Suitable nesting habitat for this species is present in the study area in the form of bulrush and cattails along the settling pond edges and the canals and

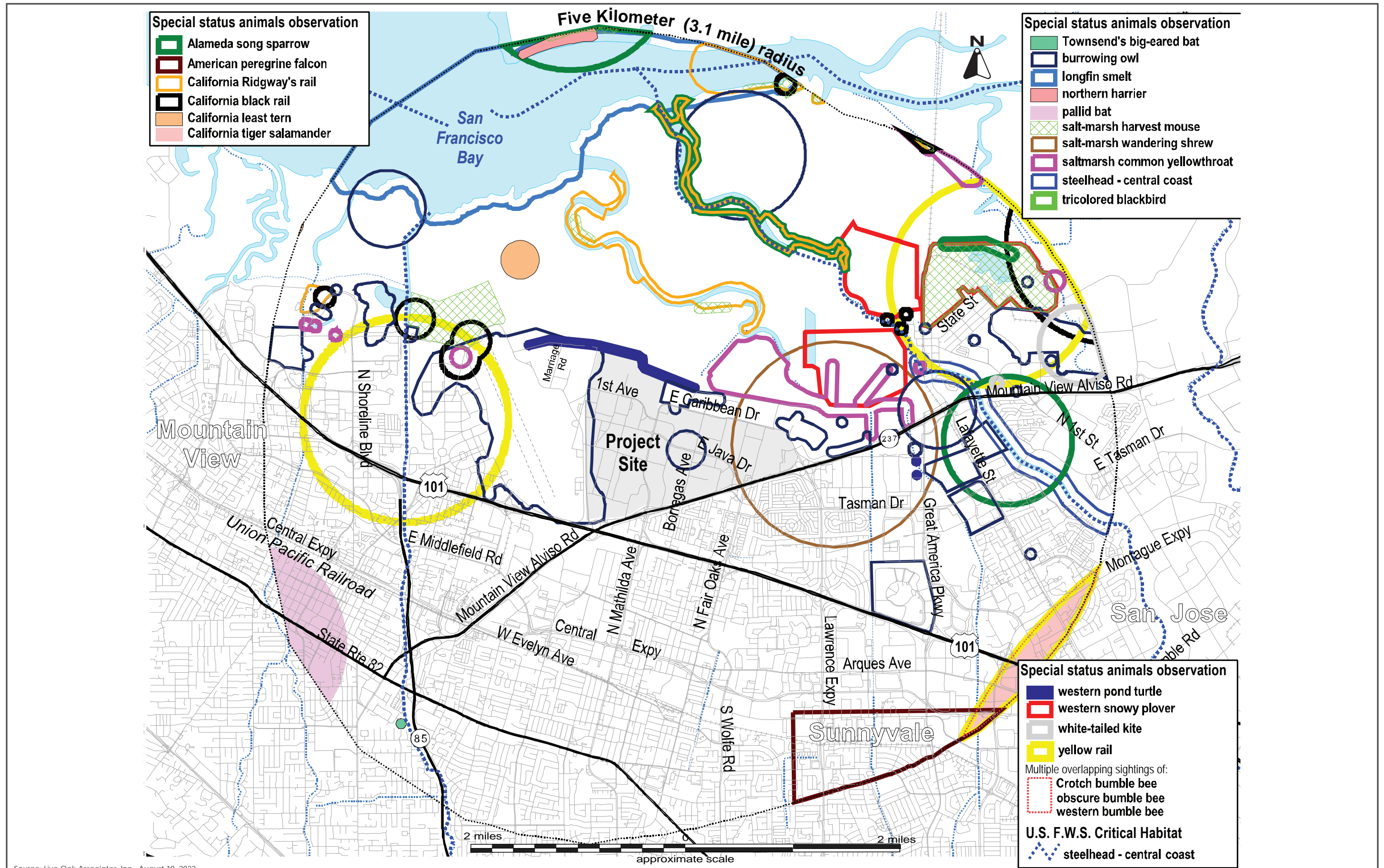
Table 3.4-1: Special Status Animal Species that Occur or Potentially Occur at Moffett Park

Species (Status)	Habitat	Occurrence in Moffett Park
		East and West Sunnyvale Channels. The nearest documented observation of this species is more than three miles from Moffett Park.
Western bumble bee (California Candidate Endangered)	<p>In California, mainly occurs within the coastal and Sierra Nevada ranges within meadows and grasslands and some natural areas within urban environments.</p> <p>The species was historically found from the Channel Islands to the northern California border. The flight period is February to late November, peaking in late June and late September.</p> <p>The species constructs nests underground in animal burrows on west and south-west facing slopes. Overwintering sites are likely in friable soils or in debris or leaf litter.</p>	Not present in Moffett Park but has potential to occur. Natural lands on the northern side of Lockheed Martin property are suitable for the crotch bumble bee. The nearest documented observation of this species is more than three miles from Moffett Park.
Western pond turtle (California Species of Special Concern)	Intermittent and permanent waterways including streams, marshes, rivers, ponds, and lakes. Open slow-moving water of rivers and creeks of central California with rocks and logs for basking.	Not present in Moffett Park but has potential to occur. Suitable habitat for this species occurs in Moffett Park in the form of the settling ponds, seasonal wetland, stormwater canals, and East and West Channel. The nearest recorded location of this species is adjacent to Moffett Park.
Western snowy plover (Federally Threatened, California Species of Special Concern)	<p>Uses man-made agricultural wastewater ponds and reservoir margins.</p> <p>Breeds on barren to sparsely vegetated ground at alkaline or saline lakes, reservoirs, ponds, and riverine sand bar.</p>	Not present in Moffett Park but has potential to occur. Marginal breeding and foraging habitat is available along the settling ponds on the Lockheed Martin portion of Moffett Park. The nearest recorded observation of the western snowy plover is less than two miles from Moffett Park.
White-tailed kite (California Species of Special Concern)	Open grasslands and agricultural areas throughout central California.	Present in Moffett Park. This species was observed in the developed area of Moffett Park during field visits.

Table 3.4-1: Special Status Animal Species that Occur or Potentially Occur at Moffett Park

Species (Status)	Habitat	Occurrence in Moffett Park
Yellow rail (California Species of Special Concern)	Frequents grassy meadows and sedge marshes with dense cover, breeds in marshes.	Not present in Moffett Park but has potential to occur. The East and West Sunnyvale Channels may support some movement of the yellow rail. They may also occasionally use the settling ponds in Moffett Park due to the proximity to more suitable habitat. The nearest recorded observation is approximately 1.75 miles from Moffett Park.

Source: Live Oak Associates, Inc. *Moffett Park Specific Plan Biological Evaluation*. September 9, 2022.



SPECIAL STATUS ANIMALS IN MOFFETT PARK

FIGURE 3.4-4

Federal and State Protected Wetlands

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and carry ephemeral flows. Jurisdictional waters include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the USACE, CDFW, and RWQCB as described under Section 3.4.1.1 Regulatory Framework. The Sunnyvale East and West Channels, as well as other canals, settling ponds, emergent wetland, and other potential wetlands in Moffett Park may be considered jurisdictional waters of the U.S. and/or state.

3.4.2 Impact Discussion

For the purpose of determining the significance of the project's impact on biological resources, would the project:

- 1) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?
- 2) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS?
- 3) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?
- 4) 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?
- 5) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
- 6) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

3.4.2.1 *Project Impacts*

Impact BIO-1: The project would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS. (**Less than Significant Impact**)

Moffett Park is mostly developed with office/industrial/R&D and commercial buildings and has a limited, undeveloped area with wetlands, stormwater basins, and grassland in the northwestern corner which is where most of the special-status plant and animal species have the potential to occur.

As discussed in Section 3.4.1.2 Existing Conditions, there is a potential for two special status plant and 18 special status animal species to occur in Moffett Park. The two special status plant species have the potential to occur in the northwestern corner of Moffett Park and no special-status plant

species have the potential to occur on the developed portion of the Moffett Park (which makes up most of Moffett Park) due to the lack of suitable habitat. All except for some special status birds and nesting migratory birds (including the white-tailed kite, Western snowy plover, California least tern, California black rail, California Ridgway's rail, bald eagle, and tricolored blackbird), burrowing owls, and roosting bats are absent from the developed portion of Moffett Park. The potential impacts from implementation of the proposed Specific Plan to these species are described below.

Special Status Plants

The alkali milk-vetch and Congdon's tarplant have the potential to occur within the northwestern corner of Moffett Park; however, the extent to which these species may occur is not known. Future development should be designed and constructed to avoid impacts to special status species. If impacts cannot be avoided, measures shall be implemented to reduce the impacts to a less than significant level. Future development projects proposed in the northwest section of Moffett Park would be required to complete focused surveys to determine the presence and absence of these species, in compliance with the proposed Specific Plan Project Requirement listed below.

Special Species Project Requirements:

- **10.3.5-1: Special Status Plants.** At the time development is proposed, focused special status plant surveys shall be completed by a qualified biologist for alkali milk-vetch and Congdon's tarplant in the grasslands and vernal mesic areas (e.g., areas with a moderate supply of moisture) of Moffett Park's northwestern corner. These surveys shall be completed prior to ground disturbance and shall be timed to occur during the appropriate blooming season for each species. Surveys conducted in or around April, June, and September would be sufficient to confirm their presence or absence; the timing and number of surveys shall be adjusted based on environmental conditions that may affect blooming in a particular year. The surveys shall follow protocols outlined in the "California Native Plant Society Botanical Survey Guidelines" and the California Department of Fish and Wildlife's (CDFW's) "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities." If the alkali milk-vetch and Congdon's tarplant are determined absent, no additional measures are required.

If the alkali milk vetch and/or Congdon's tarplant are present, to the maximum extent practicable, the project shall be designed to avoid populations of special status plants. If the project cannot be redesigned to avoid impacts to the identified species, and these impacts are found to be significant as defined by CEQA, then compensation measures shall include development of an on-site restoration plan for these species. The determination of the significance of impacts shall be based on, but not limited to, criteria such as the nature of the habitat impacts (i.e., temporary versus permanent impacts), extent of the species' range, relative abundance of regional populations of the species in its range, and the number of plant populations in Moffett Park. Areas to be preserved on-site as open space are expected to be able to fully accommodate any compensation measures for these species. If compensation measures cannot be fully accommodated on-site, then off-site compensatory mitigation (in the immediate vicinity of the identified populations(s), where feasible) would need to be considered. At a minimum, the restoration plan shall contain the following elements:

- Location of restoration areas,
- Propagation and planting techniques to be employed for the restoration effort,
- Timetable for implementation,
- Monitoring plan and performance criteria,
- Adaptive management techniques, and
- A site maintenance plan.

A report would be prepared summarizing the results of the surveys and submitted to the City, along with the restoration plan (if required). The restoration plan shall be reviewed and approved by the City for approval prior to the start of project construction. The objective of the restoration plan would be to replace the special status plants and habitat lost during project buildout at proportional basis to the impact. This would incorporate both the spatial and relative density of the impacted plant and its habitat. Success of the restoration effort would be based on a five-year monitoring program.

With the implementation of the proposed Specific Plan Project Requirement 10.3.5-1, future development under the proposed Specific Plan would result in a less than significant impact on special status alkali milk-vetch and Congdon’s tarplant by ensuring project design avoids these habitats, or implementing restoration plans. If focused rare plant surveys determine that these species are absent from areas proposed for future development, then there would be no impact to these species. **(Less than Significant Impact)**

Special Status Animals

Future development should be designed and constructed to avoid impacts to special status species. If impacts cannot be avoided, measures shall be implemented to reduce the impacts to a less than significant level. Potential impacts of future development under the Specific Plan to special status animal species that have the potential to occur or are present within Moffett Park are discussed below.

Burrowing Owl

The California annual grassland and ruderal habitats within Moffett Park provide suitable habitat for burrowing owls. Furthermore, burrowing owls are known to occur in the higher quality habitat within the northern area of Moffett Park. As such, burrowing owls could use the ruderal areas for wintering or breeding roost. Future development projects would comply with the following Specific Plan Project Requirement pertaining to burrowing owls.

Special Species Project Requirements:

- **10.3.5-2:** Burrowing Owl Survey. Preconstruction surveys shall be completed by a qualified biologist in areas where burrowing owl habitat occurs such as ruderal lots (not including impervious surfaces) no more than 14 days in advance of the on-set of ground-disturbing activity. These surveys shall be conducted in accordance with the methods described in the

Staff Report on Burrowing Owl Mitigation or the most recent California Department of Fish and Wildlife (CDFW) guidelines at the time development is proposed. The surveys shall cover all areas of suitable burrowing owl habitat within the construction zones.

- If preconstruction surveys are undertaken during the non-breeding season (September 1 through January 31), any burrows occupied by resident owls in areas planned for construction shall be protected by a construction-free buffer with a radius of 150 to 250 feet around each active burrow, with the required buffer distance to be determined in each case by a qualified biologist. Passive relocation of resident owls is not recommended by the CDFW where it can be avoided. If passive relocation is unavoidable, resident owls may be passively relocated according to a relocation plan prepared by a qualified biologist.
- If preconstruction surveys are undertaken during the breeding season (February 1 through August 31) and active nest burrows are located within or near construction zones, a construction-free buffer of 250 feet shall be established around all active owl nests. The buffer areas shall be enclosed with temporary fencing, and construction equipment and workers shall not be allowed to enter the enclosed setback areas. Buffers shall remain in place for the duration of the breeding season. After the breeding season (i.e., once all young have left the nest), passive relocation of any remaining owls may take place but only under the conditions described below.

If breeding owls are detected, suitable compensation shall be provided. Compensation could include collaborating with existing protected areas for the burrowing owls along the San Francisco Bay or collaborating and interacting with the Santa Clara Valley Habitat Plan (Habitat Plan) burrowing owl program. Although the City of Sunnyvale is not within the Habitat Plan area, it is within the extended area for preserving habitat to assist with conservation of burrowing owls for the Habitat Plan; the applicant should collaborate with the Santa Clara Valley Habitat Agency to define a suitable and acceptable compensation strategy. This most likely would result in the applicant funding a defined conservation need for the Habitat Plan. Providing protection in the form of deed restrictions or establishing a conservation easement in the northwestern “natural” area would also help to provide suitable compensation for breeding owls observed within the developed portion of Moffett Park.

A report shall be submitted to the City summarizing the results of the survey, any buffer zones, and measures implemented to prevent impacts to nesting burrowing owls and their habitat.

With the implementation of the above proposed Specific Plan Project Requirement, future development in Moffett Park would not result in impacts to burrowing owls by ensuring species avoidance or careful handling for relocation during construction. **(Less than Significant Impact)**

Bumble Bees

Moffett Park provides potentially suitable habitat for the Crotch bumble bee and western bumble bee, which have been petitioned to be listed species, in the natural lands on the northern side of the Lockheed Martin property. The remainder of Moffett Park is not suitable for these species. Future development projects would comply with the following Specific Plan Project Requirement pertaining to bumble bees.

Special Species Project Requirements:

- **10.3.5-3: Bumble Bees Survey.** At the time development is proposed in the potentially suitable habitat in the natural lands on the northern side of the Lockheed Martin property, four separate surveys shall be completed by a qualified biologist when the ambient temperatures are greater than 60 degrees Fahrenheit, wind speeds are ideally less than eight miles per hour (mph), and skies are clear enough to see your shadow. Bumble bees typically have an active season, or flight period in warmer months. The flight periods of the two different bumble bees which have potential to occur in Moffett Park are: (1) the Crotch bumble bee's flight period is typically late February through late October, peaking in early April with a second pulse in July; and 2) the western bumble bee's flight period is typically early April to early November, with workers peaking in early August and males peaking in late September; the queens' flight period is early February through late November, peaking in late June and late September. The survey period should be from March through September and should aim for a survey in April, July, August, and September at the least; surveys will depend on local temperatures to identify the specific active season for any given area.

The surveys shall be completed between 12:00 PM and 4:00 PM, but may be completed earlier if the weather conditions are good. The surveys shall be completed by walking transects spaced up to approximately 100 feet apart within the affected habitat. Transect widths shall be reduced if needed, so there is complete visual coverage of potential nest, overwintering, and forage sites. These bumblebees are typically found in potential nesting, overwintering, and forage habitat within brush piles, in un-mowed or overgrown areas, hollow logs, abandoned rodent burrows, but can also nest above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees, as well as milkweeds, daisies, lupines, burclovers, phacelias, and salvias. To the degree any of this habitat exists onsite, focused surveys shall occur within suitable habitat. If possible, bumble bee species shall be determined, the location of potential or known Crotch bumble bees and western bumble bees shall be recorded via a handheld GPS unit, and a representative picture shall be taken. No bumble bees shall be handled to determine species.

If protected bumble bees are observed on the project site, they shall be avoided via buffer zones (the size of which would be determined at the time surveys are prepared). If protected bumble bees are observed on the site or adjacent to the site and they cannot be fully avoided, construction shall occur during a period of time that minimizes the effect of dust on their lifecycles (which would be determined at the time surveys are prepared). If protected bumble bees are observed on the site, compensation may be necessary; any habitat compensation should protect suitable habitat proportional to the impact.

Following completion of the surveys, a report shall be prepared that documents the methods and summarizes the results of the survey which would identify any buffer zones, and measures to prevent impacts to protected bumble bees. The report shall be submitted to the City prior to issuance of grading permits.

With the implementation of the above proposed Specific Plan Project Requirement, future development in Moffett Park would not result in impacts to bumblebees by ensuring species avoidance during construction. **(Less than Significant Impact)**

Steelhead Central Coast California ESU

Moffett Park provides potentially suitable habitat for steelhead in some of the channels and canals. Although no substantial changes to the channels are assumed under the Specific Plan, future pedestrian bridges could be constructed at the channels and canals. Future development projects with temporary or minor encroachment in channels or canals, as described under Impacts BIO-2 and BIO-3, would comply with the following Specific Plan Project Requirement pertaining to steelhead.

Special Species Project Requirements:

- **10.3.5-4:** Steelhead. Plans shall contain the following elements:
 - All work adjacent to waterways which may support steelhead shall use adequate silt fencing and Stormwater Pollution Prevention Plan (SWPPP) measures to ensure debris (i.e., soil) does not enter the waterway.
 - All work over waterways (e.g., bridge work) shall use netting to ensure items such as tools and pollutants do not fall into the waterway.
 - All work in or around waterways shall ensure an appropriate spill kit is onsite to avoid polluting the waterway.

With the implementation of the above proposed Specific Plan Project Requirement, future development in Moffett Park with temporary or minor encroachment in channels or canals would not result in impacts to steelhead by ensuring no construction debris or pollutants that could harm the species enter the waterway. **(Less than Significant Impact)**

Western Pond Turtle

Moffett Park provides potentially suitable habitat for the western pond turtle within the habitat types containing water (see Figure 3.4-1). Future development projects would comply with the following Specific Plan Project Requirement pertaining to the western pond turtle.

Special Species Project Requirements:

- **10.3.5-5:** Western Pond Turtle. Pre-construction surveys shall be completed by a qualified biologist within 250 feet of a waterway if development is proposed in or within 250 feet of a waterway within/no sooner than 48 hours of construction to ensure that western pond turtles

are absent from the construction area. If western pond turtles are present, the turtle shall be able to leave on its own, or a biologist possessing all necessary permits shall relocate them.

A report shall be prepared summarizing the results of the pre-construction survey which outlines recommended next steps, including the following measures to prevent impacts to the western pond turtle. The report shall be submitted to the City prior to the issuance of grading permits.

Immediately following the pre-construction surveys, the construction zone shall be cleared, and silt fencing shall be erected and maintained around construction zones to prevent western pond turtles from moving into these areas.

A biological monitor shall be present onsite during particular construction activities, including initial silt fence installation along water features, to ensure western pond turtles are not harmed, injured, or killed during project buildout.

With the implementation of the above proposed Specific Plan Project Requirement, future development in Moffett Park would not result in impacts to the western pond turtle by completing pre-construction surveys to determine if the western pond turtle is present and properly excluding and preventing access by the western pond turtle to construction areas. **(Less than Significant Impact)**

Roosting Bats

Moffett Park provides potentially suitable habitat for roosting bats (including the Townsend's big-eared bat and pallid bat) in the form of buildings, bridges, and trees. Future development projects would comply with the following Specific Plan Project Requirements pertaining to roosting bats.

Special Species Project Requirements:

- **10.3.5-6: Roosting Bat Assessment.** A bat assessment shall be completed by a qualified biologist and submitted to the City for approval, no more than 30 days prior to removal of trees or buildings. If a non-breeding bat colony is found, or if the tree supports suitable roosting habitat that cannot be fully visibly surveyed (such as peeling bark or cavities in trees, especially high up in trees), the individuals shall be humanely evicted via two-step removal as directed by a qualified biologist to ensure no harm or "take" would occur to any bats as a result of demolition activities. Two-step removal shall occur during the volant seasons in fair weather and outside of the maternity season for bats (March 1 to April 15 or September 1 to October 15). Two-step removal consists of one day of disturbance and removing portions of buildings or trees, as directed by a qualified biologist, followed by the removal of that building or tree the following day; the goal is to disturb the bats and render the trees and structures unsuitable for them. This passive effort allows bats using these structures or trees to nocturnally relocate to a suitable nearby roost. Measures would not be required for the loss of roosting or foraging habitat for bats, as such habitat is abundantly available regionally.

If a breeding colony is observed, two-step removal shall not occur until breeding season is over (September 1) or until all young are independent of their parents. An appropriate buffer, as determined by a qualified biologist, based on the site conditions and location of the maternity colony would be established. This buffer may be up to 350 feet, depending on site-specific conditions, and shall remain until breeding season is over (September 1) or until all young are independent of their parents.

A report shall be submitted to the City summarizing the results of the survey, any buffer zones, and measures to prevent impacts to roosting bats.

Measures to mitigate the loss of roosting or foraging habitat for bats would not be required, as such habitat is abundantly available regionally. With the implementation of the above proposed Specific Plan Project Requirement, future development in Moffett Park would not result in impacts to roosting bat individuals by ensuring proper handling and removal from the site if necessary. (**Less than Significant Impact**)

Salt-Marsh Harvest Mouse

The emergent wetland habitat located in the northwestern corner of Moffett Park provides potentially suitable habitat for the salt-marsh harvest mouse (see Figure 3.4-1). Future development projects would comply with the following Specific Plan Project Requirement pertaining to the salt-marsh harvest mouse.

Special Species Project Requirements:

- **10.3.5-7:** Salt-marsh Harvest Mouse Survey. A habitat survey shall be completed by a qualified biologist 30 days prior to work within 250 feet of the emergent wetland habitat located in the northeastern corner of Moffett Park to confirm current habitats. If pickleweed or salt grass habitats are within the work area, these areas shall be avoided, and a report shall be submitted to the City summarizing the results of the habitat survey which would identify any buffer zones and expected monitoring efforts to prevent impacts to the salt-marsh harvest mouse and their habitat.

A qualified biologist shall monitor work occurring within 50 feet of habitat identified as suitable for the salt-marsh harvest mouse. This monitor shall stop work should a salt-marsh harvest mouse be detected in the work area until the individual moves out of the construction area and into suitable habitat on its own.

Should monitoring be required, a report shall be submitted to the City summarizing the results of the monitoring, including any observation of the salt-marsh harvest mouse.

With the implementation of the above proposed Specific Plan Project Requirement, future development in Moffett Park would not result in impacts to the salt-marsh harvest mouse by ensuring

no construction work takes place in or near its habitat and by monitoring the population to ensure none are harmed. **(Less than Significant Impact)**

San Francisco Dusky-Footed Woodrat

Moffett Park provides potentially suitable riparian habitat for the San Francisco dusky-footed woodrat. Future development projects would comply with the following Specific Plan Project Requirement pertaining to the San Francisco dusky-footed woodrat.

Special Species Project Requirements:

- **10.3.5-8:** San Francisco Dusky-Footed Woodrat Survey. A qualified biologist shall conduct a preconstruction survey for San Francisco dusky-footed woodrat nests no more than 30 days and no less than 14 days prior to the onset of construction activities. This survey timing allows for the scheduling of and deconstruction of any woodrat nests which need relocating. The survey shall encompass all construction zones and surrounding lands within 50 feet. If no woodrat nests are present, no additional measures are required.

Identified nests shall be avoided, where possible. If avoidance is not possible, the nest(s) shall be manually deconstructed by a qualified biologist when helpless young are not present, typically during the non-breeding season (October 1 through January 31). The nest shall be reconstructed in a nearby suitable area.

If it is determined during the preconstruction survey that young may be present, a suitable buffer, delineated with flagging, depending on the timing within the breeding season (ranging from 15 to 50 feet) shall be established around the nest by a qualified biologist and maintained during construction until the young are independent and have successfully moved from the nest on their own.

A report shall be submitted to the City summarizing the results of the survey and identifies any buffer zones and measures implemented to prevent impacts to San Francisco dusky-footed woodrats.

With the implementation of the above proposed Specific Plan Project Requirement, future development in Moffett Park would not result in impacts to the San Francisco dusky-footed woodrat by ensuring species avoidance during construction. **(Less than Significant Impact)**

Migratory Nesting Birds and Raptors

The white-tailed kite, golden eagle, saltmarsh common yellowthroat, and Northern harrier are present in Moffett Park. The saltmarsh common yellowthroat and Northern harrier were observed in the northwestern corner of the Moffett Park and the golden eagle and white-tailed kite were observed in the developed portion of Moffett Park. Moffett Park has the potential to support migratory nesting birds and raptors including the Western snowy plover, California least tern, California black rail, California Ridgway's rail, bald eagle, and tricolored blackbird. Active bird nests may occur on the ground, in grasslands, in shrubs or trees, on power poles, on bridges, and on buildings. Future

development projects would comply with the following Specific Plan Project Requirement pertaining to migratory nesting birds and raptors.

Special Species Project Requirements:

- **10.3.5-9: Construction During Migratory Bird and Raptor Nesting Season.** To the extent feasible, construction activities shall be scheduled to avoid the nesting season. If construction activities are scheduled to take place outside the nesting season, all impacts to nesting birds protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Code shall be avoided. The nesting season for most birds in Santa Clara County extends from February 1 through August 31.

If initial site disturbance activities, including tree, shrub, or vegetation removal, are to occur during the bird breeding season (February 1 through August 31), a qualified biologist shall conduct a pre-construction survey for nesting migratory birds and raptors. The survey for nesting migratory birds shall cover the project site itself and the immediate vicinity of the site, with the survey for nesting raptors encompassing the site and surrounding lands within 250 feet, where accessible. The survey shall occur within seven days prior to the onset of ground disturbance.

If active nests are detected, appropriate construction-free buffers shall be established. The buffer sizes shall be determined by the project biologist based on species, topography, and type of activity occurring in the vicinity of the nest. Typical buffers are 25 to 50 feet for passerines and up to 250 feet for raptors. The project buffer shall be monitored periodically by the project biologist to ensure compliance. After the nesting is completed, as determined by the biologist, the buffer shall no longer be required.

A report shall be submitted to the City summarizing the results of the survey, identifies any buffer zones, and outlines measures implemented to prevent impacts to nesting birds.

With the implementation of the above proposed Specific Plan Project Requirement, future development in Moffett Park would not result in impacts to migratory nesting birds and raptors by ensuring no construction work takes place in or near its habitat. **(Less than Significant Impact)**

Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS. **(Less than Significant Impact)**

Moffett Park includes riparian habitat around the settling ponds, and wetlands, including man-made settling ponds, a seasonal wetland, manmade stormwater canals, and the Sunnyvale East and West Channels. The East and West Channels traverse Moffett Park from south to north in two places. The remaining features occur on the Lockheed Martin property, with the settling ponds and seasonal wetland occurring within the undeveloped area in the northern and northwestern areas of Moffett Park.

The extent to which development within or near riparian habitats or other sensitive natural communities would occur is unknown at this time; this would be determined at the time that specific developments are proposed. However, potential impacts to the riparian areas of manmade canals and channels from implementation of the proposed Specific Plan may include, but are not limited to, footbridges, vehicular bridges, or other infrastructure constructed over the waterways. Such impacts may require future developers to provide suitable avoidance, minimization, and mitigation measures at the time a specific development is proposed. Accordingly, future development projects would comply with Specific Plan Project Requirement pertaining to riparian habitat and sensitive natural communities, including the following.

Special Species Project Requirements:

- **10.3.5-10:** During the environmental review process for future developments proposed within 250 feet of riparian areas, a qualified biologist shall determine if the project would impact riparian habitat and the project shall be designed to avoid impacts. If impacts cannot be avoided, the project shall mitigate for impacts to riparian habitat by a measure of at least 1:1. This can consist of on-site or off-site planting mitigation or fees paid to a suitable mitigation bank. For on- or off-site mitigation plantings, a restoration plan, including success criteria, must be written, which would include a minimum monitoring period of five years. Regulatory permits may be required for impacts to riparian habitat from the U.S. Army Corps of Engineers (USACE), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (RWQCB).

In addition, the Specific Plan (Chapter 6) includes standards to protect sensitive habitat (including riparian and wetland habitats) within the ECD. These design standards include the following:

- **Building Placement.** No private development shall be located within the ECD. Buildings service the ECD such as public restrooms, restoration maintenance buildings, interpretive centers, or stormwater pumps shall be located to minimize impact on sensitive habitat areas.
- **Impervious Area.** No new impervious surface shall be constructed closer to the delineated wetlands than existing impervious surfaces, and no net increase impervious surface shall occur within the ECD.
- **Landscape Design and Lighting within the ECD.** Landscape design shall be per Section 6.6.6 Landscape Design in the Specific Plan. Landscape areas adjacent within the ECD shall be designed to provide high-quality habitat and shall be comprised of 100 percent native species per Appendix B of the Specific Plan and per qualified restoration ecologist. Landscape design shall be designed by a qualified restoration ecologist to ensure that the design is consistent with best practices for ecological habitat restoration including the planting plan (plant palettes, structure, and species distribution) and other work necessary for successful native habitat restoration. Landscape lighting shall not be installed within the Ecological Enhancement Area.
- **Landscape Design and Lighting within 150 feet of the ECD Boundary.** Landscape design shall be per Section 6.6.6 Landscape Design in the Specific Plan. Landscape areas adjacent to the ECD shall be designed to provide high-quality habitat and shall be comprised of 100 percent native species per Appendix B of the Specific Plan. Landscape design shall be reviewed by a qualified ecologist to ensure that the design is consistent with best practices for

urban ecology including the planting plan (plant palettes, structure, and species distribution) and the lighting plan. Landscape lighting shall be per Section 6.6.9 Exterior Lighting of the Specific Plan.

- **Raptor Perches.** Raptor perch deterrents should be placed at the edges of new building roofs or other structures (e.g., light poles or electrical towers) within the ECD and within a 150 feet buffer from the ECD.

With the implementation of the above proposed Specific Plan Policy and Specific Plan design standards, future development in Moffett Park would result in minimal impacts to riparian habitat and natural communities by incorporating restoration plans at a 1:1 ratio and complying with the protective ECD building placement, impervious area, landscaping and lighting standards. (**Less than Significant Impact**)

Impact BIO-3: The project would not have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. (**Less than Significant Impact**)

Moffett Park includes wetland features that may be jurisdictional waters of the U.S. and/or waters of the state. Future development may impact manmade canals and channels in Moffett Park. Future development projects would comply with the following Specific Plan Policy to reduce any potential impacts to state or federally protected wetlands.

Special Species Project Requirements:

- **10.3.5-11:** During the environmental review process for future developments containing a wetland or potential wetland on the project site, a formal aquatic resources delineation shall be completed and submitted to the USACE for verification of the presence and extent of jurisdictional waters within Moffett Park. Information about the riparian habitat shall be collected during the site visit for this work as well to evaluate potential impacts to riparian habitat on a project-specific level.

Future development must comply with all state and federal laws and regulations related to disturbance to jurisdictional waters. If it is determined that wetlands within Moffett Park under the USACE's and/or RWQCB's jurisdiction, future project developers would be required to obtain a Section 404 Clean Water Act permit from the USACE, Section 401 water quality certification from the RWQCB, and/or Section 1602 Streambed Alteration Agreement from the CDFW or demonstrate that such permits are not necessary prior to initiating any construction-related activities within jurisdictional waters. Future project developers shall satisfy all agency requirements to mitigate aquatic impacts. These may include avoidance of aquatic resources, measures to minimize impacts, or compensation (e.g., habitat enhancement) for impacts.

In addition, future construction would likely require grading that leaves the soil of construction zones barren of vegetation and, therefore, vulnerable to erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, urban runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy

metals, etc. Without proper control, these pollutants could eventually be carried to sensitive wetland habitats used by a diversity of native wildlife species. To reduce water quality impacts during construction, future development projects that would disturb one acre or more of soil are required to comply with the statewide National Pollutant Discharge Elimination System (NPDES) Construction General Permit to reduce runoff and pollution in runoff from construction activities, including preparation of a NOI and Stormwater Pollution Prevention Plan (SWPPP), and implementation of stormwater control Best Management Practices (BMPs) discussed in further detail in Section 3.10 Hydrology and Water Quality.

With implementation of the proposed Specific Plan Project Requirements 10.3.5-10 and 10.3.5-11 and standards pertaining to state and federal wetland permit requirements, wetland habitats, and construction NPDES requirements, future development projects would reduce potential impacts to state or federally protected wetlands to less than significant levels by ensuring potentially harmful pollutants do not enter waterways. Thus, implementation of the proposed Specific Plan would result in a less than significant impact. **(Less than Significant Impact)**

Impact BIO-4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. **(Less than Significant Impact)**

Movement of Native and Migratory Birds

Buildout of the Specific Plan, which would span over 20 years, would not constrain native wildlife movement for most animals as Moffett Park does not support a major terrestrial or aquatic wildlife movement corridor. Any terrestrial local wildlife moving through Moffett Park would continue to have the ability to move through the area once the Specific Plan has been fully built out. Future Specific Plan Project Requirements 10.3.5-2 through 10.3.5-8 (discussed under Impact BIO-1) would be implemented to reduce impacts to the movement of the Crotch bumble bee, western bumble bee, steelhead, western pond turtle, burrowing owl, saltmarsh common yellowthroat, salt-marsh harvest mouse, Townsend's big-eared bat, pallid bat, and San Francisco dusky-footed woodrat to less than significant.

However, as discussed under Section 3.4.1.2 Existing Conditions, Moffett Park is adjacent to the Bay, which is a stopover along the Pacific Highway. Buildout of the Specific Plan has the potential to interfere with avian movement (including the movement of special-status species such as the western snowy plover, California least tern, California black rail, California Ridgway's rail, yellow rail, black skimmer, northern harrier, white-tailed kite, golden eagle, Alameda song sparrow, and tricolored blackbird) via the Pacific Highway. Future proposed development projects within Moffett Park would be required to comply with the following standards and guidelines proposed by the Specific Plan, found in Chapter 5 of Appendix E, to reduce the impacts to the movement of resident and migratory birds through Moffett Park.

Proposed Specific Plan Standards:

- (1) Applicability. All new construction, building additions, and/or building alterations shall adhere to the following Bird Safe Design standards.
- (2) Façade treatment. No more than 10 percent of the surface area of a building's total exterior façade shall have untreated glazing between the ground and 60 feet above ground. Bird-friendly glazing treatments can include the use of opaque glass, the covering of clear glass surface with patterns, the use of paned glass with fenestration patterns, and the use of external screens over non-reflective glass. All façade glazing shall have reflectivity ratings no greater than 30 percent.
- (3) Skyways, walkways, or glass walls. New construction and building additions shall avoid building glass skyways or walkways, freestanding glass walls, and transparent building corners. If such features are incorporated, all glazing on those features shall be treated as described under 4a, Glazing design.
- (4) Façade treatment. No more than 10 percent of the surface area of a building's total exterior façade between the ground and 60 feet above ground or within 15 feet above a green roof shall have untreated glazing. Bird-friendly glazing treatments can include the use of opaque glass, the covering of clear glass surface with patterns, the use of paned glass with fenestration patterns, and the use of external screens over non-reflective glass. All façade glazing shall have reflectivity ratings no greater than 30%.
 - a. Glazing treatment. Bird-friendly glazing treatments shall include elements with a minimum horizontal width of one quarter of an inch and minimum vertical height of one eighth of an inch with a maximum vertical spacing of four inches and maximum horizontal spacing of two inches.
- (5) Interior occupancy sensors. Occupancy sensors or other switch control devices in non-residential development shall be installed on non-emergency interior lights. These lights should be programmed to shut off during non-work hours and between 10:00 pm and sunrise. Using smaller zones in internal lighting layouts will increase the effectiveness of occupancy sensors.
- (6) Exceptions to the bird safe design requirements. The City may waive or reduce bird safe design requirements based on analysis by a qualified ornithologist with bird safety expertise which indicates that proposed construction will not pose a collision hazard to birds.

Proposed Specific Plan Guidelines:

- (1) Flight paths. New construction shall avoid the funneling of flight paths along buildings or trees towards a building façade.
- (2) Reduced glazing. New construction and building additions should reduce glass at tops of buildings, especially when incorporating a green roof into the design.
- (3) Avoiding visual traps. Visual traps such as areas of glass through which trees, landscape areas, water features, or the sky are visible from the exterior, should be avoided unless a bird safety treatment is used.
- (4) Collision monitoring. Building owners and tenants are encouraged to monitor locations of bird collisions (e.g., based on dead or injured birds or imprints of feathers on windows) and implement retrofit measures, such as application of bird-friendly patterns to existing windows or use of internal blinds, where collisions occur.

- (5) Interior lighting. Building design and operation shall reduce the amount of light that escapes through windows during the night.
- (6) Window coverings. Building owners and tenants are encouraged to install window coverings above the ground floor to reduce the amount of light escape from the building at night.
- (7) Workstation lighting. Businesses are encouraged to turn off lighting at employee workstations and draw office window coverings at the end of the day.
- (8) Migration periods. Building managers should place particular focus on limiting nighttime light escape during bird migration periods (February 15 through May 31, and August 15 through November 30).
- (9) Maintenance. Businesses are encouraged to schedule maintenance during the day or to conclude before 10:00 p.m.

With the implementation and compliance of the above proposed Specific Plan standards and guidelines and City's Bird Safe Design Guidelines, future development in Moffett Park would not result in significant impacts to the movement of resident or migratory birds. **(Less than Significant Impact)**

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

SMC Section 19.94 contains the Tree Preservation Ordinance, which defines protected trees in the City, and sets forth protection requirements. Future development under the proposed Specific Plan would conform with the requirements of the Tree Preservation Ordinance. At the discretion of the Director of Community Development, replacement trees may be required as a condition of issuance of a protected tree removal permit, or as a condition of any discretionary permit for development or redevelopment (SMC Chapter 19.94.080). Therefore, the proposed Specific Plan would not conflict with the City's Tree Preservation Ordinance. **(Less than Significant Impact)**

Impact BIO-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. **(Less than Significant Impact)**

Moffett Park is not located within an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The proposed Specific Plan Project Requirement 10.3.5-2 listed under Impact BIO-1 above requires collaboration with the Habitat Plan in the case burrowing owls are detected on the site of a future proposed development project. Although Moffett Park is not within the Habitat Plan area, the Habitat Plan mitigates for burrowing owls outside of the Habitat Plan area because they have an extended boundary that allows for conservation outside of the main Habitat Plan boundary specifically for burrowing owls. Therefore, implementation of the proposed Specific Plan would not conflict with provisions of any of these plans. **(Less than Significant Impact)**

3.4.2.2 *Cumulative Impacts*

Impact BIO-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant biological resources impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative biological impacts includes Moffett Park and areas within five miles of Moffett Park. As described above, implementation of the proposed Specific Plan has the potential to impact nesting birds, special status plant and animal species, wetland, and riparian habitat. Future development under the proposed Specific Plan would undergo site-specific analyses for their potential to adversely affect sensitive natural communities, habitats, and special status plant and animal species. Additionally, future development would comply with all existing regulations (e.g., MBTA, CDFW codes, General Plan policies, SMC, and Specific Plan policies) and would be subject to the City's development review process. Future projects in other areas within five miles of Moffett Park (which includes areas within Alameda County and Santa Clara County) would also be subject to the local agency's development review process and the same or similar regulations to reduce impacts to biological resources. For these reasons, the cumulative biological resources impacts would be less than significant. **(Less than Significant Cumulative Impact)**

3.5 CULTURAL RESOURCES

The following discussion is based, in part, upon an archaeological literature search completed by Holman & Associates dated March 2020. This report is confidential and is on file with the Sunnyvale Community Development Department.

3.5.1 Environmental Setting

3.5.1.1 *Regulatory Framework*

Federal and State

National Historic Preservation Act

Federal protection of cultural resources is legislated by the National Historic Preservation Act of 1966 (NHPA) and the Archaeological Resource Protection Act of 1979. These laws maintain processes for determination of the effects on historical properties eligible for listing in the National Register of Historic Places (NRHP). Section 106 of the NHPA and related regulations (36 Code of Federal Regulations [CFR] Part 800) constitute the primary federal regulatory framework guiding cultural resources investigations and require consideration of effects on properties that are listed or eligible for listing in the NRHP. Impacts to properties listed in the NRHP must be evaluated under CEQA.

The NRHP is the nation's master inventory of historic resources that are considered significant at the national, state, or local level. The minimum criteria for determining NRHP eligibility include:

- The property is at least 50 years old (properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
- It possesses at least one of the following characteristics:
 - Association with events that have made a significant contribution to the broad patterns of history (Criterion 1);
 - Association with the lives of persons significant in the past (Criterion 2);
 - Distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (Criterion 3); or
 - Has yielded, or may yield, information important to prehistory or history (Criterion 4); and
- It retains integrity of location, design, setting, materials, workmanship, feeling, and associations.

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

For properties eligible for the NRHP, the Secretary of the Interior's Standards for the Treatment of Historic Properties offer four approaches to the treatment of historic properties: preservation, rehabilitation, restoration, and reconstruction, with accompanying guidelines for each approach, as described below.

- *Preservation* focuses on the maintenance and repair of existing historic materials and retention of a property’s form as it has evolved over time. Guidelines for preservation include (but are not limited to) stabilizing deteriorated historic materials, protecting and maintaining historic materials and features, and repairing historic materials and features.
- *Rehabilitation* acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property’s historic character. Guidelines for rehabilitation include (but are not limited to) repairing historic materials and features, replacing deteriorated historic materials and features, designing for the replacement of missing historic features, and proposing exterior or interior alterations.
- *Restoration* depicts a property at a particular period of time in its history, while removing evidence of other periods. Guidelines for restoration include (but are not limited to) repairing materials and features from the restoration period, replacing extensively deteriorated features, removing existing features from other historic periods, and recreating missing features from the restoration period.
- *Reconstruction* re-creates vanished or non-surviving portions of a property for interpretive purposes. Guidelines for reconstruction include (but are not limited to) researching and documenting historical significance, preserving extant historic features, and reconstructing non-surviving buildings.²⁸

The choice of treatment depends on the property’s historical significance, physical condition, proposed use, and intended interpretation.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation (OHP) and encourages protection of resources of architectural, historical, archeological, and cultural significance. The CRHR identifies historic resources for state and local planning purposes and affords protections under CEQA. Under Public Resources Code Section 5024.1 a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.²⁹

Historical resources eligible for listing in the CRHR must meet the significance criteria described previously and retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the CRHR if it retains the potential to yield significant scientific or historical information or specific data.

The concept of integrity is essential to identifying the important physical characteristics of historical resources and, therefore, in evaluating adverse changes to them. Integrity is defined as “the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance.” The processes of determining integrity are similar for both the CRHR and NRHP and use the same seven variables or aspects to define integrity

²⁸ National Park Service, U.S. Department of the Interior. “Four Approaches to the Treatment of Historic Properties.” Accessed June 5, 2022. <https://www.nps.gov/tps/standards/four-treatments.htm>

²⁹ California Office of Historic Preservation. CEQA Guidelines Section 15064.5(a)(3) and California Office of Historic Preservation Technical Assistance Series #6. March 14, 2006. <http://www.ohp.parks.ca.gov/pages/1069/files/technical%20assistance%20bulletin%206%202011%20update.pdf>.

that are used to evaluate a resource's eligibility for listing. These seven characteristics include (1) location, (2) design, (3) setting, (4) materials, (5) workmanship, (6) feeling, and (7) association.

Health and Safety Code, Part 2.7, Division 13, Sections 18950-18961

Adopted by the State Historical Building Safety Board, Health and Safety Code, Part 2.7, Division 13, Sections 18950-18961 (California Historical Building Code 2019) contains regulations for the preservation, restoration, rehabilitation, relocation, or reconstruction of structures designated historical. The California Historical Building Code contains solutions for preservation of historic structures that aim to allow for the continued use of buildings or properties while maintaining safety for building occupants and visitors.

Built Environmental Resources Directory

The OHP's Built Environmental Resources Directory (BERD) is an inventory of cultural resources that have been assessed for eligibility to the NRHP and California Historical Landmarks programs. The BERD uses status codes to indicate whether resources have been evaluated as eligible. There are a total of seven categories of status codes, with associated subcategories, as listed below.

- Status Code 1: Listed in the National Register or the California Register
- Status Code 2: Determined Eligible for Listing in National or California Registers
- Status Code 3: Appears Eligible for National or California Registers
- Status Code 4: Appears Eligible for National Register or as State Historical Landmark Through Public Resources Code Section 5024
- Status Code 5: Recognized as Historically Significant by Local Government
- Status Code 6: Not Eligible for or Removed from Listing or Designation as Specified
- Status Code 7: Not Evaluated, or Needs Re-evaluation for National or California Registers³⁰

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. The act requires that upon discovery of human remains, construction or excavation activity must cease and the county coroner be notified.

Public Resources Code Sections 5097, 5097.98, and 5097.99

Section 15064.5 of the CEQA Guidelines specifies procedures to be used in the event of an unexpected discovery of Native American human remains on non-federal land. These procedures are outlined in Public Resources Code Sections 5097 and 5097.98. These codes protect such remains from disturbance, vandalism, and inadvertent destruction, establish procedures to be implemented if Native American skeletal remains are discovered during construction of a project, and establish the Native American Heritage Commission (NAHC) as the authority to resolve disputes regarding disposition of such remains.

³⁰ California Office of Historic Preservation. "California Historical Resources Status Codes." March 1, 2020. Accessed May 27, 2022. https://ohp.parks.ca.gov/?page_id=30338

Pursuant to Public Resources Code Section 5097.98, in the event of human remains discovery, no further disturbance is allowed until the county coroner has made the necessary findings regarding the origin and disposition of the remains. If the remains are of a Native American, the county coroner must notify the NAHC. The NAHC then notifies those persons most likely to be related to the Native American remains. The code section also stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods. Public Resources Code Section 5097.99 defines the obtaining or possession of Native American remains or grave goods to be a felony.

California Health and Safety Code Section 7050.5

Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial and requires that excavation be halted in the event of discovery of human remains in accordance with Public Resources Code Section 5097.98.³¹

Local

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to the General Plan cultural resource policies including the ones listed below.

Policy	Description
<i>Community Character Element</i>	
CC-5.1	Preserve existing landmarks and cultural resources and their environmental settings.
CC-5.3	Identify and work to resolve conflicts between the preservation of historic resources and alternative land uses.
CC-5.5	Archaeological resources should be preserved whenever possible.
<i>Land Use and Transportation Element</i>	
LT-1.10f	Continue to condition projects to halt all ground-disturbing activities when unusual amounts of shell or bone, isolated artifacts, or other similar features are discovered. Retain an archaeologist to determine the significance of the discovery. Mitigation of discovered significant cultural resources shall be consistent with Public Resources Code Section 21083.2 to ensure protection of the resource.

Sunnyvale Municipal Code

Chapter 19.96 (Heritage Preservation) of the SMC establishes the Heritage Preservation Commission to oversee the designation, preservation, restoration, rehabilitation, relocation, or reconstruction of qualified historic resources (e.g., buildings, properties, signs, features, and trees). The Heritage

³¹ California Legislative Information. “Health and Safety Code Chapter 2. General Provisions (7050.5 - 7055).” Accessed May 26, 2022. https://leginfo.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC§ionNum=7050.5.

Preservation Commission has the chance to review all permit applications regarding heritage resources, heritage resource districts, landmark site, or landmark district designated structures that involve changing use, exterior alteration, or demolition; and approve, disapprove, or approve as modified said applications.

Heritage Resource Inventory

The City maintains a Heritage Resource Inventory (HRI) containing landmarks, trees, residential and commercial districts, and individual structures of local importance. There are two main types of protected structures in Sunnyvale: heritage resources and local landmarks. A local landmark is the highest level of protection afforded by the City under the SMC. Heritage resources have a somewhat lower level of protection that recognizes properties which have architectural or historic significance. The inventory was last updated in September 2018.³² In February 2022, the Heritage Preservation Commission identified a need to update the HRI, which would take approximately two years to complete.³³

3.5.1.2 Existing Conditions

Historic Resources

Historic Resources within Moffett Park

The types of cultural resources that meet the definition of historical resources under CEQA generally consist of districts, sites, buildings, structures, and objects that are significant for their traditional, cultural, and/or historical associations.

No existing structures in Moffett Park are listed on NRHP, CRHR, or City's HRI.^{34,35,36} There have been resources identified within Moffett Park, however, that are eligible for the NRHP.

A Historic Resource Evaluation completed in 2013 determined two buildings, Buildings 181 and 182, within the Naval Industrial Reserve Ordnance Plant (NIROP) site located at the northwest corner of North Mathilda Avenue and 5th Avenue within Moffett Park were eligible for listing on the NRHP under Criterion 1 under the Cold War Weapons Research, Development, Testing & Evaluation theme for their significant role in, and contributions to, the Navy's Fleet Ballistic Missile (FBM) program between 1955 and 1975.³⁷ As part of the Environmental Assessment (EA) completed by the Navy for the exchange of the NIROP site for replacement of real property and facilities elsewhere, the Navy consulted with SHPO regarding these two potentially eligible buildings. SHPO concurred with the Navy's eligibility determination for the two buildings. SHPO also stated the 19 buildings on the NIROP site contributed to a single historic district.³⁸ The Navy concurred with

³² City of Sunnyvale. *Heritage Resources Inventory*. Revised September 2018.

³³ City of Sunnyvale. *2022 Council Study Issue (22-0006)*. February 17, 2022.

³⁴ National Park Service. "National Register of Historic Places (NRHP)." Accessed May 27, 2022.

<https://www.nps.gov/subjects/nationalregister/database-research.htm>

³⁵ Office of Historic Preservation. "California Register of Historical Resources" Accessed May 27, 2022.

https://ohp.parks.ca.gov/?page_id=21238

³⁶ City of Sunnyvale. *Heritage Resources Inventory*. Revised September 2018.

³⁷ United States Department of the Navy. *Draft Environmental Assessment for Naval Industrial Reserve Ordnance Plant Land Exchange at Sunnyvale, California*. September 2020. Page 3-21.

³⁸ *Ibid*.

SHPO's recommendation, recognizing the eligibility of the NIROP Sunnyvale Historic District. According to the EA, the land exchange would result in the demolition of all 19 structures (which include Buildings 181 and 182) that comprise the NIROP Sunnyvale Historic District and that the demolition and loss of the buildings and eligible historic district would be mitigated through adherence to a Memorandum of Agreement (MOA) between the Navy, SHPO, and Advisory Council on Historic Preservation. As part of the MOA:

- Prior to transfer out of federal ownership, the Navy would ensure that the proposed NIROP Sunnyvale Historic District is documented in a form consistent with the site's eligibility under Criterion A for its association with all six generations of the Navy's FBM Program to preserve information on the historical significance of the facility for scholars and interested members of the public. This would include development of a documentary video based on drawings, site and historical photographs, and oral interviews conveying and interpreting the site's historic significance.
- During development of the documentary video, the Navy would seek input from interested and consulting parties for the purposes of research and documentation. This includes solicitation of historic documents, photos, and oral interviews from parties relevant to the story of the Sunnyvale site and the evolution of the FBM Program.
- Copies of the video would be provided to SHPO to demonstrate completion of the requirements for mitigation and to appropriate local archives and libraries for public access.
- The Navy would identify and preserve historical materials for archival storage at the Naval Air Weapons Station China Lake Curation Facility and/or the Naval History and Heritage Command.

The EA concluded that the execution of the finalized MOA and stipulations would result in no significant impacts (under NEPA) and no adverse effect to historic properties from the land exchange.³⁹

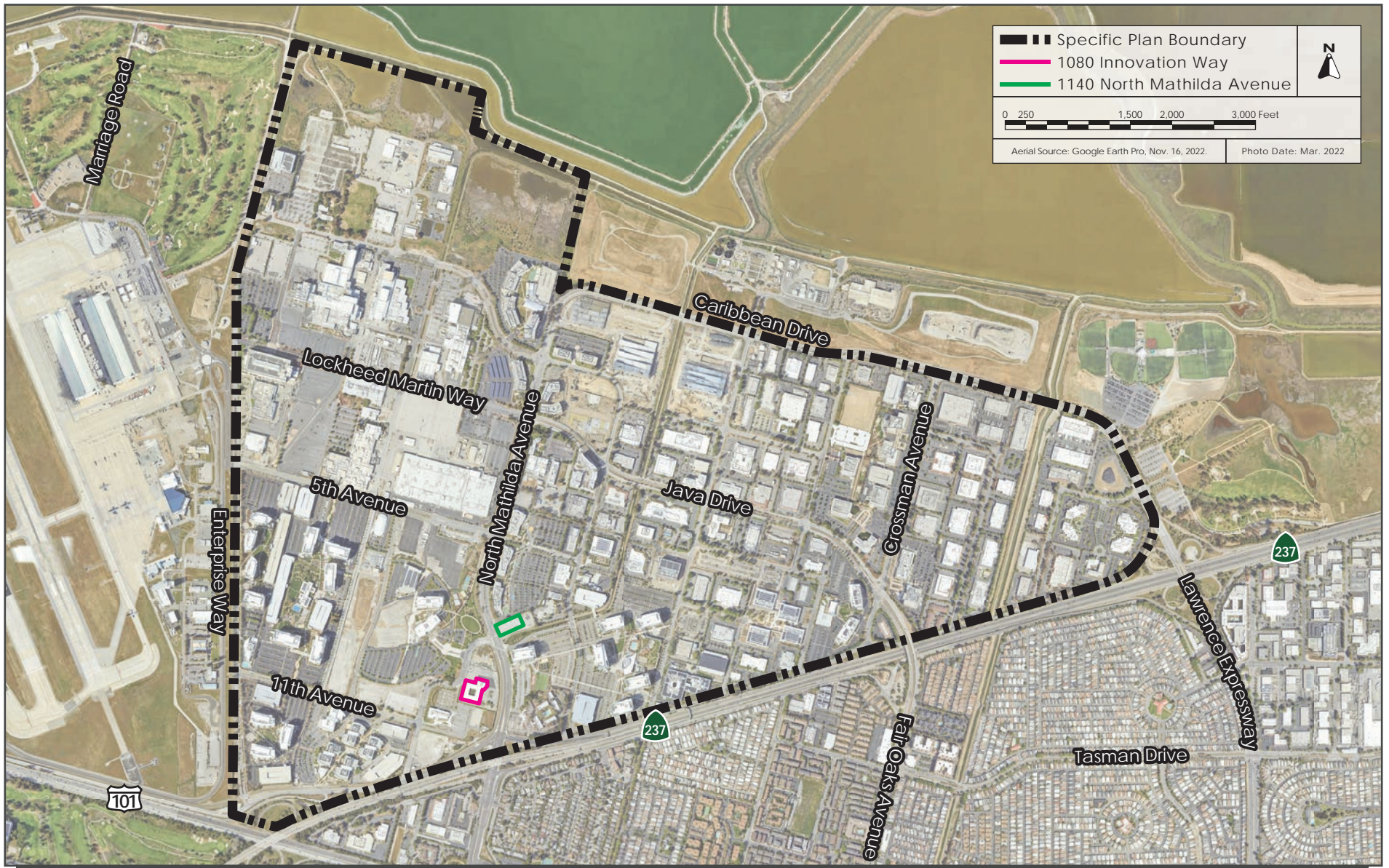
There are 31 on-site buildings that are listed on the BERD. Thirty of these buildings were associated with the Sunnyvale Air Station (otherwise known as the Onizuka Air Force Station) constructed in 1960 and are located at 1080 Innovation Way, west of Mathilda Avenue. The remaining listed building is located at 1140 North Mathilda Avenue. The BERD-listed buildings have an evaluation status of either 6Y or 7N1.⁴⁰ Figure 3.5-1 below outlines the structures listed on the BERD in Moffett Park.

Historic Resources in the Vicinity

Located west of Moffett Park at Moffett Federal Airfield is the U.S. Naval Air Station Central Historic District that is listed on the NRHP under Criteria 1 and 3. The Station is also known as

³⁹ United States Department of the Navy. *Draft Environmental Assessment for Naval Industrial Reserve Ordnance Plant Land Exchange at Sunnyvale, California*. September 2020. Page 3-24.

⁴⁰ A BERD status of 6Y means the structure has been determined ineligible to the NRHR through the Section 106 process but has not been evaluated for the CRHR or any local listing. A BERD status of 7N1 means the structure needs to be reevaluated and could become NRHR-eligible with restoration and other conditions. Source: Office of Historic Preservation. "California Historical Resource Status Codes." March 1, 2020.



STRUCTURES LISTED ON THE BUILT ENVIRONMENTAL RESOURCES DIRECTORY

FIGURE 3.5-1

Naval Air Station Moffett Field. The district was listed for important events and its architectural contribution, with its period of significance identified as 1925 through 1949.^{41,42}

Archaeological Resources

An archaeological literature review was completed for Moffett Park at the Northwest Information Center of the California Historical Resources Information System (CHRIS) on February 25, 2020. All records of all identified cultural resources and archaeological resources reports within Moffett Park were reviewed. About 10 percent of Moffett Park has been studied for its cultural resources potential with most of the studies focused adjacent to the SR 237 corridor and west of Mathilda Avenue. The latter is the most archaeologically sensitive and complicated area identified within Moffett Park, given its intense use for thousands of years.

Six archaeological sites associated with Lope Ynigo/Inigo have been recorded within Moffett Park, west of Mathilda Avenue and east of Moffett Federal Airfield.⁴³ The largest find, located within Moffett Park and continuing further to the south, was determined eligible to the NRHP and is listed in the CRHR. In brief, Lope Ynigo/Inigo was a local Native American with a Hispanic name. In 1781, four years after the founding of Mission Santa Clara de Asis, Ynigo was born, likely within Moffett Park. As an adult, he became one of the mission's Native American alcaldes and had a wife and family. After secularization of the missions, large areas of land were opened for landgrants. Ynigo and his family left the mission in 1839 and returned to his home on lands that would later become Moffett Field and the western portion of Moffett Park. By 1844, Ynigo had been granted a 3,042-acre landgrant named Rancho Posolmi. He was one of the few Native Americans who was granted lands that later were approved by the United States. Often referred to as the Ynigo Reservation, the land was a refuge for other displaced mission Indians. He died in 1864 and his grave was outlined by a fence until 1890. This land continued to be farmed by various owners and renters until 1930.

Previously recorded Native American sites in the general area tend to be situated adjacent to the edge of the historic margins of the Bay and on valley terraces. Native American site locations were selected for their access to a freshwater source. Many creeks throughout this area have long been channelized, making it difficult to determine their original channels and meanderings without extensive geoarchaeological field investigations. Consequently, proximity to fresh water is not easily recognized within Moffett Park. Given changes to riparian systems and bay margins over the last several millennia of documented Native American occupation, the likelihood of additional subsurface Native American deposits within Moffett Park is considered moderate to high.

⁴¹ Holman & Associates. *Archaeological Literature Review for the Moffett Park Specific Plan*. March 2020. Page 5.

⁴² National Archives Catalog. "California SP US Naval Air Station Sunnyvale, California, Historic District." Accessed May 27, 2022. <https://catalog.archives.gov/id/123861812>

⁴³ Holman & Associates. *Archaeological Literature Review for the Moffett Park Specific Plan*. March 2020. Page 2.

3.5.2 Impact Discussion

For the purpose of determining the significance of the project's impact on cultural resources, would the project:

- 1) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?
- 2) Cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5?
- 3) Disturb any human remains, including those interred outside of dedicated cemeteries?

3.5.2.1 *Project Impacts*

Impact CUL-1: The project would not cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5. (**Less than Significant Impact**)

A project could have a significant impact on a historic resource if it would cause a substantial adverse change in the historic significance of that resource. A "substantial adverse change" is defined as the physical demolition, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired.

As discussed in Section 3.5.1.2, Buildings 181 and 182 are eligible for the NRHP, the NIROP site is eligible as a NRHP historic district, and there are at least 31 structures that are designated as 6Y or 7N1 (i.e., they would need to be evaluated or reevaluated for eligibility for NRHR or CRHR) under the BERD. There may be other properties within Moffett Park that are eligible for the NRHP, CRHP, or City's HRI that have not been identified or evaluated yet. In addition, Moffett Park is adjacent to the U.S. Naval Air Station, which is listed as a historic district in the NRHP and a landmark in the City's HRI.

While the project does not propose the removal of any historic resources, implementation of the Specific Plan would allow for new development and redevelopment over a period of approximately 20 years that could directly or indirectly affect historic resources, including those that have yet to be identified and evaluated. Future development projects would comply with the following Specific Plan Project Requirements pertaining to historic resources.

Cultural Resources Project Requirements:

- **10.3.2-1:** Historic Resource Evaluation. A Historic Resource Evaluation shall be required for future development that would impact properties that may meet the CEQA definition of historic resources, including resources 45 years of age or older and not currently listed/identified.
 - At a minimum, the supplemental review effort shall include preparation of a site-specific historic resources report that involves a records search at the Northwest Information Center (NWIC), a review of the Sunnyvale Heritage Resources Inventory, and where there is no evaluation within the last five years (using the

Department of Parks and Recreation 523A and B forms), evaluation by a qualified historian or architectural historian to determine if the property meets the CEQA definition of a historic resource.

- If the supplemental review effort does not identify any site or structure that meets the definition of a historic resource that could be affected by construction activities, then no further study or protection is necessary prior to project implementation.
- **10.3.2-2: Standards for the Treatment of Historic Properties.** New construction within historic districts or adjacent to a historic resource, rehabilitation of a historic resource, replacement of an existing historic resource, addition to a historic resource, or a renovation of a historic resource shall conform to the Secretary of the Interior’s Standards for the Treatment of Historic Properties, California Historic Building Code, and other applicable regulations.

Construction adjacent to a historic resource, in conformance with the Secretary of Interior Standards as required by the Specific Plan Project Requirements above, would have less than significant impacts to the historic integrity of the resources because it would require appropriate treatments to retain the historical significance or physical conditions.

For the purposes of this analysis, it is assumed impacts to historic resources, including as yet identified resources, would be avoided through implementation of General Plan policies (including General Plan policy CC-5.1 and CC-5.3) and Specific Plan Project Requirements 10.3.2-1 and 10.3.2-2. If a future project could adversely affect historic resources, supplemental analysis would be required to identify mitigation measures necessary to reduce the impact to a less than significant level. **(Less than Significant Impact)**

If a future project requires the demolition or substantial alteration of a historic resource or its immediate surroundings such that the significance of the historical resource would be materially impaired, the Historic Resource Evaluation required by Specific Plan Project Requirement 10.3.2-1 should address the feasibility of avoiding adverse impacts through project redesign, rehabilitation, or reuse of the resource. Preservation in place is always the preferred measure for mitigating direct impacts to historic resources. If the resource is to be preserved on the property, specific measures to protect the integrity of the structure and its setting should be identified. If impacts to the historic resource cannot be avoided, all feasible measures are required to be implemented to reduce the magnitude of the impact. At a minimum, the City should require “Documentation” and “Commemoration” efforts.⁴⁴ Additional measures could include relocation, incorporation of the resources into the project, and/or salvage.

⁴⁴ “Documentation” refers to the completion of documentation in conformance with the Secretary of the Interior’s Standards for Architectural and Engineering Documentation, Historical American Building Survey (HABS). “Commemoration” refers to the creation of an interpretative exhibit(s) or documentary display(s) that increase public awareness of the resource and its historical significance.

Impact CUL-2: The project would not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. **(Less than Significant Impact)**

As discussed in Section 3.5.1.2, there are six known archaeological resources within Moffett Park. The entire Moffett Park has a moderate to high potential for additional, buried Native American and archaeological resources. Future development projects would comply with the following Specific Plan Project Requirements pertaining to archaeological resources.

Cultural Resources Project Requirements:

- **10.3.2-3:** Archaeological Literature Review. For any new proposed development or improvements within Moffett Park, an archaeological literature review shall be completed at the Northwest Information Center of the California Historical Resources Information System. If the site, prior to development, contains any visible soils, a field inspection shall also be conducted. Recommendations for additional archaeological efforts beyond these initial studies shall be commensurate with the scale of the project and range of proposed impacts. Development shall include subsurface exploration and monitoring as warranted by a qualified archaeologist.
- **10.3.2-4:** Finding of Archaeological Deposits or Materials. If buried, or previously unrecognized archaeological deposits or materials of any kind are inadvertently exposed during any monitoring work, work within 50 feet of the find shall cease until a qualified archaeologist can assess the find and provide recommendations for further treatment, if warranted. Construction and potential impacts to the area(s) within a radius determined by the archaeological shall not recommence until the assessment is complete.
- **10.3.2-5:** Finding of Human Remains During Excavation. In the event that human remains are discovered during excavation and/or grading of the site, all activity within a 50-foot radius of the find shall be stopped. The Santa Clara County Coroner shall be notified and shall make a determination as to whether the remains are of Native American origin or whether an investigation into the cause of death is required. If the remains are determined to be Native American, the Coroner shall notify the NAHC immediately. Once the NAHC identifies the most likely descendants, the descendants will make recommendations regarding proper burial, which will be implemented in accordance with Section 15064.5(e) of the CEQA Guidelines.

Future Specific Plan development, in conformance with existing General Plan policies and the proposed Specific Plan Project Requirements above, would not result in significant impacts to archaeological resources because General Plan policies CC-5.5 and LT-1.10f require protection of archaeological resources and the Specific Plan Project Requirements require monitoring for potential unknown resources, halting construction if a resource is encountered, and requiring appropriate treatment to reduce impacts to a less than significant level. **(Less than Significant Impact)**

Impact CUL-3: The project would not disturb any human remains, including those interred outside of dedicated cemeteries. **(Less than Significant Impact)**

As discussed in Section 3.5.1.2 and under Impact CUL-2 above, there is potential for buried archaeological resources to be disturbed during construction or demolition. Future development implementing the Specific Plan would comply with the Specific Plan Project Requirements identified under Impact CUL-2 (Requirements 10.3.2-1 through 10.3.2-5) to protect archaeological resources and human remains if discovered. Therefore, future development would result in less than significant impacts. **(Less than Significant Impact)**

3.5.2.2 Cumulative Impacts

Impact CUL-C: The project would result in a cumulatively considerable contribution to a cumulatively significant cultural resources impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative cultural resources impacts is the general Moffett Park and adjacent areas, as it is assumed development in the same area would affect similar resources.

Historic Resources

As discussed in 3.5.1.2 Existing Conditions, there are known historic resources within and adjacent to Moffett Park. All future development in the City of Sunnyvale, including in Moffett Park, would comply with existing regulations, including General Plan policies CC-5.1 and CC-5.3, and Specific Plan Project Requirements 10.3.2-1 and 10.3.2-2, to reduce impacts to historic resources. Under CEQA, future development is required to evaluate its cumulative impacts to historic resources. The cumulative historic analysis would consider the impacts of other projects in the area to the same or common historic resource and identify mitigation, such as the measures identified in Specific Plan Project Requirements 10.3.2-1 and 10.3.2-2, to reduce impacts to a less than significant level. **(Less than Significant Impact)**

Archaeological Resources and Human Remains

As discussed in 3.5.1.2 Existing Conditions, there are known archaeological resources within the Specific Plan (including one site whose boundaries extend beyond Moffett Park). Future development, including within and adjacent to Moffett Park, would comply with existing regulations (including those identified in Section 3.5.1.1 Regulatory Framework) and CEQA (which would identify measures such as those identified in Specific Plan Project Requirements 10.3.2-3 through 10.3.2-5 to protect archaeological resources and human remains if discovered. For adjacent areas within the City of Mountain View, the City of Mountain View has similar policies in its General Plan protecting archaeological resources and human remains.⁴⁵ For these reasons, the cumulative projects

⁴⁵ City of Mountain View 2030 General Plan includes policies LUD 11.5 (Protect important archaeological and paleontological sites. Utilize the development review process to identify and protect archaeological and paleontological deposits.) and LUD 11.6 (Protect Human Remains. Utilize the development review process to identify and protect human remains and follow the appropriate procedures outlined under Health and Safety Code

would not result in significant cumulative impacts to archaeological resources or human remains.
(Less than Significant Cumulative Impact)

Section 7050.5 and Public Resources Code Section 5097.98.). Source: City of Mountain View. *City of Mountain View 2030 General Plan*. April 13, 2021. Page 54.

3.6 ENERGY

The following discussion is based, in part, on an Air Quality Analysis completed by Illingworth & Rodkin, Inc. dated November 23, 2022. This report is included as Appendix D to this EIR.

3.6.1 Environmental Setting

3.6.1.1 *Regulatory Framework*

Federal and State

Energy Star and Fuel Efficiency

At the federal level, energy standards set by the EPA apply to numerous consumer products and appliances (e.g., the EnergyStar™ program). The EPA also sets fuel efficiency standards for automobiles and other modes of transportation.

Renewables Portfolio Standard Program

In 2002, California established its Renewables Portfolio Standard Program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent of retail sales by 2010. Governor Schwarzenegger issued Executive Order (EO) S-3-05, requiring statewide emissions reductions to 80 percent below 1990 levels by 2050. In 2008, EO S-14-08 was signed into law, requiring retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. In October 2015, Governor Brown signed SB 350 to codify California's climate and clean energy goals. A key provision of SB 350 requires retail sellers and publicly owned utilities to procure 50 percent of their electricity from renewable sources by 2030. SB 100, passed in 2018, requires 100 percent of electricity in California to be provided by 100 percent renewable and carbon-free sources by 2045.

Executive Order B-55-18 To Achieve Carbon Neutrality

In September 2018, Governor Brown issued an executive order, EO-B-55-18 To Achieve Carbon Neutrality, setting a statewide goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." The executive order requires CARB to "ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal." EO-B-55-18 supplements EO S-3-05 by requiring not only emissions reductions, but also that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO₂ from the atmosphere through sequestration.

California Building Standards Code

The Energy Efficiency Standards for Residential and Nonresidential Buildings, as specified in Title 24, Part 6 of the California Code of Regulations (Title 24), was established in 1978 in response to a legislative mandate to reduce California's energy consumption. Title 24 is updated approximately

every three years.⁴⁶ Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.⁴⁷

California Green Building Standards Code

CALGreen establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce GHG emissions from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to state environmental directives. CALGreen covers five categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

Advanced Clean Cars Program

CARB adopted the Advanced Clean Cars program in 2012 in coordination with the EPA and National Highway Traffic Safety Administration. The program combines the control of smog-causing pollutants and GHG emissions into a single coordinated set of requirements for vehicle model years 2015 through 2025. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.⁴⁸

Regional and Local

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to the General Plan energy policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation</i>	
LT-2.1	Enhance the public's health and welfare by promoting the City's environmental and economic health through sustainable practices for design, construction, maintenance, operation, and deconstruction of buildings, including measures in the climate action plan.
LT-2.7	Provide Sunnyvale residents and businesses with opportunities to develop private, renewable energy facilities.

⁴⁶ California Building Standards Commission. "California Building Standards Code." Accessed September 20, 2021. <https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo>.

⁴⁷ California Energy Commission. "2019 Building Energy Efficiency Standards." Accessed September 20, 2021. <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>.

⁴⁸ California Air Resources Board. "The Advanced Clean Cars Program." Accessed September 20, 2021. <https://www.arb.ca.gov/msprog/acc/acc.htm>.

Sunnyvale Climate Action Playbook

The City of Sunnyvale Climate Action Playbook (August 2019) sets a vision for the City to reduce carbon emissions by 2050. The playbook includes six strategies with “plays” that identify areas for action to reduce GHG emissions (including energy consumption). The following plays from the plan are related to energy and are applicable to the Specific Plan.

Strategy	Description
<i>Strategy 1: Promoting Clean Electricity</i>	
Play 1.2	Increase local solar photovoltaics
<i>Strategy 3: Decarbonizing Transportation & Sustainable Land Use</i>	
Play 3.2	Increase transportation options and support shared mobility
<i>Strategy 4: Managing Resources Sustainable</i>	
Play 4.1	Achieve Zero Waste goals for solid waste
Play 4.2	Ensure resilience of water supply
Play 4.3	Enhance natural carbon sequestration capacity

Sunnyvale Green Building Program

In May 2019, the City revised the green building standards for new construction, additions, and remodels of buildings.⁴⁹ The green building standards increase energy efficiency for heating and cooling and promote reduced vehicle travel. Incentives are offered for projects that exceed the minimum green building standards to encourage project applicants and developers to provide additional green building features. Mixed use projects are required to meet the appropriate Build It Green standard for the residential portion and LEED for the non-residential portion. Alternatively, LEED may be applied to the entire project. At a minimum, new multi-family residential development is required to meet CALGreen Mandatory Measures and GreenPoint Rated Checklist with at least 90 points with BIG Certification. At minimum, new non-residential projects greater than 5,000 square feet are required to meet CALGreen Mandatory Measures and LEED Gold.

Sunnyvale Reach Code

The California Energy Commission (CEC) approved the City’s Reach Code Ordinance, which went in effect on January 26, 2021. The Reach Code is a local energy code for buildings design and construction that go beyond the minimum state requirements. The purpose of the Reach Code is to help reduce GHG emissions by promoting electric versus natural gas energy use. The Reach Code Ordinance applies to new residential and nonresidential construction, and includes the following requirements:

- Gas appliances including cooking range, water heater, space heater, fireplace, etc. are not permitted (with the exception of certain non-residential uses such factories, hazardous

⁴⁹ City of Sunnyvale. *Green Building Program*. May 2019.

materials manufacturing, and laboratory facilities, as well as emergency operation centers, and commercial dryers in large hotels)

- Solar panels are required for all new buildings
- Electric vehicle charging stations (or conduit and preliminary wiring for them) are required for all new building parking lots

Sunnyvale Construction and Demolition Waste Diversion

The City requires remodel or demolition projects where 50 percent or more of the exterior wall will be removed to recycle or reuse at least 65 percent of the project's nonhazardous waste.⁵⁰ Recycling of nonhazardous waste reduces the energy use to produce new materials from raw, non-renewable resources.

3.6.1.2 Existing Conditions

Total energy usage in California was approximately 6,956.6 trillion British thermal units (Btu) in the year 2020, the most recent year for which this data was available.⁵¹ Out of the 50 states, California is ranked second in total energy consumption and 49th in energy consumption per capita. The breakdown by sector was approximately 21.8 percent (1,507.7 trillion Btu) for residential uses, 19.6 percent (1,358.3 trillion Btu) for commercial uses, 24.6 percent (1,701.2 trillion Btu) for industrial uses, and 34 percent (2,355.5 trillion Btu) for transportation.⁵² This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

Electricity

Electrical energy is expressed in units of kilowatts (kW) and kilowatt-hours (kWh). In 2020, California produced approximately 70 percent of the electricity it consumed, and the rest was imported from outside the state including Mexico.⁵³ California's non carbon dioxide-emitting electric generation (from nuclear, large hydroelectric, solar, wind, and other renewable sources) accounted for more than 46 percent of total in-state generation for 2020.⁵⁴ Electricity from coal-powered plants located out of state has continued to decrease since 2006 due to a state law limiting new long-term financial investments in power plants that meet California emissions standards.

California's total system electric generation in 2020 was approximately 197,165,106 megawatt-hours (MWh), which was down three percent from 2019's total generation of approximately 201,784,204 MWh.⁵⁵ In 2020 natural gas represented the largest portion of the state's electricity sources (at 54

⁵⁰ City of Sunnyvale. "Construction Waste." February 5, 2019. Accessed June 20, 2019.

<https://sunnyvale.ca.gov/business/environmental/waste.htm>.

⁵¹ United States Energy Information Administration. "State Profile and Energy Estimates, 2020." Accessed November 18, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

⁵² United States Energy Information Administration. "State Profile and Energy Estimates, 2020." Accessed November 18, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

⁵³ United States Energy Information Administration. State Profile and Energy Estimates: California. May 17, 2022. <https://www.eia.gov/state/?sid=CA#tabs-3>.

⁵⁴ Ibid.

⁵⁵ United States Energy Information Administration. *State Electricity Profiles; California Electricity Profile 2019*. November 2, 2020. And Ibid. *California Electricity Profile 2020*. November 10, 2022.

percent). Solar and wind generation accounted for more than 65 percent of all renewable electricity generation.⁵⁶

Growth in annual electricity consumption increased between 2016 and 2017 reflecting increased electricity consumption by light-duty electric vehicles (EV) and high levels of manufacturing electricity consumption. Per-capita electricity consumption, despite increasing EV use, is projected to be relatively flat due to small-scale residential and commercial photovoltaic generation. Due to population increases, however, it is estimated that future demand in California for electricity would grow at approximately 1.27 percent each year through 2030, and that approximately 339,160 gigawatt hours (GWh) of electricity would be utilized in the state in 2030.

Electricity in Santa Clara County in 2020 was consumed primarily by the non-residential sector (73 percent), followed by the residential sector consuming 24 percent. In 2020, a total of approximately 16,435 GWh of electricity was consumed in Santa Clara County.⁵⁷

The community-owned Silicon Valley Clean Energy (SVCE) is the electricity provider for the City of Sunnyvale.⁵⁸ SVCE sources the electricity and the Pacific Gas and Electric Company (PG&E) delivers it to customers over their existing utility lines. Customers are automatically enrolled in the GreenStart plan and can upgrade to the GreenPrime plan. The GreenStart plan is sourced by 50 percent renewable resources and the GreenPrime plan is sourced by 100 percent renewable resources. Both options are considered 100 percent GHG-emission free.

The existing uses in Moffett Park use approximately 316,152,620 kWh (or 316 GWh) of electricity annually (refer to Table 3.6-1).⁵⁹

Natural Gas

PG&E provides natural gas services within Santa Clara County. In 2020, approximately two percent of California's natural gas supply came from in-state production, while the remaining supply was imported from other western states and Canada.⁶⁰ In 2021, residential and commercial customers in California used 33 percent of the state's natural gas, power plants used 0.01 percent, and the

⁵⁶ United States Energy Information Administration. State Profile and Energy Estimates: California. May 17, 2022. <https://www.eia.gov/state/?sid=CA#tabs-3>

⁵⁷ California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed November 18, 2022. <http://ecdms.energy.ca.gov/elecbycounty.aspx>.

⁵⁸ Silicon Valley Clean Energy. "Frequently Asked Questions." Accessed September 20, 2021. <https://www.svcleanenergy.org/faqs>.

⁵⁹ Illingworth & Rodkin, Inc. *Moffett Park Specific Plan Update Air Quality Assessment*. November 23, 2022. Attachment 2.

⁶⁰ California Gas and Electric Utilities. 2020 *California Gas Report*. Accessed November 18, 2022. [https://www.socalgas.com/sites/default/files/2020-10/2020 California Gas Report Joint Utility Biennial Comprehensive Filing.pdf](https://www.socalgas.com/sites/default/files/2020-10/2020%20California%20Gas%20Report%20Joint%20Utility%20Biennial%20Comprehensive%20Filing.pdf).

industrial sector used 33 percent. Utility providers measure natural gas usage in Btu.⁶¹ In 2020, California used 2,144 trillion Btu of natural gas.⁶² In 2020, Santa Clara County used less than one percent of the state’s total consumption of natural gas.⁶³

The existing uses in Moffett Park use approximately 296,013,591 kBtu (or 296,014 Btu) of natural gas annually (refer to Table 3.6-1).⁶⁴

Fuel for Motor Vehicles

In 2020, California produced 144.2 million barrels of crude oil and in 2019, 19.2 billion gallons of gasoline were sold in California.⁶⁵ ⁶⁶ The average fuel economy for light-duty vehicles (autos, pickups, vans, and sport utility vehicles) in the United States has steadily increased from about 13.1 miles per gallon (mpg) in the mid-1970s to 25.4 mpg in 2020.⁶⁷ Federal fuel economy standards have changed substantially since the Energy Independence and Security Act was passed in 2007. That standard, which originally mandated a national fuel economy standard of 35 miles per gallon by the year 2020, was updated in March 2020 to require all cars and light duty trucks achieve an overall industry average fuel economy of 49 mpg by model year 2026.^{68,69}

The existing VMT travelled for the uses in Moffett Park is approximately 338,686,481 miles. Assuming an average fuel economy of 25.9, the existing uses use approximately 13,076,698 gallons of fuel annually (refer to Table 3.6-1).⁷⁰

3.6.2 Impact Discussion

For the purpose of determining the significance of the project’s impact on energy, would the project:

- 1) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
- 2) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

⁶¹ United States Energy Information Administration. “Natural Gas Consumption by End User.” October 31, 2022. https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_SCA_a.htm

⁶² United States Energy Information Administration. “State Profile and Energy Estimates, 2020.” Accessed November 18, 2022. <https://www.eia.gov/state/?sid=CA#tabs-2>.

⁶³ California Energy Commission. “Natural Gas Consumption by County.” Accessed November 18, 2022. <http://ecdms.energy.ca.gov/gasbycounty.aspx>.

⁶⁴ Illingworth & Rodkin, Inc. *Moffett Park Specific Plan Update Air Quality Assessment*. November 23, 2022. Attachment 2.

⁶⁵ United States Energy Information Administration. “Petroleum & Other Liquids, California Field Production of Crude Oil.” September 30, 2020. <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pets&s=mcrfpcal&f=a>

⁶⁶ California Department of Tax and Fee Administration. “Net Taxable Gasoline Gallons.” Accessed November 23, 2022. <https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist>.

⁶⁷ United States Environmental Protection Agency. “The 2021 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975.” November 2021. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010U68.pdf>

⁶⁸ United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed September 20, 2021. <http://www.afdc.energy.gov/laws/eisa>.

⁶⁹ Public Law 110–140—December 19, 2007. *Energy Independence & Security Act of 2007*. Accessed September 20, 2021. <http://www.gpo.gov/fdsys/pkg/PLAW-110publ140/pdf/PLAW-110publ140.pdf>.

⁷⁰ Illingworth & Rodkin, Inc. *Moffett Park Specific Plan Update Air Quality Assessment*. November 23, 2022. Attachment 2.

- 3) Result in a substantial increase in demand upon energy resources in relation to projected supplies?

3.6.2.1 *Project Impacts*

Impact EN-1: The project would not result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation. **(Less than Significant)**

Construction

The Specific Plan is proposed in Moffett Park, which is an urbanized area already served by existing roadways and more proximate to construction supplies and workers than outlying areas. Construction of future development under the proposed Specific Plan would require energy for the manufacture and transportation of building materials, preparation of the sites (e.g., demolition and grading), and building construction. Full build out of the Specific Plan would occur over several years with older buildings being replaced.

Construction processes are generally designed to be efficient in order to avoid excess monetary costs. Further, development within an urbanized area such as Moffett Park with proximity to roadways, construction supplies, and workers is already more efficient than construction occurring in outlying, undeveloped areas. Thus, the construction process for future development is considered efficient.

Future development projects constructed within Moffett Park would be required to implement BAAQMD BMPs (see Specific Plan Project Requirement 10.3.3-1 in Section 3.3 Air Quality) to restrict equipment idling times and require signs be posted on the project site reminding workers to shut off idle equipment, thus reducing the potential for energy waste. In addition, consistent with Specific Plan Project Requirement 10.3.3-2, equipment would be selected to reduce emissions during construction; therefore, energy would not be wasted or used inefficiently by construction equipment and waste from idling. Future development under the Specific Plan would also comply with the CALGreen and City's requirements to recycle and/or salvage for reuse a minimum of 65 percent of nonhazardous construction and demolition waste, minimizing energy impacts from the creation of excessive waste. For these reasons, construction activities from buildout of the Specific Plan would not use fuel or energy in a wasteful manner. **(Less than Significant Impact)**

Operation

Implementation of the Specific Plan would result in a greater mix of complimentary land uses at a higher density than currently exists in Moffett Park. The Specific Plan is proposed in Moffett Park, which is an urbanized area already served by existing infrastructure including roadways and utilities (as well as proximate to construction supplies and workers). In general, the operation of uses in an existing urban and developed area is more efficient than operation of uses in outlying areas where services and infrastructure would need to be extended to.

The occupation and operation of future buildings would consume energy for multiple purposes, including building heating and cooling, lighting, and appliance use. Operational energy also includes gasoline consumption from vehicles traveling to and from Moffett Park. The net increase in energy

use upon buildout of the Specific Plan, as compared to the existing conditions, is shown in Table 3.6-1. Refer to Appendix D for additional details, including energy consumption by land use.

Table 3.6-1: Estimated Annual Existing and Proposed Energy Usage			
	Electricity (kWh)	Natural Gas (kBtu)	Gasoline¹ (gallons)
A. Existing Conditions (2020)	316,152,620	296,013,591	13,076,698
B. Specific Plan Buildout	254,483,320	1,939,560	20,254,020
Project Net Increase (B – A)	-61,669,300	-294,074,031	7,177,322
<u>Notes:</u>			
¹ The gasoline demand for existing uses is based on the estimated VMT of 338,686,481 and an average fuel economy of 25.9 mpg. The gasoline demand for development under the Specific Plan is based on the estimated VMT of 992,447,000 and an average fuel economy of 49 mpg which is expected to be achieved by 2026, as discussed under Section 3.6.1.2 Existing Conditions. kWh = kilowatt per hour; kBtu = kilo-British thermal unit Source: Illingworth & Rodkin, Inc. <i>Moffett Park Specific Plan Update CalEEMod Results</i> . November 23, 2022. Attachment 2.			

As shown in Table 3.6-1, buildout of the Specific Plan would result in a decrease of approximately 61,669,300 kWh of electricity and 294,074,031 kBtu of natural gas compared to existing conditions. Future development under the Specific Plan would comply with applicable regulations that would increase energy efficiency including the City’s Green Building Program, Reach Code, Title 24, and CALGreen requirements. For example, the City’s Green Building Program requires new development to meet Build It Green, LEED, and/or GreenPoint Rated green building requirements. Consistent with the Specific Plan’s green building standards, all new non-residential developments would achieve a LEED Platinum certification. In addition, the City’s Reach Code prohibits natural gas use for residential uses, requires solar panels, and requires EV charging stations. Further, future projects would implement the following Specific Plan policies to facilitate energy efficiency.

Proposed Specific Plan Policies:

- **DS-4.1:** Decarbonize new developments with low embodied carbon materials, renewable energy generation, and resource efficient design (energy, water, and waste) through development standards and incentives for higher performing new developments.
- **DS-4.8:** Encourage the productive use of roof space for PV, solar thermal, and vegetation.
- **DS-5.4:** Provide the use of vegetation at the site and building level to provide natural shade, reduce energy consumption, reduce reliance on indoor climate control systems, and address urban heat island effects.
- **IU-5.1:** Prohibit new natural gas services in all buildings and infrastructure to transition to all electric.
- **IU-5.2:** Encourage the installation of solar arrays on roofs, parking lots, and as shade structures paired with battery storage.
- **IU-5.3:** Plan energy systems collaboratively with SVCE, PG&E, property owners, and the City to ensure that Moffett Park maintains affordable, resilient, reliable, and 100 percent renewable energy.

- **IU-5.4:** Increase energy infrastructure to build capacity for Moffett Park, with a clear phasing program.

As shown in Table 3.6-1, buildout of the Specific Plan would result in a net increase of 7.2 million gallons of gasoline compared to existing conditions. This represents a relatively minor increase in energy demand compared to statewide energy supplies. Given Moffett Park’s accessibility to existing transit, the Specific Plan’s proposed mix of uses (i.e., jobs, housing, and services), the Specific Plan’s multi-modal transportation network, and Specific Plan policies TDMP-2.1 through 2.4 (which require implementation of a TDM program), multi-modal transportation options and alternatives to SOV trips would reduce gasoline consumption.

For the reasons described above, the operation of future development under the Specific Plan would not represent a wasteful or inefficient use of energy resources. **(Less than Significant Impact)**

Impact EN-2: The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

Future development under the Specific Plan would obtain electricity from SVCE, which is 100 percent GHG-emission free energy from renewable and hydroelectric sources, consistent with the state’s RPS program and SB 350.⁷¹ In addition, future projects under the Specific Plan would meet or exceed state mandated Title 24 energy efficiency, CALGreen, and Sunnyvale Green Building standards given future projects would comply with Specific Plan policies DS-4.1, DS-4.8, DS-5.5, and IU.5-1 through IU-5.4 pertaining to energy efficiency. Future development would also comply with the City’s Reach Code requirements. In addition, as discussed in Section 3.8 Greenhouse Gas, future development would be consistent with the City’s Climate Action Playbook. Therefore, buildout of the Specific Plan would not obstruct a state or local plan for renewable energy or energy efficiency. **(Less than Significant Impact)**

Impact EN-3: The project would not result in a substantial increase in demand upon energy resources in relation to projected supplies. **(Less than Significant Impact)**

Electricity

As discussed under Section 3.6.1.2 Existing Conditions, California’s total system electric generation in 2020 was approximately 197,165,106 MWh (down from 201,784,204 MWh in 2019). Despite this decrease, it is estimated that future demand in California for electricity would grow at approximately 1.27 percent each year through 2030 and approximately 339,160 GWh of electricity would be utilized in the state in 2030. Efficiency and production capabilities would help meet increased electricity demand in the future, such as improving energy efficiency in existing and future buildings, establishing energy efficiency targets, inclusion of microgrids and zero-net energy buildings, and integrating renewable technologies.⁷² Future development under the Specific Plan would construct

⁷¹ SVCE is the default electricity provider in the City. Building occupants/owners need to voluntarily opt-out of SVCE in order to obtain electricity directly from PGE.

⁷² Ibid.

and operate energy efficient buildings in accordance with existing regulations (including Title 24, CALGreen, the City's Green Building Program, and Reach Code).

Electricity supply and demand data and reporting is provided at the state level. Buildout of the Specific Plan would result in a net decrease of approximately 61,669,300 kWh (or 61.7 GWh) of electricity and would not constitute an impact in the state's annual use. As discussed under Impact EN-1, buildout of the Specific Plan would not result in wasteful, inefficient, or unnecessary consumption of energy. Given these reasons, the project's increase in electricity usage is not considered to have a substantial effect on the state's supply. **(Less than Significant Impact)**

Natural Gas

Natural gas demand in the state is expected to decline due to policies such as SB 100 and local reach code ordinances which prohibit the use of natural gas infrastructure in new construction.⁷³

Natural gas supply and demand data and reporting is provided at a state level. As shown in Table 3.6-1, buildout of the Specific Plan would result in an annual natural gas demand of 1,939,560 kBtu (or 1,939 MMBtu). This is a decrease of 294,074,031 kBtu compared to existing conditions on-site. This estimate assumes that all non-residential uses in the Specific Plan would use natural gas, which is only permitted by the Reach Code as exceptions. Compared to the growth trends in natural gas supply and the existing available supply in the state, buildout of the Specific Plan would not result in a significant increase in natural gas demand relative to projected supply. Also, as discussed under Impact EN-1, the buildout of the Specific Plan would not result in wasteful, inefficient, or unnecessary consumption of energy. **(Less than Significant Impact)**

Fuel for Motor Vehicles

Buildout of the Specific Plan would result in a net increase in gasoline demand of approximately 7.2 million gallons compared to existing conditions. This increase is not a substantial increase in the context of gasoline supply and demand for the State of California. New automobiles purchased by occupants of future development under the Specific Plan would be subject to fuel economy and efficiency standards applied throughout the State of California, which means that over time the fuel efficiency of vehicles associated with Moffett Park would improve. In addition, as discussed under Impact TRN-1, for reasons including most of Moffett Park is within walking distance of existing transit services (i.e., Caltrain and VTA bus service, as discussed in Section 3.1 Aesthetics and Section 3.17 Transportation) and Specific Plan Policies 2.1 through 2.5 that requires future development to implement a TDM program, vehicle trips would be reduced resulting in a reduction in gasoline consumption. For these reasons, buildout of the Specific Plan would not result in a significant increase in gasoline demand relative to projected supply. Also refer to the discussion under Impact EN-1 of why buildout of the Specific Plan would not result in wasteful, inefficient, or unnecessary consumption of energy. **(Less than Significant Impact)**

⁷³ CEC. "2019 Natural Gas Market Trends and Outlook." February 9, 2020.

3.6.2.2 *Cumulative Impacts*

Impact EN-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant energy impact. **(Less than Significant Cumulative Impact)**

Energy is a cumulative resource. The geographic area for cumulative energy impacts is the state. Past, present, and future development projects contribute to the state's energy impacts. If the project is determined to have a significant energy impact, it is concluded that the impact is a cumulative impact. In summary, per the discussions under Impact EN-1, Impact EN-2, and Impact EN-3, future development under the Specific Plan would not result in a significant project energy impact because future development would comply with Specific Plan policies 2.1 through 2.5, City's Green Building Program, Title 24, CALGreen, Reach Code, and Construction and Demolition Waste Diversion requirements. Therefore, the project would not have a cumulatively considerable contribution to a significant cumulative energy impact. **(Less than Significant Cumulative Impact)**

3.7 GEOLOGY AND SOILS

3.7.1 Environmental Setting

3.7.1.1 *Regulatory Framework*

State

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act was passed following the 1971 San Fernando earthquake. The act regulates development in California near known active faults due to hazards associated with surface fault ruptures. Alquist-Priolo maps are distributed to affected cities, counties, and state agencies for their use in planning and controlling new construction. Areas within an Alquist-Priolo Earthquake Fault Zone require special studies to evaluate the potential for surface rupture to ensure that no structures intended for human occupancy are constructed across an active fault.

Seismic Hazards Mapping Act

The Seismic Hazards Mapping Act (SHMA) was passed in 1990 following the 1989 Loma Prieta earthquake. The SHMA directs the California Geological Survey (CGS) to identify and map areas prone to liquefaction, earthquake-induced landslides, and amplified ground shaking. CGS has completed seismic hazard mapping for the portions of California most susceptible to liquefaction, landslides, and ground shaking, including the central San Francisco Bay Area. The SHMA requires that agencies only approve projects in seismic hazard zones following site-specific geotechnical investigations to determine if the seismic hazard is present and identify measures to reduce earthquake-related hazards.

California Building Standards Code

The CBC prescribes standards for constructing safe buildings. The CBC contains provisions for earthquake safety based on factors including occupancy type, soil and rock profile, ground strength, and distance to seismic sources. The CBC requires that a site-specific geotechnical investigation report be prepared for most development projects to evaluate seismic and geologic conditions such as surface fault ruptures, ground shaking, liquefaction, differential settlement, lateral spreading, expansive soils, and slope stability. The CBC is updated every three years, with the latest update effective as of 2020.

California Code of Regulations and Excavation Rules Title 8

Excavation, shoring, and trenching activities during construction are subject to occupational safety standards for stabilization by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) under Title 8 of the California Code of Regulations and Excavation Rules. These regulations minimize the potential for instability and collapse that could injure construction workers on the site.

Public Resources Code Section 5097.5

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils. These materials are valued for the information they yield about the history of the earth and its past ecological settings. California Public Resources Code Section 5097.5 specifies that unauthorized removal of a paleontological resource is a misdemeanor. Under the CEQA Guidelines, a project would have a significant impact on paleontological resources if it would disturb or destroy a unique paleontological resource or site or unique geologic feature.

Nonpoint Source Management Program and National Pollutant Discharge Elimination System permits

Stormwater runoff and soil erosion from project sites is regulated under the Nonpoint Source Management Program and NPDES permits adopted by the State Water Resources Control Board (SWRCB) and RWQCB, as required under the federal Clean Water Act. Permits include the NPDES General Permit for Discharges of Stormwater Associated with Construction Activity (Construction General Permit). Projects disturbing one acre or more of soil must obtain permit coverage under the Construction General Permit by filing Notice of Intent (NOI) and SWPPP with the RWQCB prior to commencement of construction. The Construction General Permit includes requirements for training, inspections, record keeping, and monitoring to reduce soil erosion.

California Department of Education School Site Selection Criteria

Pursuant to Section 17251(b) of the Education Code, the California Department of Education (CDE) developed the School Site Selection and Approval Guide to assist school districts in (1) selecting appropriate sites in compliance with regulations and CDE policies and 2) gaining state approval for the selected sites. The guide refers to the standards for school site selection as outlined in CEQA, California Education Code, Title 5 of the CCR, and other state codes. The guide includes site selection criteria based on a variety of factors such as location, size, and cost; however, it focuses on safety as the most important criteria to be considered during site selection.

According to the guide, the following safety factors shall be considered when evaluating a potential school site: (1) proximity to airports; (2) proximity to high-voltage power transmission lines; (3) presence of toxic and hazardous substances; (4) hazardous air emissions and facilities within a quarter mile; (5) other health hazards; (6) proximity to railroads; (7) proximity to high-pressure natural gas lines, gasoline lines, pressurized sewer lines, or high-pressure water pipelines; (8) proximity to propane tanks; (9) proximity to major roadways; (10) noise; (11) results of geological studies and soils analyses; (12) condition of traffic and school bus safety; (13) safe routes to school; and (14) safety issues for joint-use projects.

Regional

Municipal Stormwater National Pollutant Discharge Elimination System Permit

The San Francisco Bay RWQCB has issued a Municipal NPDES Permit (MRP), which requires the use of Low Impact Development (LID) stormwater treatment controls (e.g., infiltration or

bioretention-based facilities) to treat post-construction stormwater runoff. The City of Sunnyvale, as a permittee, reviews and enforces stormwater treatment controls on development sites to minimize pollutant discharge, as well as erosion and sedimentation.

Local

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to the General Plan geology and soil policies including the ones listed below.

Policy	Description
<i>Environmental Management Element</i>	
EM-8.5	Prevent accelerated soil erosion. Continue implementation of a construction site inspection and control program to prevent discharges of sediment from erosion and discharges of other pollutants from new and redevelopment projects.

Sunnyvale Municipal Code

SMC Title 16 (Building and Construction) and SMC Title 12 (Water and Sewers) includes the CBC and requirements for soil erosion control. In accordance with the SMC, procedures for the issuance, administration, and enforcement of building and grading permits are employed in order to protect health and safety. Such procedures include the reduction or elimination of the hazards of undue settlement, erosion, siltation, and flooding, or other special conditions.

3.7.1.2 *Existing Conditions*

Regional and Site Geology

Moffett Park is within the Santa Clara Valley, an alluvial basin bounded by the Santa Cruz Mountains to the west, Diablo Range to the east, and the Bay to the north. The Valley was formed when sediments derived from both mountain ranges were exposed by tectonic uplift and regression of the inland sea which previously inundated the area. The Upper Quaternary sediments include Holocene-Middle Pleistocene era deposits that consist of up to 1,000 feet of poorly sorted gravel, sand, and clay which were deposited in alluvial fan and deltaic depositional environments.

Moffett Park is primarily underlain by Hangerone series soils, along with Embarcadero, Bayshore, and Xerorthents soils.⁷⁴ These soils are clay alluvium soils derived from metamorphic or sedimentary rock. The soils are poorly drained and exhibit moderate to high shrink-swell (i.e., expansive)

⁷⁴ United States Department of Agriculture, Natural Resources Conservation Service. “Web Soil Survey.” Accessed March 31, 2022.

behavior.^{75,76} Expansive soils shrink and swell as a result of moisture changes. These changes can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations.

Moffett Park is generally flat and located in an urban environment. Much of Moffett Park is below the high tide elevation of 7.4 feet. The ground elevation is highest in the southwest corner of Moffett Park and the ground surface slopes down to the northeast.⁷⁷ The topography ranges from below two to approximately 18 feet, as shown on Figure 3.7-1. There are no nearby hills or steep slopes surrounding the area to the west, south, or east. North of Moffett Park, there are sloped berms separating Moffett Park from the WPCP and SMaRT Station®. The berms reach a maximum height of approximately 50 feet.

Groundwater and Subsidence

In 1933, the Santa Clara Valley became the first area in the United States where subsidence due to groundwater withdrawal was observed.^{78,79} Subsidence was primarily caused by the region's seasonal groundwater demand for agricultural uses. Between 1915 and 1965, groundwater levels in the Santa Clara Valley declined by up to 60 meters, leading to subsidence of up to 3.8 meters and flooding of large areas. From 1965 to 1990, water-intensive agricultural uses were replaced with urban and suburban development. Additionally, water suppliers began importing surface water from Sierra Nevada watersheds, further reducing groundwater demand and limiting subsidence. Local groundwater currently provides 40 percent of the Bay Area's water supply.

Regional groundwater pumping from the early 1900s to mid-1960s led to widespread ground subsidence of up to eight feet in some areas of Specific Plan; from the 1960s to present, the rate of subsidence has been halted through the reduction of groundwater extraction.⁸⁰ The Santa Clara Valley Water District (Valley Water) actively monitors for land subsidence through surveying, groundwater elevation monitoring, and data from compaction wells. Valley Water reduces the potential for land subsidence throughout the Santa Clara Valley by recharging groundwater basins with local and imported surface water. Valley Water also manages "in-lieu" recharge programs, including treated water deliveries, water conservation, and water recycling that reduce groundwater demand.

Groundwater is encountered at three to nine feet throughout Moffett Park.⁸¹ The groundwater flow direction is towards the northeast. Groundwater is discussed further in Section 3.10 Hydrology and Water Quality.

⁷⁵ United States Department of Agriculture. "Soil Series: Hangerone Series." Accessed September 30, 2021. https://soilseries.sc.egov.usda.gov/OSD_Docs/H/HANGERONE.html

⁷⁶ United States Department of Agriculture. "Soil Series: Embarcadero Series." Accessed September 30, 2021. https://soilseries.sc.egov.usda.gov/OSD_Docs/E/EMBARCADERO.html

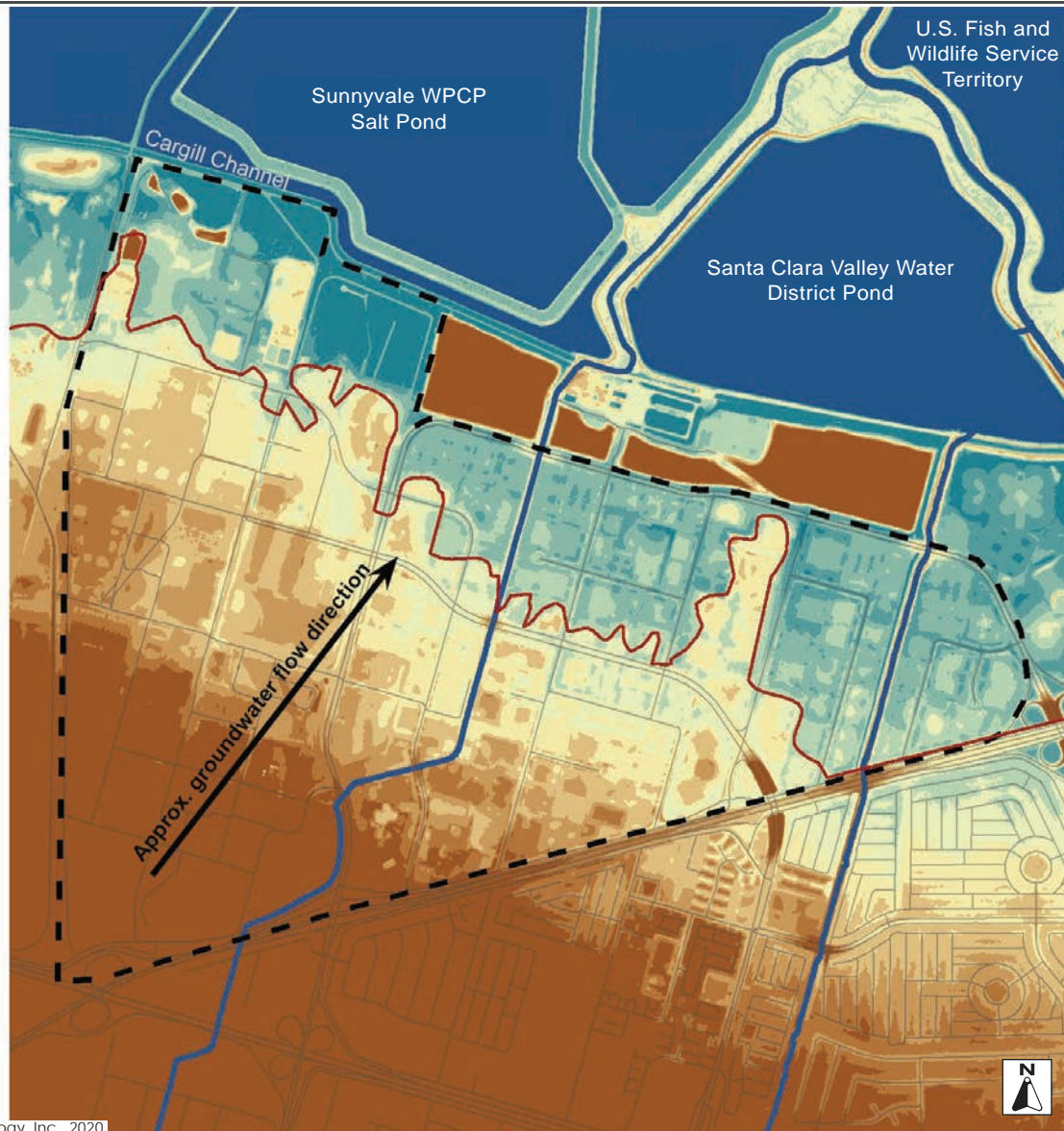
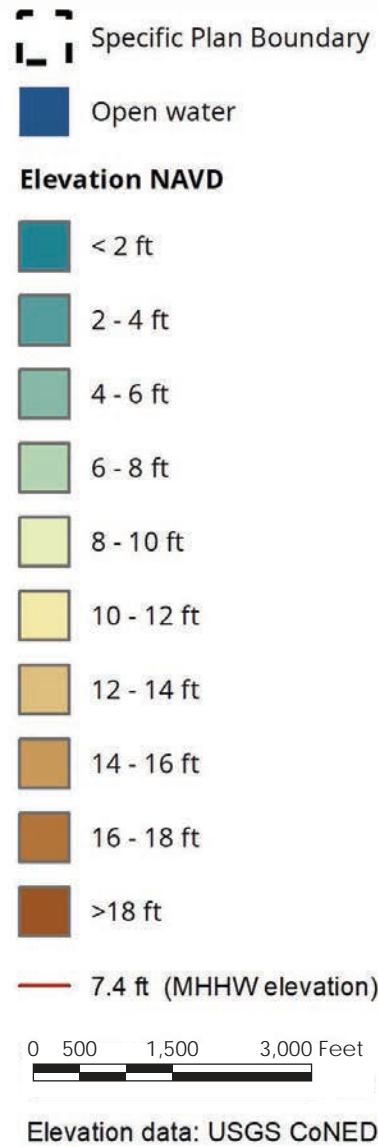
⁷⁷ San Francisco Estuary Institute. *Sea-level rise impacts on shallow groundwater in Moffett Park: a technical addendum to the Moffett Park Specific Plan*. November 2021. Page 4.

⁷⁸ Poland, J. F., and R. L. Ireland. *Land subsidence in the Santa Clara Valley, California, as of 1982*. 1988.

⁷⁹ Galloway, D. L., and J. Hoffmann. *The application of satellite differential SAR interferometry-derived ground displacements in hydrogeology*. 2006.

⁸⁰ San Francisco Estuary Institute. *Sea-level rise impacts on shallow groundwater in Moffett Park: A technical addendum to the Moffett Park Specific Plan*. November 2021. Page 4.

⁸¹ ESA. *Sunnyvale Flood Hazard & Sea-level Rise Adaptation Strategy*. November 2020. Page 16.



TOPOGRAPHY OF MOFFETT PARK

FIGURE 3.7-1

Paleontological Resources and Unique Geologic Features

Paleontological resources are the fossilized remains of organisms from prehistoric environments found in geologic strata. They range from mammoth and dinosaur bones to impressions of ancient animals and plants, trace remains, and microfossils.

Moffett Park generally consists of Holocene-Middle Pleistocene era deposits and include Hangerone, Embarcadero, Bayshore, and Xerorthents soils.^{82,83} The Holocene-age sediments (11,700 years to present) have low potential to yield fossil resources or to contain significant nonrenewable paleontological resources.⁸⁴ There are no known fossil localities within Moffett Park.⁸⁵ There is a known fossil locality north of Moffett Park (M1227 Mountain View Dump), approximately 1,300 feet north of East Caribbean Drive, where fossils were discovered approximately 30 feet below ground in Pliocene-Pleistocene gravel deposits.^{86,87} No unique geologic features, such as serpentine rock outcrops and boulders, pinnacles, or sandstone are located within Moffett Park.

Seismic and Seismic-Related Hazards

Earthquake Faults

Moffett Park is located within the seismically active San Francisco Bay region and within the general vicinity of three known major active faults. These faults include the San Andreas Fault, located approximately 11.2 miles to the southwest; the Calaveras Fault, 11.8 miles to the east; and the Hayward Fault, 7.8 miles to the northeast.⁸⁸ Moffett Park is not located within a currently designated Alquist-Priolo Earthquake Fault Zone.⁸⁹

Liquefaction

Soil liquefaction can be defined as ground failure or loss of strength that causes otherwise solid soil to take on the characteristics of a liquid. This phenomenon is triggered by earthquake or ground shaking that causes saturated or partially saturated soils to lose strength, potentially resulting in the soil's inability to support structures. Moffett Park is located within a State of California Seismic Hazard Zone for liquefaction and Santa Clara County liquefaction hazard zone.^{90,91}

⁸² Macrostrat. "Macrostrat." Accessed March 10, 2021. <https://macrostrat.org/>.

⁸³ United States Department of Agriculture, Natural Resources Conservation Service. "Web Soil Survey." Accessed March 31, 2022.

⁸⁴ City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. SCH #2012032003. August 2016. Page 3.7-12.

⁸⁵ Macrostrat. "Macrostrat." Accessed March 10, 2021. <https://macrostrat.org/>.

⁸⁶ Maguire, Kaitlin Clare and Holroyd, Patricia A. "Pleistocene Vertebrates of Silicon Valley (Santa Clara County, California)." *PaleoBios, University of California Museum of Paleontology*. Issue 33, 2016. Page 9.

⁸⁷ The Pleistocene era is typically 11,700 to 2.6 million years ago and the Pliocene era is typically 2.6 to 5.3 million years ago.

⁸⁸ United States Geological Survey. "Earthquake Hazards Program. The San Andreas and Other Bay Area Faults." Accessed May 5, 2022. <https://earthquake.usgs.gov/earthquakes/events/1906calif/virtualtour/bayarea.php>

⁸⁹ California Geological Survey. "CGS Information Warehouse: Earthquake Zones of Required Investigation." Accessed May 5, 2022. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>

⁹⁰ California Geological Survey. "CGS Information Warehouse: Regulatory Maps." Accessed September 30, 2021. <https://maps.conservation.ca.gov/cgs/informationwarehouse/regulatorymaps/>

⁹¹ Santa Clara County Planning Department. "Interactive Property Assessment." Accessed May 26, 2022. <https://sccplanning.maps.arcgis.com/apps/webappviewer/index.html?id=fb3af8ce73b6407c939e1ac5f092bb30>

Lateral Spreading

Lateral spreading is horizontal/lateral ground movement of relatively flat-lying soil deposits towards a free face such as an excavation, channel, or open body of water. Typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope. The Sunnyvale East and West Channels pass through Moffett Park from south to north before discharging to the Bay (as shown on Figure 2.2-3 and Figure 3.10-1). The salt ponds are located approximately 1,000 feet north of Moffett Park.

Landslides

A landslide is the movement of a mass of rock, debris, or earth down a slope. Landslides can be caused by a variety of factors such as strong ground shaking, changes in water level, changes in groundwater, or erosion. Moffett Park is not located within a state or county landslide hazard zone.⁹²

3.7.2 Impact Discussion

For the purpose of determining the significance of the project's impact on geology and soils, would the project:

- 1) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:
 - Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (refer to Division of Mines and Geology Special Publication 42)?
 - Strong seismic ground shaking?
 - Seismic-related ground failure, including liquefaction?
 - Landslides?
- 2) Result in substantial soil erosion or the loss of topsoil?
- 3) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?
- 4) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?
- 5) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?
- 6) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?

3.7.2.1 *Project Impacts*

Per California Building Industry Association v. Bay Area Air Quality Management District, 62 Cal. 4th 369 (BIA v. BAAQMD), CEQA does not generally require an analysis of the impacts of locating development in areas subject to environmental hazards unless the project would exacerbate those

⁹² Ibid.

existing environmental hazards or the hazards at issue are subject to certain specified exceptions to this general rule.

Impact GEO-1: The project would not directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault; strong seismic ground shaking; seismic-related ground failure, including liquefaction; or landslides. **(Less than Significant Impact)**

Fault Rupture

As discussed in Section 3.7.1.2 Existing Conditions, Moffett Park is not located within a currently designated Alquist-Priolo Earthquake Fault Zone⁹³ nor are there any faults mapped through Moffett Park. For these reasons, fault rupture would not occur within Moffett Park, and implementation of the project would not cause substantial adverse effects associated with fault rupture. **(Less than Significant Impact)**

Seismic Ground Shaking

As discussed in Section 3.7.1.2 Existing Conditions, Moffett Park is located within a seismically active region. It can be reasonably anticipated that future Specific Plan development would experience strong ground shaking during its lifetime. Strong ground shaking from seismic activity could damage structures and infrastructure. In accordance with the CBC, future Specific Plan development under the proposed would be required to prepare site-specific geotechnical investigation reports to evaluate seismic and geologic conditions and implement identified recommendations in those reports to avoid/minimize risk due to seismic and seismic-related hazards (including ground shaking) to acceptable levels. Therefore, implementation of the proposed project would not cause substantial adverse effects associated with seismic ground shaking. **(Less than Significant Impact)**

Liquefaction

As discussed in Section 3.7.1.2 Existing Conditions, Moffett Park is located in a liquefaction hazard zone, which can pose a risk to the integrity of structures at the site. In accordance with the CBC, future Specific Plan development would be required to prepare site-specific geotechnical investigation reports to evaluate seismic and geologic conditions and implement identified recommendations in those reports to avoid/minimize risk due to seismic and seismic-related hazards (including liquefaction) to acceptable levels. Therefore, implementation of the proposed project would not cause substantial adverse effects associated with liquefaction. **(Less than Significant Impact)**

⁹³ California Geological Survey. "CGS Information Warehouse: Earthquake Zones of Required Investigation." Accessed May 5, 2022. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>

Landslides

Due to the generally flat topography of Moffett Park, the risk of seismically induced landsliding is low. Therefore, future Specific Plan development would not cause substantial adverse effects associated with landslides. **(Less than Significant Impact)**

Impact GEO-2: The project would not result in substantial soil erosion or the loss of topsoil. **(Less than Significant Impact)**

Future development in Moffett Park, in compliance with the NPDES General Construction Permit (which includes the implementation of a SWPPP) and conformance with City grading and excavation requirements (refer to discussion in Section 3.10 Hydrology and Water Quality for more details). Therefore, implementation of the Specific Plan would not result in significant impacts from soil erosion or loss of topsoil. **(Less than Significant Impact)**

Impact GEO-3: The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. **(Less than Significant Impact)**

As discussed under Impact GEO-1, future Specific Plan development would not result in landslides and would comply with the CBC. The CBC requires preparation of site-specific geotechnical investigation reports and implementation of the identified recommendations in those reports to avoid and minimize seismic and seismic-related hazards. Site-specific conditions that could result in unstable conditions could include proximity to open bodies of water, type of on-site soils, and presence of undocumented fill on-site. Seismic-related hazards include liquefaction (discussed under Impact GEO-1) and lateral spreading. Typically, lateral spreading is associated with liquefaction of one or more subsurface layers near the bottom of the exposed slope.

As discussed under Section 3.7.1 Environmental Setting, the project site has historically experienced high levels of subsidence, which has since been halted by reducing groundwater extraction in the region. Implementation of the proposed project would develop urban uses connected to the City's water system and does not include groundwater extraction wells. Consistent with CALGreen and Specific Plan policies DS-4.1, DS-4.8, DS-5.4, and IU-5.1 through IU-5.4 (refer to Section 3.6 Energy), future Specific Plan development would implement water efficiency measures including low flow fixtures, high efficiency irrigation systems, and would use recycled water for landscaping to reduce regional groundwater demand.

Given the shallow groundwater depth in Moffett Park (three to nine feet below ground), future below ground structures (e.g., below ground parking garages) could be below the groundwater table and would require dewatering during construction and operation (see Section 3.10 Hydrology and Water Quality for a detailed discussion). Removal of groundwater could result in subsidence of the above

ground; however, with prudent design, in accordance with the most up-to-date building codes, the risk from hydrostatic pressure can be reduced to acceptable levels and not result in subsidence.

Future development shall be developed in accordance with the CBC and recommendations in site-specific geotechnical investigation reports to avoid and minimize impacts related to liquefaction, lateral spreading, and subsidence from groundwater pumping (if required as part of construction or operation of future development). As discussed in Section 3.6.1.1 Regulatory Framework, public schools (if proposed in the future) are subject to state siting criteria to ensure that they are located on sites containing stable and safe geologic conditions. The on-site geotechnical investigation and Cal/OSHA under Title 8 of the California Code of Regulations and Excavation Rules would also address any potential for collapse on development sites. Future development, therefore, would not result in impacts on- or off-site. **(Less than Significant Impact)**

Impact GEO-4: The project would not be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property. **(Less than Significant Impact)**

As described under Section 3.7.1.2, soils underlying Moffett Park have a moderate to high potential for expansion. The shrink-swell actions of these soils can cause heaving and cracking of slabs-on-grade, pavements, and structures founded on shallow foundations. Future development projects within Moffett Park would comply with the CBC and prepare site-specific geotechnical investigations, which would take into account the expansive soils underlying the development site and implement the identified recommendations for building design and engineering practices that address potential impacts from expansive soils. Future development, therefore, would not exacerbate existing conditions related to expansive soils on- or off-site. **(Less than Significant Impact)**

Impact GEO-5: The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. **(Less than Significant Impact)**

It is assumed future Specific Plan development would connect to existing sanitary sewer system; therefore, future development would not require septic tanks or alternative wastewater disposal systems. In the event private district utilities systems are proposed to treat sewage as part of future development projects, a design-level geotechnical report is required pursuant to the CBC to ensure on-site soil conditions are adequate. Leach pits or percolation fields are not anticipated. **(Less than Significant Impact)**

Impact GEO-6: The project would not directly or indirectly destroy a unique paleontological resource or site or unique geological feature. **(Less than Significant Impact)**

Paleontological Resource

Confirmed occurrences of Pleistocene fossils (not including localities with only horse or bison identified to genus, as these animals may represent modern records) from the valley areas of Santa Clara County were found at depths of nine or more feet below ground surface. Generally, fossils of

extinct Pleistocene animals start appearing at about eight feet below the surface of California's large valleys in areas of Holocene and Pleistocene alluvium. Accordingly, for areas mapped as Holocene at the surface, native sediments less than eight feet below the original surface are given a low sensitivity, and those that are more than eight feet deep are given a high sensitivity.

Based on the above discussion it is possible that excavation or disturbance of soils eight feet below ground surface or greater and within Pleistocene-era or older sediments may encounter unknown paleontological resources. Future development projects would comply with the following Specific Plan Project Requirement pertaining to paleontological resources.

Cultural Resources Project Requirements:

- **10.3.2-6:** Fossil Review. Future development projects involving excavation at depths of eight feet or greater, shall retain a qualified paleontologist to inspect cuts more than eight feet deep for fossils at all times during original grading. In the event paleontological resources are discovered, all work within 25 feet of the find shall be halted and a Principal Paleontologist (M.S. or PhD in paleontology or geology familiar with paleontological procedures and techniques) shall evaluate the find and prepare a Paleontological Resource Mitigation (PRM) plan. As part of the PRM plan, discovered fossil(s), along with copies of all pertinent field notes, photos, and maps, shall be deposited in a scientific institution with paleontological collections. A final report documenting any found resources, their recovery, and disposition shall be prepared and filed with the local repository and the City.

Future Specific Plan development, in compliance with Specific Plan Project Requirement 10.3.2-6 above, would not result in significant impacts to paleontological resources by monitoring construction work at depths where paleontological resources could be present and properly protecting, recovering, and documenting resources (if found). **(Less than Significant Impact)**

Unique Geological Features

As discussed in Section 3.7.1.2 Environmental Conditions, there are no unique geologic features located within Moffett Park. Thus, implementation of the Specific Plan would not destroy a unique geological feature. **(No Impact)**

3.7.2.2 Cumulative Impacts

Impact GEO-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant geology and soils impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative geologic impacts is Moffett Park and surrounding areas because it is assumed that the effects of ground disturbing activities would be limited to Moffett Park and surrounding sites. Cumulative projects, including future Specific Plan developments, are required to comply with existing regulations including CEQA, CBC, NPDES, SMC Title 16, and SMC Title 12 to reduce geology and soil impacts to acceptable levels. Compliance with these regulations on a project-level basis ensures less than significant cumulative impacts. Additionally, as described under

Impact GEO-6, future development under the Specific Plan would comply with Specific Plan Project Requirement 10.3.2-6 to reduce impacts to paleontological resources to less than significant levels. Cumulative projects outside of the Specific Plan would also be required to protect paleontological resources with the implementation of measures similar to this requirement, pursuant to CEQA. For these reasons, the cumulative projects (including the Specific Plan) would not result in a significant cumulative geology and soils impact. **(Less than Significant Cumulative Impact)**

3.8 GREENHOUSE GAS EMISSIONS

The following discussion is based, in part, on an Air Quality/Greenhouse Gas Analysis completed by Illingworth & Rodkin, Inc. dated November 23, 2022. This report is included as Appendix D to this EIR.

3.8.1 Environmental Setting

3.8.1.1 *Background Information*

Gases that trap heat in the atmosphere are commonly referred to as GHGs. The most common GHGs are carbon dioxide (CO₂) and water vapor but there are also several others, most importantly methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆). These are released into the earth's atmosphere through a variety of natural processes and human activities. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential and is measured in units of CO₂ equivalents (CO₂e). Sources of GHGs are generally as follows:

- CO₂ and N₂O are byproducts of fossil fuel combustion.
- N₂O is associated with agricultural operations such as fertilization of crops.
- CH₄ is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and SF₆ emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

An expanding body of scientific research supports the theory that global climate change is currently causing changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

As the result of the extent of human sources of GHG worldwide, the stability of many of these compounds in the atmosphere, and the mixing that occurs in the atmosphere (and oceans), the effects of GHG emissions on climate are considered global, cumulative impacts.

3.8.1.2 *Regulatory Framework*

State

Assembly Bill 32 and State Bill 32

Under the California Global Warming Solutions Act, also known as AB 32, CARB established a statewide GHG emissions cap for 2020, adopted mandatory reporting rules for significant sources of GHGs, and adopted a comprehensive plan, known as the Climate Change Scoping Plan, identifying how emission reductions would be achieved from significant GHG sources.

In 2016, SB 32 was signed into law, amending the California Global Warming Solution Act. SB 32, and accompanying Executive Order B-30-15, require CARB to ensure that statewide GHG emissions are reduced to 40 percent below the 1990 level by 2030. CARB updated its Climate Change Scoping Plan in December of 2017 (2017 Scoping Plan) to express the 2030 statewide target in terms of million metric tons of CO₂e (MMTCO₂e). Based on the emissions reductions directed by SB 32, the annual 2030 statewide target emissions level for California is 260 MMTCO₂e.

Senate Bill 375

SB 375, known as the Sustainable Communities Strategy and Climate Protection Act, was signed into law in September 2008. SB 375 builds upon AB 32 by requiring CARB to develop regional GHG reduction targets for automobile and light truck sectors for 2020 and 2035. The per capita GHG emissions reduction targets for passenger vehicles in the San Francisco Bay Area include a seven percent reduction by 2020 and a 15 percent reduction by 2035.

Consistent with the requirements of SB 375, the Metropolitan Transportation Commission (MTC) partnered with the Association of Bay Area Governments (ABAG), BAAQMD, and the Bay Conservation and Development Commission to prepare the region's Sustainable Communities Strategy (SCS) as part of the Regional Transportation Plan process. The SCS is referred to as Plan Bay Area 2050.

Plan Bay Area 2050 is a long-range plan for the nine-county San Francisco Bay Area that provides strategies that increase the availability of affordable housing, support a more equitable and efficient economy, improve the transportation network, and enhance the region's environmental resilience. Plan Bay Area 2050 promotes the development of a variety of housing types and densities within identified priority development areas (PDAs). PDAs are areas generally near existing job centers or frequent transit that are locally identified for housing and job growth.⁹⁴

Plan Bay Area 2050 includes a goal to increase the number of households that live within 0.5 mile of frequent transit by 2050. Plan Bay Area promotes strategies that support active and shared modes, combined with a transit-supportive land use patterns, which together are forecasted to lower the share of Bay Area residents that drive to work alone from 50 percent in 2015 to 33 percent in 2050, resulting in a decrease in greenhouse gas emissions. Plan Bay Area 2050 also includes goals to

⁹⁴ Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2050*. October 21, 2021. Page 20.

expand TDM initiatives that support and augment employers' commute programs, providing a path to emissions reductions.

SB 100

SB 100, known as The 100 Percent Clean Energy Act of 2018, was adopted on September 10, 2018. The overall goal is to have all retail electricity sold in California be procured from 100 percent renewable and zero-carbon resources by the year 2045. SB 100 also modified the renewables portfolio standard to 50 percent by 2025 and 60 percent by 2030.

Executive Order B-55-18

Executive Order B-55-18 was issued in September 2018. It ordered a new statewide goal of achieving carbon neutrality no later than 2045 and to maintain net negative emissions thereafter.

Assembly Bill 1279

The California Climate Crisis Act was approved on September 16, 2022, and it codifies the statewide goal set by Executive Order B-55-18 of achieving net zero GHG emissions no later than the year 2045 and maintaining net negative emissions thereafter. In addition, this bill has a statewide goal of reducing anthropogenic GHG emissions by 85 percent below the 1990 levels by the year 2045. The bill requires CARB to work with relevant state agencies to ensure that updates to the scoping plan identify and recommend measures to achieve these policy goals and strategies that enable carbon dioxide removal solutions and carbon capture, utilization, and storage technologies in California. The bill requires CARB to submit an annual report.

An updated CARB Scoping Plan, which sets a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045 (consistent with AB 1279), is anticipated to be approved in December 2022.

Advanced Clean Cars II Regulation

To continue reducing air pollutants and GHG emissions in the transportation sector, CARB adopted the Advanced Clean Cars II Regulations (Resolution 22-12) on August 25, 2022. The new regulation requires that by 2035 all new passenger cars, trucks, and SUVs sold in California will be zero emissions. This regulation bans the sale of new gasoline or diesel passenger cars, trucks, and SUVs in California from automakers. Beginning in the 2026, 35 percent of new vehicle sales must be zero-emission vehicles and plug-in hybrid electric vehicles and that percentage will increase per year. By 2030, 70 percent of new vehicle sales will be zero-emissions vehicles and by the 2035 model year 100 percent of new vehicle sales will be zero-emissions. CARB will limit the use of plug-in hybrid electric vehicles in the percentage requirements to keep the manufacturing of zero-emissions as the primary goal. Existing gasoline cars can continue to be driven and sold as used cars beyond 2035. CARB will be required to track and report on the zero-emissions vehicle market development annually.

California Building Standards Code – Title 24 Part 11 and Part 6

The CALGreen Code is part of the California Building Standards Code under Title 24, Part 11.⁹⁵ The CALGreen Code encourages sustainable construction standards that incorporate planning/design, energy efficiency, water efficiency resource efficiency, and environmental quality. These green building standard codes are mandatory statewide and are applicable to residential and non-residential developments. The most recent CALGreen Code was effective as of January 1, 2020.

The California Building Energy Efficiency Standards (California Energy Code) is under Title 24, Part 6 and is overseen by the CEC. This code includes design requirements to conserve energy in new residential and non-residential developments. This Energy Code is enforced and verified by cities during the planning and building permit process. The current energy efficiency standards (2019 Energy Code) replaced the 2016 Energy Code as of January 1, 2020. Under the 2019 standards, single-family houses are predicted to be 53 percent more efficient than homes built under the 2016 standard due more stringent energy-efficiency standards and mandatory installation of solar photovoltaic systems. For non-residential developments, it is predicted that these buildings will use 30 percent less energy due to lightening upgrades.⁹⁶

Requirements for electric vehicle (EV) charging infrastructure are set forth in Title 24 of the California Code of Regulations and are regularly updated on a three-year cycle. The CALGreen standards consist of a set of mandatory standards required for new development, as well as two more voluntary standards known as Tier 1 and Tier 2. The CALGreen standards have recently been updated (2022 version) to require deployment of additional EV chargers in various building types, including multi-family residential, hotel, and non-residential land uses. They include requirements for both EV capable parking spaces and the installation of EV supply equipment for multi-family residential and nonresidential buildings. The 2022 CALGreen standards include requirements for both EV readiness and the actual installation of EV chargers. The 2022 CALGreen standards include both mandatory requirements and more aggressive voluntary Tier 1 and Tier 2 provisions.

CALGreen Tier 1 standards require multi-family developments and hotels with less than 20 units to have 35 percent of the total number of parking spaces EV ready; if there are more than 20 units, 10 percent of the parking spaces must be provided with EV supply equipment. These standards also require 30 percent of total parking spaces require EV capable spaces and 33 percent of parking spaces require EV capable spaces provided with EV supply equipment for non-residential and non-hotel uses.

CALGreen Tier 2 standards require multi-family developments and hotels with less than 20 units to have 40 percent of the total number of parking spaces EV ready; if there are more than 20 units, 15 percent of the parking spaces must be provided with EV supply equipment. For non-residential and non-hotel uses, 45 percent of total parking spaces require EV capable spaces and 33 percent of parking spaces require EV capable spaces provided with EV supply equipment.

⁹⁵ See: <https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen#:~:text=CALGreen%20is%20the%20first%2Din,to%201990%20levels%20by%202020>.

⁹⁶ California Energy Commission. “2019 Building Energy Efficiency Standards: Frequently Asked Questions.” Accessed November 28, 2022. https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf.

CALGreen also requires new construction and demolition projects to have a diversion of at least 65 percent of the construction waste generated. CALGreen also allows a disposal reduction option that can be met when the project's disposal rate is 2.0 pounds per square foot or less for non-residential and high-rise residential construction or 3.4 pounds per square foot or less for low-rise residential construction.

Regional

2017 Clean Air Plan

To protect the climate, the 2017 CAP (prepared by BAAQMD) includes control measures designed to reduce emissions of methane and other super-GHGs that are potent climate pollutants in the near-term, and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

CEQA Air Quality Guidelines

The BAAQMD CEQA Air Quality Guidelines, adopted in May 2017, are intended to serve as a guide for those who prepare or evaluate air quality impact analyses for projects and plans in the San Francisco Bay Area. The jurisdictions in the San Francisco Bay Area Air Basin utilize the thresholds and methodology for assessing GHG impacts developed by BAAQMD within the CEQA Air Quality Guidelines. The guidelines include information on legal requirements, BAAQMD rules, methods of analyzing impacts, and recommended mitigation measures.

CEQA GHG Thresholds and Guidelines Update

On April 20, 2022, the BAAQMD Board of Directors adopted the Justification Report: CEQA Thresholds for Evaluating the Significance of Climate Impacts from Land Use Projects and Plans. The report includes BAAQMD's thresholds of significance for use in determining whether a proposed project or plan will have a significant impact on climate change and provides the substantial evidence to support of these thresholds. The April 2022 GHG threshold replaces the GHG thresholds set forth in the May 2017 BAAQMD CEQA Air Quality Guidelines. BAAQMD has analyzed what will be required of new land use development projects and plans to achieve California's long-term climate goal of carbon neutrality by 2045.

The threshold of significance for plans (e.g., General Plans, Climate Action Plans, and similar long-term community wide plans) is to meet the state's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045 or be consistent with a local GHG reduction strategy that meets the criteria under CEQA Guidelines Section 15183.5(b).

The threshold of significance for land use development projects is to either A) incorporate project design elements and achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan or B) be consistent with a local GHG reduction strategy that meets the criteria of CEQA Guidelines Section 15183.5 (b). Table 3.8-1 below summarizes the GHG thresholds for plans and land use projects.

Table 3.8-1: BAAQMD GHG Significance Thresholds	
Plan-Level Thresholds	
A. Meet the State’s goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045; or	
B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).	
Project-Level Thresholds	
A. Projects must include, at a minimum, the following project design elements:	
<ul style="list-style-type: none"> 1. Buildings <ul style="list-style-type: none"> a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development). b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines. 2. Transportation <ul style="list-style-type: none"> a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor’s Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts. b. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2. 	
B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).	

Local

City of Sunnyvale General Plan

The City’s General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating environmental impacts resulting from planned development projects within the City. Future development projects implementing the Specific Plan would be subject to the General Plan GHG policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-2.1	Enhance the public’s health and welfare by promoting the City’s environmental and economic health through sustainable practices for the design, construction, maintenance, operation, and deconstruction of buildings, including measures in the Climate Action Plan.
LT-2.2	Reduce greenhouse gas emissions that affect climate and the environment through land use and transportation planning and development.

City of Sunnyvale Climate Action Playbook

The City of Sunnyvale Climate Action Playbook (August 2019) sets a vision for the City to reduce carbon emissions by 2050. The Playbook includes six strategies with “Plays” that identify areas for action to reduce GHG emissions. The following Strategies and Plays are applicable to future developments implementing the Specific Plan.

Strategy	Description
<i>Strategy 1: Promoting Clean Electricity</i>	
Play 1.2	Increase local solar photovoltaics
Play 1.3	Increase distributed electricity storage
<i>Strategy 2: Decarbonizing Buildings</i>	
Play 2.3	Achieve all-electric new construction
<i>Strategy 3: Decarbonizing Transportation & Sustainable Land Use</i>	
Play 3.2	Increase transportation options and support shared mobility
Play 3.3	Increase zero-emission vehicles
<i>Strategy 4: Managing Resources Sustainably</i>	
Play 4.1	Achieve zero waste goals for solid waste
Play 4.2	Ensure resilience of water supply
Play 4.3	Enhance natural carbon sequestration capacity

The Playbook is not a qualified GHG reduction strategy pursuant to the BAAQMD CEQA Guidelines and CEQA Guidelines Section 15183.5(b). The City is in the process of developing the next five-year work plan for implementing the Playbook. No updates to the Plays are anticipated.

Sunnyvale Reach Code

The CEC approved the City’s Reach Code Ordinance, which went in effect on January 26, 2021. The Reach Code is a local energy code for buildings design and construction that go beyond the minimum state requirements. The purpose of the Reach Code is to help reduce GHG emissions by promoting electric versus natural gas energy use and encouraging electric vehicle charging

infrastructure. The Reach Code Ordinance applies to new residential and nonresidential construction, and includes the following requirements:

- Gas appliances including cooking range, water heater, space heater, fireplace, etc. are not permitted (with the exception of certain non-residential uses such factories, hazardous materials manufacturing, and laboratory facilities, as well as emergency operation centers, and commercial dryers in large hotels)
- Solar panels are required for all new buildings
- Electric vehicle charging stations (or conduit and preliminary wiring for them) are required for all new building parking lots

The Reach Codes were re-adopted as part of the 2023 Building Codes update on November 1, 2022.

Sunnyvale Construction and Demolition Waste Diversion

The City requires remodel or demolition projects where 50 percent or more of the exterior wall will be removed to recycle or reuse at least 65 percent of the project's nonhazardous waste.⁹⁷ Recycling of nonhazardous waste reduces the energy use to produce new materials from raw, non-renewable resources.

3.8.1.3 Existing Conditions

Unlike emissions of criteria and toxic air pollutants, which have regional and local impacts, emissions of GHGs have a broader, global impact. Global warming is a process whereby GHGs accumulating in the upper atmosphere contribute to an increase in the temperature of the earth and changes in weather patterns.

The existing uses in Moffett Park generate GHG emissions as a result of energy consumption, vehicle trips to and from Moffett Park, solid waste generation, and water usage. It is estimated that the existing uses generate approximately 178,083 metric tons of CO_{2e} (MTCO_{2e}) annually. The existing uses at Moffett Park were not subject to the same BAAQMD design requirements or plan-level thresholds that were adopted in April 2022 to achieve carbon neutrality. Existing development in Moffett Park is not carbon neutral.

3.8.2 Impact Discussion

For the purpose of determining the significance of the project's impact on GHG emissions, would the project:

- 1) Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- 2) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

⁹⁷ City of Sunnyvale. "Construction Waste." Accessed December 9, 2022. <https://www.sunnyvale.ca.gov/business-and-development/planning-and-building/construction-waste>.

3.8.2.1 Project Impacts

Impact GHG-1: The project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Significant and Unavoidable Impact)**

Construction

Construction GHG emissions estimates are not included as part of this analysis due to the speculative nature and lack of a BAAQMD or industry-standard model for calculating emissions on a program-level basis. In addition, neither the City nor BAAQMD have an adopted threshold of significance for construction related GHG emissions. BAAQMD encourages the incorporate of best management practices to reduce GHG emissions during construction where feasible and applicable, including using alternative fueled (e.g., biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet, using local building materials of at least 10 percent, and recycling or reusing at least 65 percent of construction waste or demolition materials. Future development under the Specific Plan would comply with Specific Plan Project Requirement 10.3.3-2 to restrict idling of construction equipment and utilize energy-efficient equipment and comply with CALGreen and the City’s construction and demolition waste diversion regulations to recycle or reuse at least 65 percent of the future projects’ nonhazardous waste. For these reasons, future projects would result in less than significant construction GHG emissions. **(Less than Significant Impact)**

Operation

It is estimated the Specific Plan would be built out and fully occupied by 2040. Long-term operational GHG emissions from the buildout of the Specific Plan would result from area emissions (i.e., emissions from architectural coatings), energy consumption, mobile emissions from vehicles traveling to and from the Moffett Park, and emissions from solid waste generation and water usage. Operational GHG emissions for the Specific Plan buildout were estimated using CalEEMod. The Specific Plan land use types and size and other project-specific information were inputted into the model to estimate operational GHG emissions for the Specific Plan buildout. Refer to Appendix D for more details about the model inputs. GHG emissions from existing land uses at Moffett Park and operational GHG emissions from Specific Plan buildout are shown in Table 3.8-2.

Table 3.8-2: Annual Moffett Park GHG (CO₂e) Emissions		
Source Category	Existing Land Uses (2020)	Specific Plan Buildout (2040)
	MT CO ₂ e/year/capita and MT CO ₂ e/year/capita	
Area	0.35	249
Energy Consumption	16,177	874 ¹
Mobile	125,503	254,309
Solid Waste Generation	8,687	20,361

Table 3.8-2: Annual Moffett Park GHG (CO₂e) Emissions		
Source Category	Existing Land Uses (2020)	Specific Plan Buildout (2040)
Water Usage	4,467	9,770
Total (MT CO ₂ e/year)	154,833	285,563
Per Capita Emissions (MT CO ₂ e/year/capita)	4.40 ²	2.07 ³
Net Emissions (MT CO ₂ e/year)	--	130,730
Notes		
<p>¹ The model assumed natural gas would only be used for uses that are exempt from the City's Reach Code (e.g., commercial dryers, emergency operation centers). Natural gas use by new non-residential uses is assumed to account for four percent of GHG emissions. ² Service population for the existing Moffett Park uses is 35,212 employees. The existing per capita emissions = 178,083 MT CO₂e/year (Total emissions from existing uses)/35,212 employees (service population) = 5.06 MT CO₂e/year/capita</p> <p>³ Service population for the Specific Plan buildout = 95,683 jobs + 42,000 residents = 137,683. The Specific Plan buildout per capita emissions = 302,763 MT CO₂e/year (Total emissions from buildout)/137,683 service population = 2.20 MT CO₂e/year/capita</p>		

Compared to existing conditions, the net annual emissions from Specific Plan buildout operations are predicted to be 130,730 MT of CO₂e. The buildout of the proposed Specific Plan would result in per capita emissions of 2.07 MT CO₂e/year/capita, which would be a decrease from 4.40 MT CO₂e/year/capita under the existing conditions.

Model Assumptions

Mobile emissions are currently modeled to make up about 85 percent of Specific Plan-generated emissions in 2040. The remaining 15 percent of GHG emissions would be generated by water usage, energy, and solid waste. The modeling for mobile emissions was based on use of EMFAC2021 which does not include California's latest Advanced Clean Cars and Advanced Clean Trucks regulations. These regulations along with future fuel standards would reduce mobile emissions substantially. Additionally, new rules and regulations are likely to be adopted in the future, prior to 2040, that would reduce mobile emissions.

Future water conservation efforts, use of recycled water available in the area for outdoor water usage, and new measures to reduce solid waste (reducing emissions from hauling of solid waste and reuse of methane generated) would reduce GHG, including carbon, emissions generated by water usage and solid wastes.

Plan-Level Impact

Per BAAQMD, for plans (such as the proposed Specific Plan) to have a less than significant GHG impact, the plan would need to:

- Meet the state's goals to reduce emissions to 40 percent below 1990 levels by 2030 and carbon neutrality by 2045, or

- Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b) [Note: The City’s Climate Action Playbook does not meet the criteria under CEQA Guidelines Section 15183.5(b)].

As discussed above and shown in Table 3.8-2, buildout of the Specific Plan is predicted to increase total emissions by 130,730 MT CO₂e/year through the addition of new residences, office/industrial/R&D, and institutional land uses. There is no current pathway for the project or state to achieve carbon neutrality. The implementation of the Specific Plan, however, would decrease the amount of GHG emissions per capita compared to existing uses. This means that the Specific Plan would result in a more efficient use of land and resources compared to existing conditions. The Specific Plan also includes the following policies to reduce GHG emissions from future development:

Greenhouse Gas Emissions Project Requirements:

- **8.3.3-4:** Electric vehicle parking. The number, design, and infrastructure for electric vehicle parking shall be provided per Table 15 of the Specific Plan or CALGreen Tier 2, whichever is more stringent.
- **10.4-20:** Develop solid waste minimization programs that include increased rates of recycling, composting of food, and reuse of construction materials.
- **10.6:** Update Specific Plan policies and implementing measures on a regular basis (e.g., every five years) to measure progress and incorporate new measures to progress toward achieving carbon neutrality. Future updates to the Specific Plan would address the goals of new local and state plans (e.g., state’s upcoming scoping plan) to achieve GHG emissions reductions as well as new methods to more accurately model GHG emissions and implement innovative measures or project designs.

In addition, future development projects would be consistent with the City’s Reach Code which would prohibit the construction of new natural gas infrastructure with exceptions for certain uses (e.g., emergency operation centers). In accordance with the Reach Code, all future multi-family and non-residential buildings would be required to install solar panels with the exception for some non-residential and high-rise residential buildings that could use solar thermal systems as an alternative. Future projects would also include EV charging stations or have EV outlets or conduits (i.e., EV infrastructure), in conformance with the Reach Code and CALGreen Tier 2 requirements (as described in Specific Plan Project Requirement 8.3.3-4 above). Implementation of the above standards and Specific Plan Project requirements 8.3.3-4, 10.4-20, and 10.6 would reduce future projects’ GHG emissions.

As identified in Section 3.3 Air Quality, the Specific Plan includes policies TDMP 2.1 through 2.5 that require future development to implement a TDM plan to reduce vehicle trips (which, in turn, reduces mobile GHG emissions). Achieving carbon neutrality will rely on multiple factors including future state regulations (including the upcoming scoping plan) and technologies, and changes to human behavior. For this reason, Specific Plan Project Requirement 10.6 above is adaptive and requires periodic updates to the Specific Plan policies as needed to capture new criteria, standards, and technologies would assist towards achieving carbon neutrality.

Moreover, since achieving carbon neutrality would require state regulations and solutions that are not yet known or available, it is conservatively concluded that the buildout of the Specific Plan will result in a significant and unavoidable GHG impact. **(Significant and Unavoidable Impact)**

Project-Level Impact

Per BAAQMD, for land use projects (such as future development projects under the Specific Plan) to result in a less than significant GHG impact, the land use project would need to comply with threshold A) or B) below.

- A. Projects must include, at a minimum, the following project design elements:
 1. Buildings
 - a. The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
 - b. The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.
 2. Transportation
 - a. Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
 - i. Residential projects: 15 percent below the existing VMT per capita
 - ii. Office projects: 15 percent below the existing VMT per employee
 - iii. Retail projects: no net increase in existing VMT
 - a. Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier 2.
- B. Be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b) [As noted above, the City's Climate Action Playbook does not meet the criteria under CEQA Guidelines Section 15183.5(b)].

As discussed in Section 3.17 Transportation under Impact TRN-2, the project's VMT would be 15 percent below the existing, countywide average for all the Specific Plan land uses and/or meet the City's VMT Policy. As discussed in Section 3.6 Energy under Impact EN-1, the buildout of the Specific Plan would not result in wasteful, inefficient or unnecessary energy usage. Future development projects consistent with the Reach Code and the Specific Plan Requirements listed above that do not include natural gas appliances or plumbing and provide off-street EV requirements in the most recently adopted version of CALGreen Tier 2 would not result in significant GHG emissions.

However, some of the future non-residential buildings may include natural gas appliances and plumbing in accordance with exceptions in the Reach Code; therefore, future projects that include natural gas appliances or natural gas plumbing would result in a significant project-level impact. As acknowledged by the Reach Code, it is not feasible to prohibit all future non-residential

developments under the Specific Plan from using natural gas. **(Significant and Unavoidable Impact)**

Impact GHG-2: The project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. **(Significant and Unavoidable Impact)**

Assembly Bill 1279

AB 1279 codifies the updated statewide GHG goal of achieving net zero GHG emissions by year 2045. As discussed under Impact GHG-1, achieving carbon neutrality will require state regulations and solutions that are not yet known or available and, therefore, it was conservatively concluded that the Specific Plan despite its inclusion of adaptive policies, does not (currently) have a path towards achieving carbon neutrality. **(Significant and Unavoidable Impact)**

2017 Clean Air Plan

The BAAQMD 2017 CAP focuses on two goals: protecting public health and protecting the climate. The 2017 CAP includes air quality standards and control measures designed to reduce emissions of methane, carbon dioxide, and other super-GHGs. The Specific Plan would be consistent with the 2017 Clean Air Plan by implementing transportation control measures, building control measures, natural and land control measures, waste management control measures, and water control measures as discussed in Section 4.3 Air Quality. However, the Specific Plan would conflict with the 2017 Clean Air Plan because buildout of the Specific Plan would result in a significant amount of operational criteria air pollutant emissions. **(Significant and Unavoidable Impact)**

Plan Bay Area 2050

Plan Bay Area 2050 establishes a course for reducing per capita GHG emissions through the promotion of compact, high-density, mixed-use neighborhoods near transit, particularly within identified PDAs. Future projects under the Specific Plan would be located in a PDA. The Specific Plan would include high-density residential and mixed-use neighborhoods within one half mile of Moffett Park, Lockheed Martin, Borregas, Crossman light rail stations at Moffett Park. In addition, future projects would be required to implement TDM Plans to reduce single-occupancy vehicle trips (refer to Section 3.3 Air Quality). Therefore, the Specific Plan is consistent with the goals of Plan Bay Area 2050. **(Less than Significant Impact)**

CALGreen and Title 24 Building Code

Future projects under the Specific Plan would comply with CALGreen and the Title 24 Building Code, which require energy conservation measures and water conservation measures such as energy efficient lighting, high-efficiency water fixtures, water-efficient irrigation systems. The Specific Plan would be consistent with the CALGreen Tier 1 and Tier 2 standards by requiring EV parking spaces for residential and non-residential uses, and the City's and CALGreen's 65 percent construction waste diversion requirements. Reducing energy and water use reduces the GHG emissions associated with conveying those resources. **(Less than Significant Impact)**

Climate Action Playbook

As discussed under Section 4.6.1.1, the Climate Action Playbook’s applicable strategies to reduce the proposed project’s GHG emissions are through reduction in vehicle trips and miles traveled, and carbon-emitting energy sources. The Specific Plan is mostly consistent with applicable plays in the Climate Action Playbook, as detailed in Table 3.8-2 below. **(Less than Significant Impact)**

Table 3.8-3: Project Consistency with Applicable Climate Action Playbook Plays		
Play	Description	Consistency
1.2	Increase local solar photovoltaics	Consistent. Future development under the Specific Plan would install solar panels in accordance with the Reach Code. The City’s Reach Code Ordinance requires residential buildings to have solar panels greater than or equal to the anticipated annual electrical usage. The Reach Code also requires non-residential buildings less than 10,000 square feet to install a minimum of three-kilowatt photovoltaic (PV) system and non-residential buildings greater than 10,000 square feet to install a minimum of five-kilowatt photovoltaic system.
1.3	Increase distributed electricity storage	Consistent. In compliance with the City’s Reach Code, future developments under the Specific Plan would be all electric with some exceptions. Implementation of the Specific Plan would in the increase of electricity stored locally.
2.3	Achieve all-electric new construction	Mostly Consistent. All future residential development would comply with the Reach Code that prohibits natural gas appliances and plumbing. There are exceptions to the Reach Code, however, that permit natural gas use by non-residential uses if it can be demonstrated that it is required.
3.1	Increase opportunities for and encourage development of mixed-use sites to reduce vehicle miles per person	Consistent. The Specific Plan is a higher density, mixed-use development plan, which facilitates lower VMT given its proximate location to transit and other destinations. Future projects would be consistent with Policies TDMP-1.1 through TDMP-1.6 which limits the supply of off-street parking and TDMP-2.1 through 2.4 which requires future projects to establish clear metrics, data points, and processes for applying TDM measures that reduce vehicle trips.
3.2	Increase transportation options and support shared mobility	Consistent. As required by TDMP-2.2, future projects under the Specific Plan shall implement TDM plans to promote alternatives to single-occupancy vehicle trips (per Specific Plan Policy X, in Section 3.3 Air Quality). Required TDM measures include unbundled parking, carpool/vanpool parking, bicycle parking along with on-site showers and lockers. Other TDM measures could include pre-tax transportation benefits (including employer contributions to transit and bike benefit programs), shared biking programs, and shuttle service. Future projects would be designed to accommodate for rideshare services.

Table 3.8-3: Project Consistency with Applicable Climate Action Playbook Plays		
Play	Description	Consistency
3.3	Increase zero-emissions vehicles	Consistent. As required by the City’s Reach Code, future projects under the Specific Plan would be required to have EV charging stations or have EV outlets or conduits provided. This could encourage the use of more zero emission vehicles in Moffett Park.
4.1	Achieve zero waste goals for solid waste	Somewhat Consistent. Future projects under the Specific Plan would provide on-site recycling services and recycle and/or salvage for reuse a minimum of 65 percent of nonhazardous construction and demolition waste. Additional citywide, regional, and/or statewide regulations and programs are needed to achieve zero waste.
4.2	Ensure resilience of water supply	Consistent. Future projects under the Specific Plan would be consistent with the General Plan policy EM-2.1 to lower overall water demand through water conservation programs and subject to the water-efficiency design, planting, and irrigation requirements in SMC 19.37. Future open space areas in Moffett Park would utilize recycled water. Future projects would incorporate green building measures, including water conservation measures.
4.3	Enhance natural carbon sequestration capacity	Consistent: As discussed in Section 3.4 under Impact BIO-5, the project would be consistent with SMC Chapter 19.94 to protect trees. In addition, as discussed under Impact HYD-1 in Section 3.10 Hydrology and Water Quality, future development under the project would comply with the MRP and other regulations to reduce water quality impacts.

3.8.2.2 Cumulative Impacts

Impact GHG-C: The project would result in a cumulatively considerable contribution to a cumulatively significant GHG emissions impact. **(Significant and Unavoidable Cumulative Impact)**

As discussed in Section 3.8.1, GHG emissions have a broader, global impact; therefore, if a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable. As discussed under Impact GHG-1 and Impact GHG-2, the Specific Plan would result in significant GHG impacts given certain future non-residential uses (e.g., commercial dryers in large hotels and emergency operation centers) may use natural gas appliances and plumbing and there is no feasible pathway for the Specific Plan on its own to achieve carbon neutrality by 2045. Therefore, the project would have a cumulatively considerable contribution to a significant cumulative GHG emissions impact. **(Significant and Unavoidable Cumulative Impact)**

3.9 HAZARDS AND HAZARDOUS MATERIALS

The following discussion is based, in part, on an Environmental Evaluation Report and a General Plan Review, both prepared by Farallon Consulting, dated September 14, 2021 and October 27, 2021, respectively. The reports are included as Appendix F to this EIR.

3.9.1 Environmental Setting

3.9.1.1 *Regulatory Framework*

The storage, use, generation, transport, and disposal of hazardous materials and waste are highly regulated under federal and state laws. In California, the EPA has granted most enforcement authority over federal hazardous materials regulations to the California Environmental Protection Agency (CalEPA). In turn, local agencies have been granted responsibility for implementation and enforcement of many hazardous materials regulations under the Certified Unified Program Agency (CUPA) program.

Worker health and safety and public safety are key issues when dealing with hazardous materials. Proper handling and disposal of hazardous material is vital if it is disturbed during project construction. Cal/OSHA enforces state worker health and safety regulations related to construction activities. Regulations include exposure limits, requirements for protective clothing, and training requirements to prevent exposure to hazardous materials. Cal/OSHA also enforces occupational health and safety regulations specific to lead and asbestos investigations and abatement.

Federal and State

Federal Aviation Regulations Part 77

Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace (FAR Part 77) sets forth standards and review requirements for protecting the airspace for safe aircraft operation, particularly by restricting the height of potential structures and minimizing other potential hazards (such as reflective surfaces, flashing lights, and electronic interference) to aircraft in flight. These regulations require that the Federal Aviation Administration (FAA) be notified of certain proposed construction projects located within an extended zone defined by an imaginary slope radiating outward for several miles from an airport's runways, or which would otherwise stand at least 200 feet in height above the ground.

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law created a tax on the chemical and petroleum industries and provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. Over five years, \$1.6 billion was collected and the tax went to a trust fund for cleaning up abandoned or uncontrolled hazardous waste sites. CERCLA accomplished the following objectives:

- Established prohibitions and requirements concerning closed and abandoned hazardous waste sites;
- Provided for liability of persons responsible for releases of hazardous waste at these sites; and
- Established a trust fund to provide for cleanup when no responsible party could be identified.

The law authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response; and
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life-threatening. These actions can be completed only at sites listed on the EPA’s National Priorities List.

CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List. CERCLA was amended by the Superfund Amendments and Reauthorization Act on October 17, 1986.⁹⁸

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act (RCRA), enacted in 1976, is the principal federal law in the United States governing the disposal of solid waste and hazardous waste. RCRA gives the EPA the authority to control hazardous waste from the “cradle to the grave.” This includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also sets forth a framework for the management of non-hazardous solid wastes.

The Federal Hazardous and Solid Waste Amendments (HSWA) are the 1984 amendments to RCRA that focused on waste minimization, phasing out land disposal of hazardous waste, and corrective action for releases. Some of the other mandates of this law include increased enforcement authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.⁹⁹

Code of Federal Regulations Title 49 for Transportation

The Code of Federal Regulations (CFR 49) governs the domestic transportation of hazardous materials for all forms of transportation to, from, and within the U.S. CFR 49 addresses regulations and requirements for preparing, shipping, and handling dangerous goods. Critical components of CFR 49 include descriptions of hazardous materials by class, the amount of hazardous materials

⁹⁸ United States Environmental Protection Agency. “Superfund: CERCLA Overview.” Accessed May 28, 2022. <https://www.epa.gov/superfund/superfund-cercla-overview>.

⁹⁹ United States Environmental Protection Agency. “Summary of the Resource Conservation and Recovery Act.” Accessed May 28, 2022. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>.

permitted in specific containers in addition to total volume allowed in each shipping package, the types of packages and packaging required for the safe transport of hazardous materials, testing requirements for reaching specific performance standards, required documentation for shipping hazardous materials, the markings and labels required on packaging and placards required by carriers, and training and safety plan requirements.

Government Code Section 65962.5

Section 65962.5 of the Government Code requires CalEPA to develop and update a list of hazardous waste and substances sites, known as the Cortese List. The Cortese List is used by state and local agencies and developers to comply with CEQA requirements. The Cortese List includes hazardous substance release sites identified by the Department of Toxic Substances Control (DTSC) and SWRCB.¹⁰⁰

Toxic Substances Control Act

The Toxic Substances Control Act (TSCA) of 1976 provides the EPA with authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. Certain substances are generally excluded from TSCA, including, among others, food, drugs, cosmetics, and pesticides. The TSCA addresses the production, importation, use, and disposal of specific chemicals including polychlorinated biphenyls (PCBs), asbestos, radon, and lead-based paint (LBP).

California Accidental Release Prevention Program

The California Accidental Release Prevention (CalARP) Program aims to prevent accidental releases of regulated hazardous materials that represent a potential hazard beyond the boundaries of a property. Facilities that are required to participate in the CalARP Program use or store specified quantities of toxic and flammable substances (hazardous materials) that can have off-site consequences if accidentally released.

Approved by CalEPA, the Sunnyvale Department of Public Safety (DPS) serves as the CUPA within its jurisdiction and is responsible for the unified hazardous waste and hazardous materials management regulatory program established by Health and Safety Code, Division 20, Chapter 6.11, Section 25404, et seq. This program consolidates the administration and enforcement of six hazardous materials management programs and ensures the coordination and consistency of any regulations adopted pursuant to such program requirements. The six locally implemented programs are:

1. Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Program;
2. Aboveground Petroleum Storage Act;
3. Underground Storage Tank Program;
4. Hazardous Materials Release Response Plans and Inventories (Business Plans);

¹⁰⁰ California Environmental Protection Agency. "Cortese List Data Resources." Accessed May 28, 2022. <https://calepa.ca.gov/sitecleanup/corteselist/>.

5. CalARP Program; and
6. California Fire Code: Hazardous Material Management Plans and Inventory Statements.

National Emission Standards for Hazardous Air Pollutants Guidelines

The National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines require that potentially friable asbestos-containing material (ACM) be removed prior to building demolition or remodeling that may disturb the ACMs. Friable asbestos is any ACM that, when dry, can easily be crumbled or pulverized to a powder by hand, allowing the asbestos particles to become airborne. Common examples of products that have been found to contain friable asbestos include acoustical ceilings, plaster, wallboard, and thermal insulation for water heaters and pipes. Common examples of non-friable ACMs are asphalt roofing shingles, vinyl floor tiles, and transite siding made with cement. The EPA began phasing out use of friable asbestos products in 1973 and issued a ban in 1978 on manufacture, import, processing, and distribution of some asbestos-containing products and new uses of asbestos products.¹⁰¹ The EPA is currently considering a proposed ban on on-going use of asbestos.¹⁰²

CCR Title 8, Section 1532.1

The United States Consumer Product Safety Commission banned the use of LBP in 1978. Removal of older structures with LBP is subject to requirements outlined by the Cal/OSHA Lead in Construction Standard, CCR Title 8, Section 1532.1 during demolition activities. Requirements include employee training, employee air monitoring, and dust control. If LBP is peeling, flaking, or blistered, it is required to be removed prior to demolition.

Section 21151.8 of the Public Resources Code (CEQA)

Projects that involve the acquisition of school sites and/or construction of new schools are subject to additional environmental review requirements beyond typical land use development projects. Pursuant to Section 21151.8 of the Public Resources Code, an environmental document analyzing such a project will need to disclose if a proposed school site is:

- A current or former hazardous waste disposal site or solid waste disposal site and, if so, whether the wastes have been removed.
- A hazardous substance release site identified by the State Department of Health Services in a current list adopted pursuant to §25356 for removal or remedial action pursuant to Chapter 6.8 (commencing with §25300) of Division 20 of the Health and Safety Code.
- A site which contains one or more pipelines, situated underground or aboveground, which carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood.
- A site that is within 500 feet of the edge of the closest traffic lane of a freeway or other busy traffic corridor.

¹⁰¹ United States Environmental Protection Agency. "EPA Actions to Protect the Public from Exposure to Asbestos." Accessed April 19, 2022. <https://www.epa.gov/asbestos/epa-actions-protect-public-exposure-asbestos>

¹⁰²Ibid.

The lead agency will need to notify in writing and consult with BAAQMD to identify facilities within one-fourth of a mile of the proposed school site which might reasonably be anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Based on the written findings, the lead agency shall make one of the following findings:

- No such facilities were identified;
- Such facilities exist but the health risks do not or will not constitute an actual or potential endangerment of public health at the site;
- Such facilities exist and corrective measures will be taken that will result in emissions mitigation to levels that will not constitute endangerment. In this instance, the school district should make an additional finding that emissions will have been mitigated before occupancy of the school; or
- Such facilities exist but conditions cannot be met and a statement of overriding considerations must be adopted.

California Department of Education School Site Selection Criteria

Pursuant to Section 17251(b) of the Education Code, the CDE developed the School Site Selection and Approval Guide to assist school districts in (1) selecting appropriate sites in compliance with regulations and CDE policies and (2) gaining state approval for the selected sites. The guide refers to the standards for school site selection as outlined in CEQA, California Education Code, Title 5 of the CCR, and other state codes. The guide includes site selection criteria based on a variety of factors such as location, size, and cost; however, it focuses on safety as the most important criteria to be considered during site selection.

According to the guide, the following safety factors shall be considered when evaluating a potential school site: (1) proximity to airports; (2) proximity to high-voltage power transmission lines; (3) presence of toxic and hazardous substances; (4) hazardous air emissions and facilities within a quarter mile; (5) other health hazards; (6) proximity to railroads; (7) proximity to high-pressure natural gas lines, gasoline lines, pressurized sewer lines, or high-pressure water pipelines; (8) proximity to propane tanks; (9) proximity to major roadways; (10) noise; (11) results of geological studies and soils analyses; (12) condition of traffic and school bus safety; (13) safe routes to school; and (14) safety issues for joint-use projects.

California Education Code

Sections 17071.13, 17072.13, 17210, 17210.1, 17213.1-3, and 17268 of the Education Code establishes requirements for assessments and approvals regarding toxic and hazardous materials that school districts must follow prior to acquisition of a proposed school site. The California DTSC School Property Evaluation and Cleanup Division is responsible for assessing, investigating, and cleaning up proposed school sites to ensure that selected properties are free of contamination or, if the properties were previously contaminated, that they have been cleaned up to a level that protects occupants of the new school. A summary of the required procedures is as follows:

- Current and historic uses on and near the proposed school site shall be investigated by a qualified consultant who prepares a Phase I Environmental Site Assessment in accordance with the American Society of Testing and Materials standards (ASTM E-1527-2000).

- If the Phase I review concludes that no further investigation is required and DTSC concurs with the conclusion, DTSC will issue a determination letter stating that “no action” is required related to hazardous materials.
- If the Phase I review concludes that further investigation is needed or DTSC requires it, the local educational agency (LEA) shall enter into an agreement with DTSC and hire a qualified consultant to complete a Preliminary Endangerment Assessment (PEA) under DTSC oversight and review. The PEA includes the sampling of soils and risk assessment to determine whether a release of hazardous material has occurred, there is a threat of release, or a naturally occurring hazardous material poses a significant health risk. If no hazardous materials are identified in the PEA, or if they do not pose a significant health risk, DTSC will approve the PEA and issue a determination letter stating that “no further action” is required.

If health risks associated with hazardous materials are identified in the approved PEA, DTSC will require the preparation and implementation of a Response Action Plan (RAP), consisting of cleanup, removal, or remediation of hazardous materials, under DTSC oversight and approval. DTSC will issue a certification letter when the Response Action is completed. When a Response Action is required for a site, the LEA must obtain a Contingent Site Approval from the CDE before the acquisition and implementation of the Response Action to ensure that the site meets all other requirements for CDE approval.

Furthermore, pursuant to Section 17215 of the California Education Code, before a school district acquires title to a new school site that is located within two miles of an existing or potential airport runway (measured by air line), the Department of Transportation must issue a report favoring the acquisition of the site.

Regional and Local

Moffett Federal Airfield Comprehensive Land Use Plan

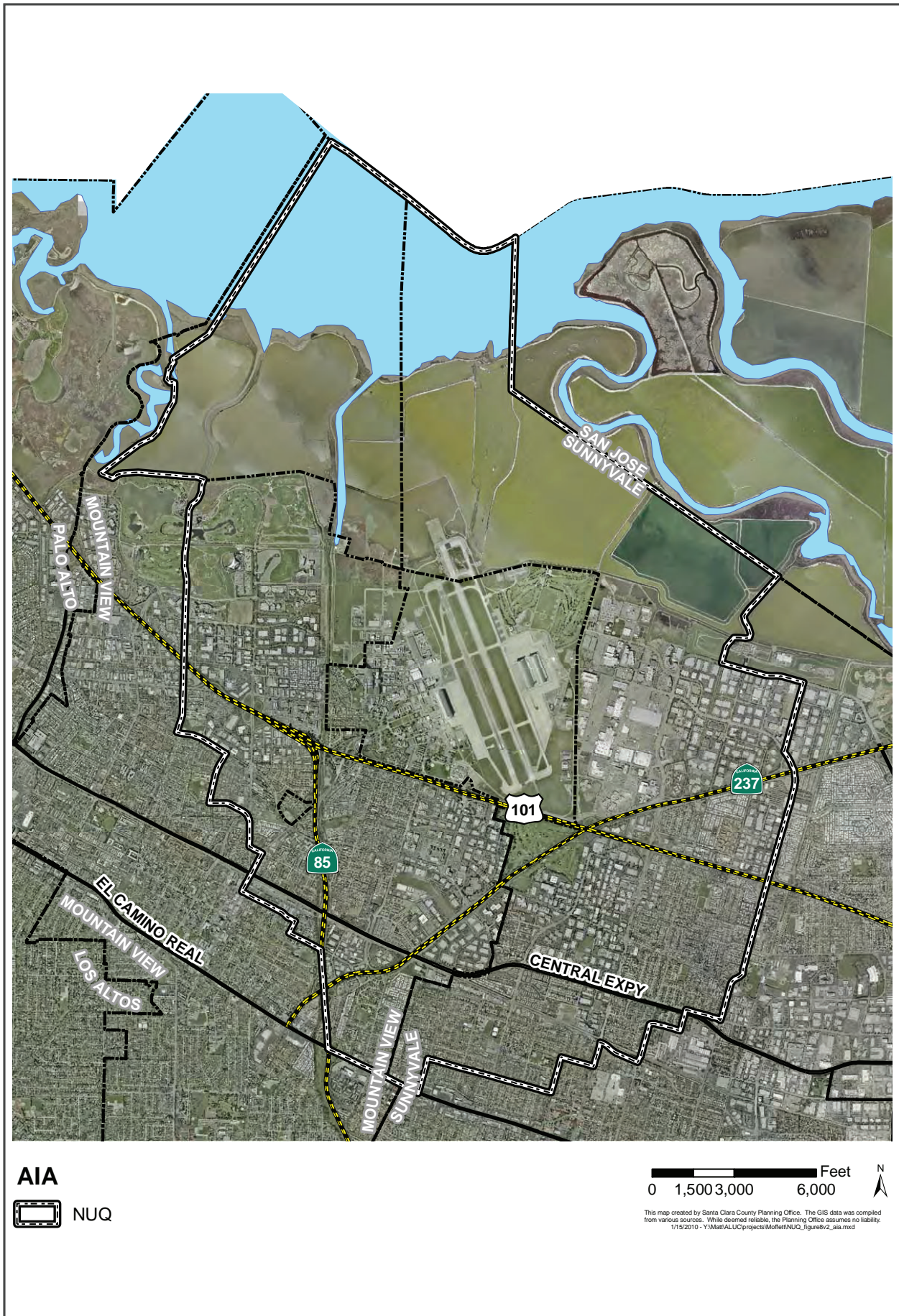
Moffett Park is located 800 feet east of the Moffett Federal Airfield. The Moffett Federal Airfield Comprehensive Land Use Plan (CLUP), adopted by the Santa Clara County Airport Land Use Commission, is intended to safeguard the general welfare of the inhabitants within the vicinity of the airport, as well as aircraft occupants. The CLUP is intended to ensure that surrounding new land uses do not affect airfield operations. The CLUP establishes an airport land use planning area, referred to as the Airport Influence Area (AIA), which sets the boundaries for application of the CLUP. Development proposals within the AIA are required to be reviewed by the Airport Land Use Commission (ALUC). The AIA map is shown on Figure 3.9-1.

The CLUP focuses on the three areas of ALUC’s responsibility: (1) aircraft noise, (2) the safety of persons on the ground and in aircraft, and (3) the control of objects in navigable airspace. The compatibility of land uses in the vicinity of the Airfield are evaluated for each of the potential land use impact categories in terms of the compatibility policies established for each category of concern. Refer to Figure 3.9-2, Figure 3.9-3, and Figure 3.9-4 for the noise contours map, airport safety zones map, and FAR Part 77 Surfaces map, respectively.

The below compatibility policies from the CLUP are to be used for ALUC consistency review.

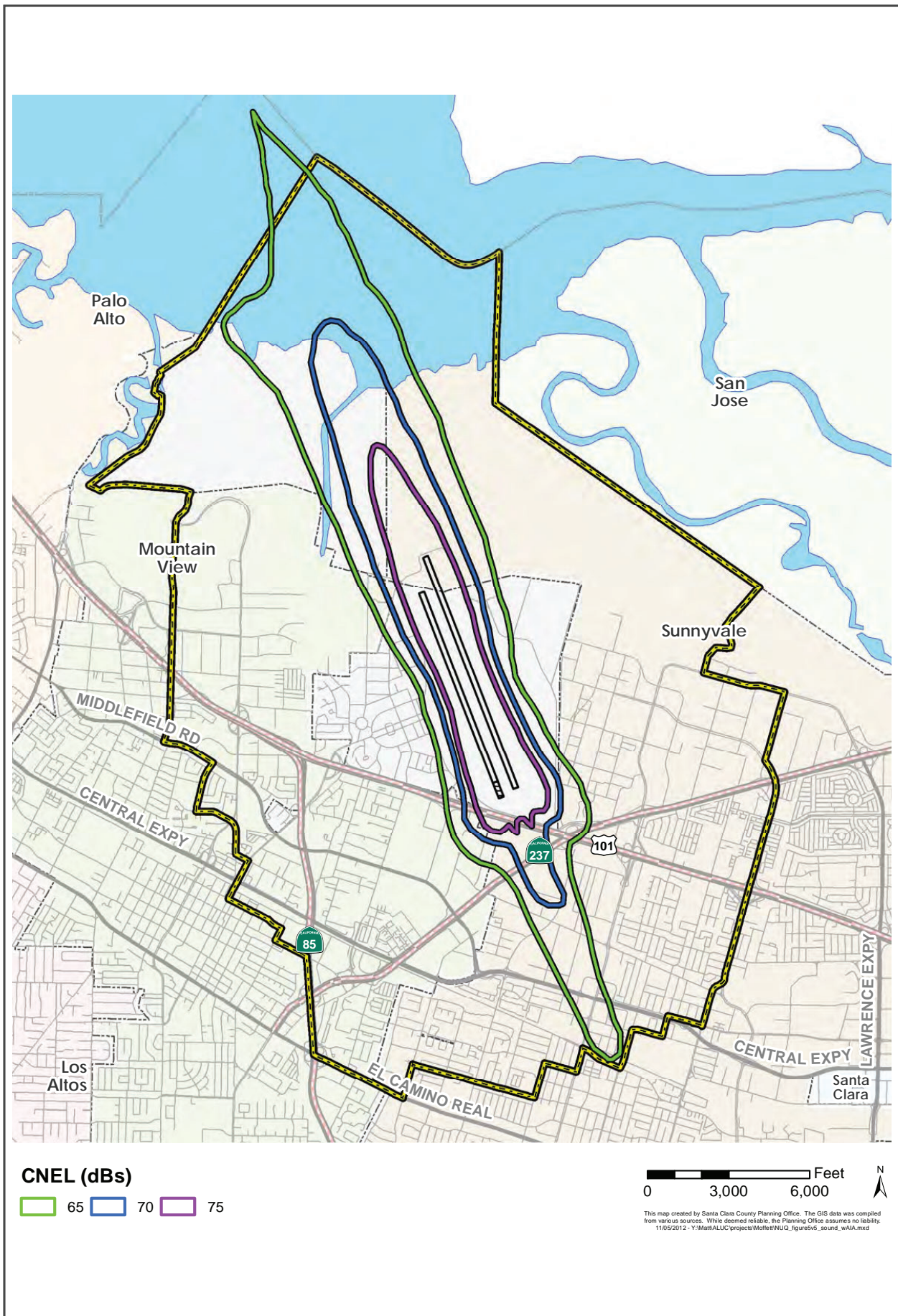
Policy	Description
<i>General Compatibility</i>	
G-6	Any proposed uses that may cause a hazard to aircraft in flight are not permitted within the AIA. Such uses include electrical interference, high intensity lighting, attraction of birds (certain agricultural uses, sanitary landfills) and activities that may produce smoke, dust, or glare. This policy requires the height at maturity of newly planted trees to be considered to avoid future penetration of the FAA FAR Part 77 Surfaces.
G-7	All new exterior lighting or large video displays within the AIA shall be designed so as to create no interference with aircraft operations. Such lighting shall be constructed and located so that only the intended area is illuminated and off-site glare is fully controlled. The lighting shall be arrayed in such a manner that it cannot be mistaken for airport approach or runway lights by pilots.
<i>Height Compatibility</i>	
H-1	Any structure or object that penetrates the FAR Part 77 surfaces will be considered an incompatible land use.
H-2	Any project that may exceed a FAR Part 77 surface must notify the FAA as required by FAR Part 77, Subpart B on FAA Form 7460-1, Notice of Proposed Construction or Alteration.
<i>Noise Compatibility</i>	
N-1	The Community Noise Equivalent Level (CNEL) method of representing noise levels shall be used to determine if a specific land use is consistent with the CLUP.
N-3	Noise impacts shall be evaluated according to the Aircraft Noise Contours.
N-4	No residential or transient lodging construction shall be permitted within the 65 decibel (dB) CNEL contour boundary unless it can be demonstrated that the resulting interior sound levels will be less than 45 dB CNEL and there are no outdoor patios or outdoor activity areas associated with the residential portion of a mixed-use residential project of a multi-unit residential project.
N-6	Residential construction will not be permitted in the area between the 60 dB CNEL contour boundary and the 65 dB CNEL contour boundary unless it can be demonstrated that the resulting interior sound level will be no greater than 45 dB CNEL.
N-7	Noise level compatibility standards for other types of land uses shall be applied in the same manner as the above residential noise level criteria.
<i>Safety Compatibility</i>	
S-1	These policies and the Safety Zone Compatibility Policies presented in Table 4-2 of the CLUP shall be used to determine if a specific land use is consistent with the CLUP. Safety impacts shall be evaluated according to the Airport Safety Zone.
S-4	Storage of fuel or other hazardous materials shall be prohibited in the Runway Protection Zone. Above ground storage of fuel or other hazardous materials shall be prohibited in the Inner Safety Zone and Turning Safety Zone.
S-5	In addition to the requirements of Table 4-2 in the CLUP, open space requirements, for sites which can accommodate an open space component, shall be established at the

Policy	Description
	<p>general plan level for each safety zone where feasible as determined by the local jurisdiction, as individual parcels may be too small to accommodate the minimum-size open space requirement. To qualify as open space, an area must be free of buildings, and have minimum dimensions of at least 75 feet wide by 300 feet long along the normal direction of flight. The clustering of development and provision of contiguous landscaping and parking areas will be encouraged to increase the size of open space areas.</p>



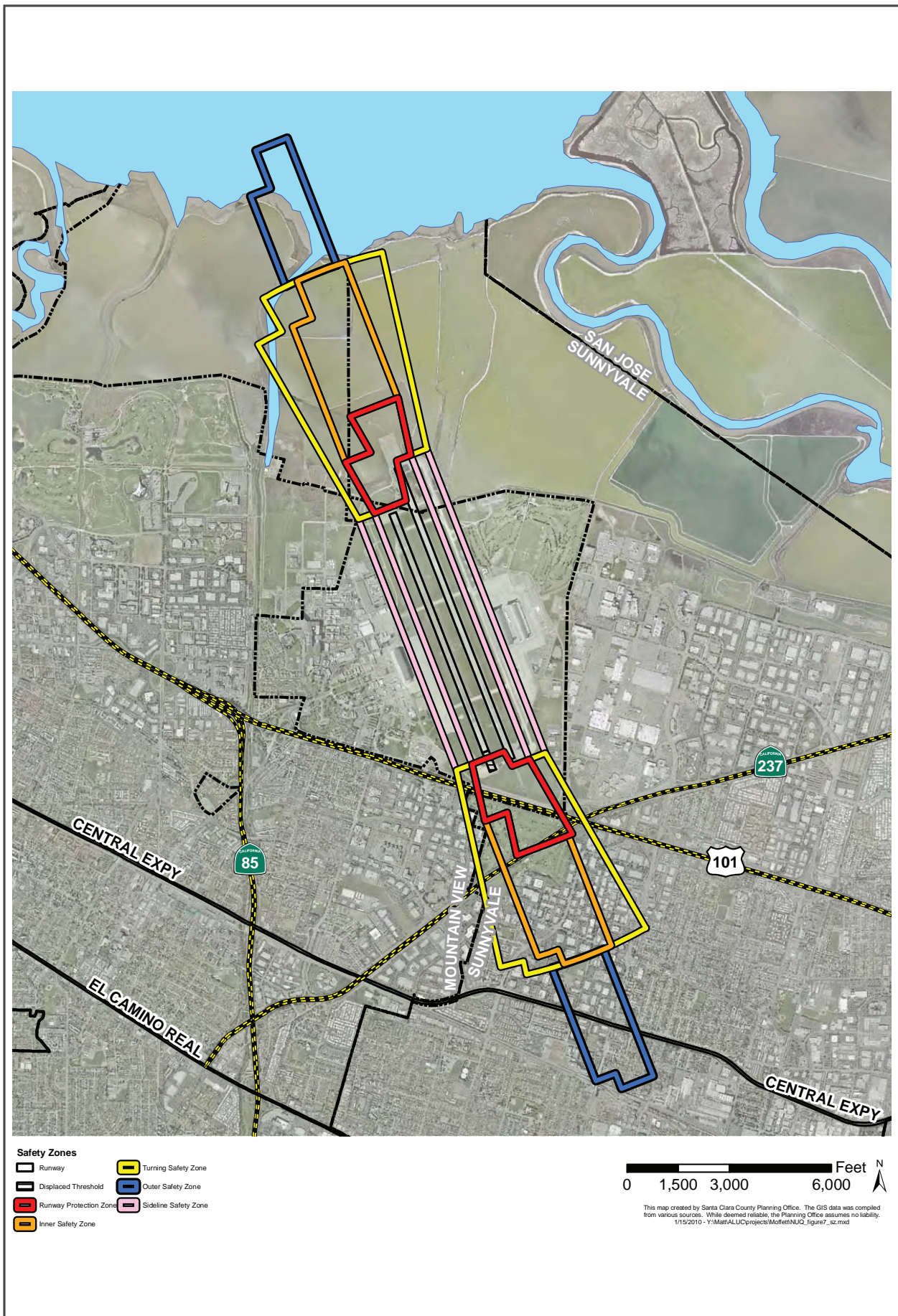
MOFFETT FEDERAL AIRFIELD AIRPORT INFLUENCE AREA MAP

FIGURE 3.9-1



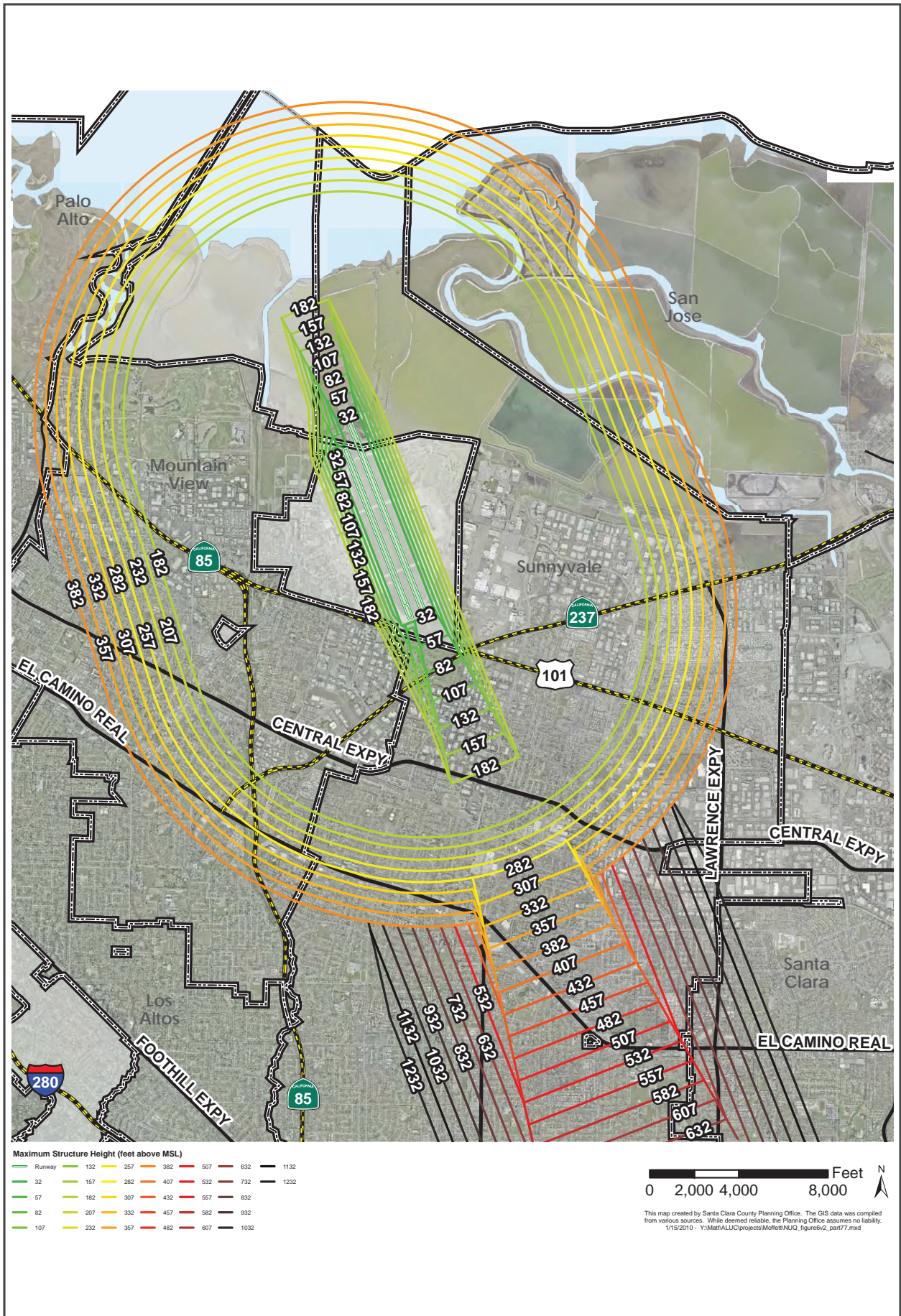
MOFFETT FEDERAL AIRFIELD NOISE CONTOURS MAP

FIGURE 3.9-2



MOFFETT FEDERAL AIRFIELD AIRPORT SAFETY ZONES MAP

FIGURE 3.9-3



FAR PART 77 SURFACES MAP

FIGURE 3.9-4

Municipal Regional Permit Provision C.12.f

PCBs were produced in the United States between 1955 and 1978 and used in hundreds of industrial and commercial applications, including building and structure materials such as plasticizers, paints, sealants, caulk, and wood floor finishes. In 1979, the EPA banned the production and use of PCBs due to their potential harmful health effects and persistence in the environment. PCBs can still be released to the environment today during demolition of buildings that contain legacy caulks, sealants, or other PCB-containing materials.

With the adoption of the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MRP) by the San Francisco Bay RWQCB on November 19, 2015, Provision C.12.f requires that permittees develop an assessment methodology for applicable structures planned for demolition to ensure PCBs do not enter municipal storm drain systems.¹⁰³ Buildings constructed between 1950 and 1980 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit. Single family homes and wood-frame structures are exempt from these requirements.

To comply with MRP Provision C.12.f, on July 1, 2019, the City adopted a PCB screening process that requires all projects complete a PCBs Screening Assessment form prior to approval of a building demolition permit. Projects are required to fill out the assessment form if the building slated for demolition meets the following requirements:

1. Was constructed or remodeled between January 1, 1950, and December 31, 1980; and
2. Will be completely destroyed.

The City requires sampling of priority building materials (i.e., calk, fiberglass insulation, thermal insulation, adhesive mastics, and rubber window gaskets) be collected and tested for PCBs per Bay Area Stormwater Management Agencies Association's Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition. If collected samples contain PCBs concentrations are equal to or greater than 50 parts per million (ppm) in one or more priority materials, abatement procedures are required in accordance with federal and state regulations.

Bay Area Stormwater Management Agencies Association

The Bay Area Stormwater Management Agencies Association (BASMAA) provides guidance, tools, and outreach and training materials to assist with San Francisco Bay Area municipal agencies' efforts to manage PCBs-containing building materials during demolition. Guidance materials include a summary of existing information related to quantifying the potential reduction in PCBs loads that could be achieved through management of PCBs-containing building materials during demolition.

Santa Clara County Operational Area Hazard Mitigation Plan

The City's Hazard Mitigation Plan, an annex to Santa Clara County's Operational Area Hazard Mitigation Plan (2017), performs a full risk assessment on the nine hazards that present the greatest concern in Santa Clara County. The nine hazards focused on for this mitigation plan are climate

¹⁰³ California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit*. November 2015.

change/sea-level rise, dam and levee failure, drought, earthquakes, floods, landslides, severe weather, tsunamis, and wildfires.

The City’s annex, Chapter 16 of the document, provides a detailed overview of the City’s response capabilities, the organizational structure of local authorities, risk rating scores that determine which hazards present the greatest risk to Sunnyvale, and a priority schedule for mitigation measures planned by local and regional agencies.

In the event of a fire, geologic, or other hazardous occurrence, the City’s Hazard Mitigation Plan provides comprehensive, detailed instructions and procedures regarding the responsibilities of City personnel and coordination with other agencies to ensure the safety of Sunnyvale citizens. U.S. 101 and Central Expressway are identified in the plan as major evacuation routes for the City.

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development under the Specific Plan would be subject to the General Plan hazards and hazardous materials policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-1.11	Prepare for risks and hazards related to climate change prior to their occurrence.
LT-14.12	Recognize childcare and places of assembly as essential services and land uses that support the diverse needs of the community. Avoid locating these sensitive uses near hazardous materials, noise, dust, etc.
<i>Safety and Noise Element</i>	
SN-1.1	Evaluate and consider existing and potential hazards in developing land use policies. Make land use decisions based on an awareness of the hazards and potential hazards for the specific parcel of land.
SN-1.6	Operate a response system that will provide effective control and investigation of hazardous materials emergencies.
SN-1.7	Make planning decisions that establish and/or maintain a safe mix of aviation and land use for the areas affected by NASA Ames/Moffett Field.

Sunnyvale Municipal Code

Chapter 20.10 of the SMC outlines the City’s CUPA administration policies. This includes details on permits, fees, and enforcement policies regarding the regulation of hazardous materials in the City. Chapter 16.52 of the SMC includes additional regulations within the City’s Fire Code which regulate the safe storage and proper containment of hazardous materials in the City.

3.9.1.2 *Existing Conditions*

Potential On-Site Contamination

Site History and Current Uses

The entire Moffett Park was historically used for agricultural purposes from at least 1939 to 1954. Industrial buildings were developed west of Mathilda Avenue in 1960 and expanded further west and north in 1968. By the 1970s, office and light industrial buildings were constructed around the periphery of the core industrial area in the northwest/western area of Moffett Park, and a post office was constructed in the central section of Moffett Park. The eastern portion of Moffett Park continued to be used for agricultural purposes until early 1980s. As of 1982, minimal agricultural land remained within Moffett Park; more office, light industrial, and R&D uses were added to the eastern portion of the area.

By the mid-1990s, two hotels were developed to the western side of Moffett Park. Minor redevelopment with office and industrial uses occurred on the western side of Moffett Park in the early 2000s. By 2012, the industrial area in the southwestern section of Moffett Park was redeveloped with offices. A community college (Foothill Community College) was constructed on the southwestern portion of Moffett Park in 2016. Since 2016, a new hotel and office buildings have been constructed in the western and southern portions of Moffett Park, respectively. Moffett Park currently consists of office/R&D/industrial, commercial uses (including restaurants and hotels), and institutional (including a fire station, post office, and community college) uses.

Given the wide-spread agricultural use of Moffett Park, the presence of residual pesticides and related metals in surface soil is expected. If orchards and other row crops were present, isolated releases of petroleum hydrocarbons related to use of heating equipment during cold weather may have also impacted surface soil.

Wide-spread commercial and industrial use of Moffett Park can be expected to result in the presence of polycyclic aromatic hydrocarbons (PAHs) in surface soil. PAHs are a general concern within regions with significant industrial activity because they are associated with increased cancer incidence in exposed populations and have been found extensively on land surrounding the Bay.

Depending on the age of the buildings in Moffett Park, they may contain ACMs, LBP, and/or PCBs.

Regulatory Database Search

A regulatory database search was completed to identify facilities within Moffett Park that are considered a potential environmental concern (i.e., sites that were known to have resulted in or are expected to result in the release of hazardous materials). The databases searched include the online repositories maintained by the California SWRCB, California DTSC, and the Navy (i.e., GeoTracker, EnviroStor, and Navy Public Information Access).

Numerous sites within Moffett Park were identified in databases as leaking underground storage tank cleanup sites, cleanup program sites, military sites, having industrial operations, and/or having documented releases of hazardous substances. The information from the database search was

reviewed and the relative risk of environmental impacts associated with the listings assessed. The sites were categorized into one of the following five risk levels:

- I. No listing, no address identified in databases
- II. Listing for storage or handling of hazardous material; low risk due to type of hazardous materials used at site, no violations or only minor administrative violations (e.g., lack of signature or proper filing)
- III. Listed for storage or handling of hazardous materials; low-medium risk, few violations for handling practices but returned to compliance
- IV. Listed for storage or handling of hazardous materials, medium risk, few violations for handling practices but returned to compliance; hazardous materials include halogenated solvents
- V. Known contamination regardless of status

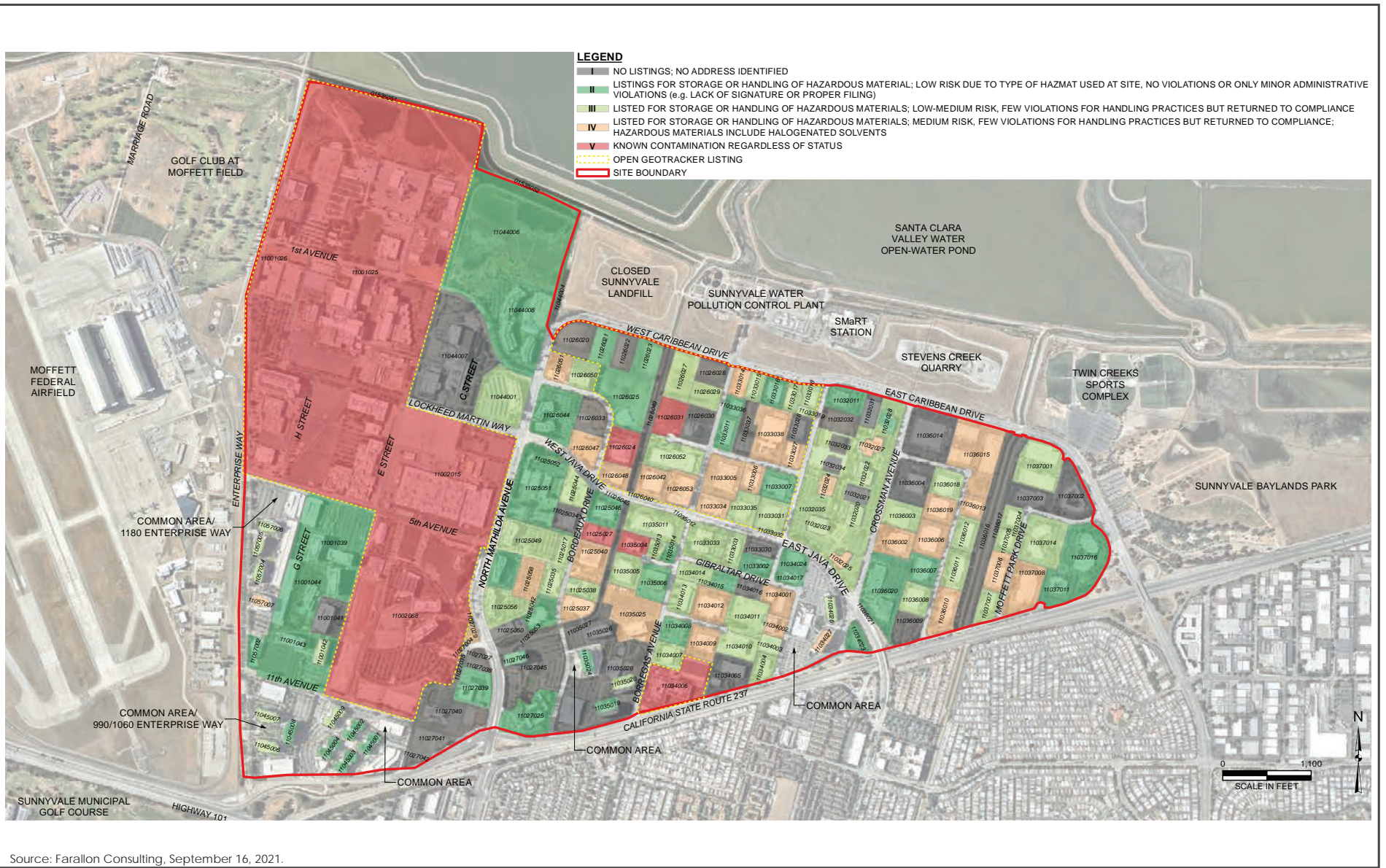
Figure 3.9-5 shows the locations of listed and contaminated areas within Moffett Park identified in the database search along with their corresponding risk level. The following four open cleanup sites were identified in GeoTracker and are outlined on Figure 3.9-5:

1. **Moffett Park Drive/McCandless Development** (see Assessor's Parcel Number [APN] 110-34-006 on Figure 3.9-5) (Geotracker database listing number T10000008180): case open – inactive as of June 15, 2016. GeoTracker lists the potential contaminants of concern as “other chlorinated hydrocarbons” and the potential media of concern is “aquifer used for drinking water.”
2. **Google Caribbean Campus** (multiple APNs) (GeoTracker database listing number T10000011817): case open – verification monitoring as of March 11, 2019. GeoTracker lists the potential contaminants of concern as “1,4-dioxane, dichloroethane, dichloroethene, tetrachloroethylene (PCE), trichloroethylene (TCE), and vinyl chloride.” The potential media of concern is “other groundwater (uses other than drinking water), soil, and soil vapor.” One tenant, A.C. Ball Company used volatile organic compounds (VOCs) in their operations. A Site Cleanup Case was overseen by the RWQCB and closed in 2004 with residual contamination remaining beneath the site.” The facility reportedly comprises 10 parcels across 40 acres.
3. **Lockheed Sunnyvale - Plant One Facility** (see APNs 110-01-026, 110-01-025, 110-02-015, and 11002068 on Figure 3.9-5.) (GeoTracker database listing number SL1821F605), case open – remediation as of March 12, 2009. GeoTracker lists the potential contaminants of concern as “1,1,1-trichloroethane, benzene, chromium, gasoline, nitrate, PCE, toluene, TCE, and xylene.” The potential media of concern is “other groundwater (uses other than drinking water).” The site covers about 660 acres and historically included about 35 large buildings and structures used as research, testing, manufacturing, laboratory, and office facilities.
4. **Sunnyvale Naval Industrial Reserve Ordnance Plant** (see APN 110-02-015 on Figure 3.9-5.) (GeoTracker database listing number T0608576849), case open – remediation as of June 12, 2018. Groundwater contamination has been identified in the area and is undergoing remediation by Lockheed Missiles and Space Company under the oversight of the San Francisco Bay RQWCB. This facility is located in the same area as the Lockheed Sunnyvale – Plant One Facility. In January 2020, the Water Board issued concurrence with the Final Proposed Plan for groundwater remediation. The purpose of the plan is to conduct remedial

action consisting of in-situ bioremediation and chemical reduction, in addition to groundwater monitoring and land use controls.

In addition, the above four open cases, a total of 18 listings in the EnviroStor database search were identified relating to documented releases of hazardous substances to the subsurface. Six of the 18 release listings are associated with the Lockheed Sunnyvale - Plant One Facility at 1111 Lockheed Martin Way. The release listings that warrant further review to assess the potential extent of environmental impacts are summarized in Table 3.9-1 below.

Table 3.9-1: Summary of EnviroStor Database Listings Warranting Further Assessment		
Database Name (Address)	Potential Contaminants of Concern	Potential Media of Concern
Former DII Orbit Semiconductor (1230 Bordeaux Drive)	Tetrachloroethylene	None specified
1320-1322 Bourdeaux Drive (SL0608552478)	Tetrachloroethylene	Aquifer used for drinking water supply
AC Ball Menlo Caspian (141 Caspian Court)	Tetrachloroethylene, trichloroethylene, 1,1,1-trichloroethane, 1,1-dichloroethylene, 1,2-dichloroethylene, 1,1-dichloroethane, and 1,4-dioxane	Groundwater
Lockheed Corporation (480 East Java Drive)	Benzene, chromium, ethylbenzene, nickel, waste oil, motor oil, hydraulic oil, xylene	Groundwater, sediments, soil, soil vapor, surface water
Lockheed Sunnyvale – Plant One and Lockheed Corporation (1111 Lockheed Martin Way)	1,1,1-trichloroethane, benzene, chromium, gasoline, nitrate, tetrachloroethylene, toluene, trichloroethylene, xylene	Groundwater
Consolidated Freightways, Inc. (1319 Moffett Park Drive)	Gasoline	Groundwater
Moffett Park Auto Center (1135 North Mathilda Avenue)	Gasoline	Groundwater
Onizuka Air Force Base (1080 Lockheed Martin Way)	Gasoline, benzene, toluene, ethylbenzene, xylene, jet fuel	Shallow groundwater, shallow soil
Source: Farallon Consulting, LLC. <i>Environmental Evaluation Report: Moffett Park Specific Plan Area</i> . November 10, 2021. Table 2, Page 12.		



CONTAMINATION AREAS WITHIN MOFFETT PARK

FIGURE 3.9-5

Refer to Appendix F for additional detail about the database search results and description of the listings.

Site Reconnaissance

A reconnaissance of sites within Moffett Park that were identified as having moderate to higher risk and sites that have remained undeveloped since the 1980s was completed. A summary of notable observations are as follows (refer to Appendix F for additional observations):

- **1230 Bordeaux Drive** (APN 110-25-027): This address is listed as DII Orbit Semiconductor (former) (SL1823J1134) on GeoTracker and appears to be owned or operated by Panorama Research Inc. The building associated with the address appears to contain a possible groundwater treatment enclosure, most likely associated with the minor concentrations of PCE that migrated from an upgradient source that impacted a tidal stream approximately 100 feet from the building.
- **1319 Moffett Park Drive** (APN 110-37-006): This site is listed as Consolidated Freightways, Inc. on GeoTracker and the building is now owned or operated by Bay Area Furniture Bank. Three USTs were removed from this property in 1989 following the discovery of a release of gasoline due to unknown circumstances. The building is marked with several hazardous material classification signs indicating fire hazards with flashpoints below 100 degrees Fahrenheit.
- **1320 Bordeaux Drive** (APN 110-26-024): This address is listed as 1320-1322 Bourdeax (sic) Drive (SL0608552478) on GeoTracker and the building is currently owned or operated by Infinera Corporation. The east side of the building contains several enclosures possibly related to a groundwater treatment system associated with minor concentrations of PCE that migrated onto the property from an upgradient source.
- **East Side of Geneva Drive between East Caribbean Drive and Caspian Drive** (1350 Geneva Drive; APN 110-32-035): At the time of the site reconnaissance, this site contained a large stockpile and a newly installed parking lot with a fence surrounding the perimeter of the location. There was no indication of where the stockpile soil originated from.
- **Former Industrial Area Northeast of E Street and 11th Avenue** (portion of APN 110-02-068): The site consisted of vacant lots surrounded by fencing with indications of building foundation columns installed within the gravel grade. There was construction debris across the site and several stockpile mounds in the center of the lot. One uncovered 55-gallon drum was observed near the northern portion of the location.

Cortese List Pursuant to Government Code Section 65962.5

The following three sites within Moffett Park are listed on the Cortese List pursuant Section 65962.5 of the Government Code:

1. **Consolidated Freightways Inc, 1319 Moffett Park:** This site is listed on GeoTracker as a LUST Cleanup Site. The potential contaminants of concern were gasoline. This case has been closed since January 1996.
2. **Lockheed Sunnyvale – Plant One Facility, 1111 Lockheed Martin Way:** This site is listed on the Cease and Desist Orders and Cleanup and Abatement Orders list and several times on the GeoTracker and EnviroStor databases.

3. **141 Caspian Court, AC Ball Menlo Caspian:** This site is currently under construction and is listed on the Cease and Desist Orders and Cleanup and Abatement Orders list.

Other Hazards

Airports

Moffett Park is located 800 feet east of the Moffett Federal Airfield and is entirely within the AIA (refer to Figure 3.9-1). Development proposals within the AIA are required to be reviewed by the ALUC. The CLUP focuses on the three areas of ALUC's responsibility: (1) aircraft noise, (2) the safety of persons on the ground and in aircraft, and (3) the control of objects in navigable airspace. As shown in Figure 3.9-2, Figure 3.9-3, and Figure 3.9-4, Moffett Park is located the CLUP's 2022 65 dB CNEL noise contour, turning safety zone, and subject to FAR Part 77 Surfaces.

Wildfire Hazard

Moffett Park is located in an urbanized location that is not in or adjacent to a very high fire hazard severity zone.¹⁰⁴ For this reason, Moffett Park is not subject to wildland fires.

Existing Schools

There are no pre-school, elementary, or high schools, which are occupied by children 16 years of age or younger (sensitive receptors) within Moffett Park or within one-quarter mile. The nearest schools to the Moffett Park are Summit Denali Middle School located at 539 East Weddell Drive (approximately 0.5-mile south of Moffett Park) and Lakewood Elementary School located at 750 Lakechime Drive in Sunnyvale (approximately 0.75 mile southeast of Moffett Park).

Foothill College Sunnyvale Center, which is intended for high school graduates and non-graduates 18 years of age or older, is located 1070 Innovation Way in Moffett Park.

3.9.2 Impact Discussion

For the purpose of determining the significance of the project's impact on hazards and hazardous materials, would the project:

- 1) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
- 2) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
- 3) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?
- 4) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

¹⁰⁴ California Department of Forestry and Fire Protection's Fire and Resource Assessment Program. FHSZ Viewer. Accessed June 1, 2022. <https://egis.fire.ca.gov/FHSZ/>.

- 5) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?
- 6) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- 7) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

3.9.2.1 *Project Impacts*

Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. **(Less than Significant Impact)**

Existing uses within Moffett Park use, handle, generate, and store hazardous materials and hazardous waste. Existing uses also use and store fertilizers, pesticides, herbicides, and consumer cleaning chemicals. Future uses could also use, handle, generate, and store similar type hazardous materials as existing, ongoing uses.

The storage, use, handling, generation, transport, and disposal of hazardous materials during operations of existing and future uses within the Specific Plan is required to comply with existing federal, state, and local laws, regulations, and programs, including the RCRA, TSCA, CFR 49, and hazardous materials regulations in CCR Title 26 on the federal and state levels. On the local level, the City's Hazard Mitigation Plan, CUPA programs, and SMC requirements would be implemented to ensure the safe storage, management, and disposal of hazardous materials.

Future use in compliance with existing hazardous materials regulations would not create a significant hazard to the public or environment through routine transport, use, disposal, or foreseeable upset of hazardous materials. **(Less than Significant Impact)**

Impact HAZ-2: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. **(Less than Significant Impact with Mitigation Incorporated)**

Contaminated Groundwater, Soil, and Soil Vapor

As discussed in Section 3.9.1.2 Existing Conditions, soil, soil vapor, and groundwater contamination with residual pesticides and related metals, PAHs, VOCs (e.g., PCE and TCE), and other chemicals have been identified in the Specific Plan. Therefore, hazardous materials could be disturbed during demolition, construction, or earthmoving activities associated with future development. This disturbance could cause unacceptable exposure of humans and the environment to contaminated groundwater, soils, and soil vapor.

Future development projects would comply with the following Specific Plan Project Requirements pertaining to contaminated groundwater, soil, and soil vapor.

Hazards and Hazardous Materials Project Requirements:

- **10.3.1-1:** Environmental Site Assessment. For any renovation, modification, or redevelopment of a property within Moffett Park that includes subsurface disturbance and requires City review, a property-specific Phase I Environmental Site Assessment (ESA) shall be completed in accordance with American Society for Testing and Materials (ASTM) Standard Designation E 1527-13 (or the standard that is effective at the time the Phase I ESA is completed) to identify Recognized Environmental Conditions, evaluate the property history, and establish if the property has been or is likely to have environmental impacts. The City or its designated environmental professional shall review the Phase I ESA to determine if additional investigation is required based on currently available information, which may supersede the designated property’s risk value.

- **10.3.1-2:** Site Management Plan. At properties with known or suspected minor environmental impacts that can be addressed safely and effectively during subsurface disturbance activities, a Site Management Plan (SMP) shall be prepared prior to development activities to establish management practices for handling contaminated soil, soil vapor, groundwater, or other materials during construction activities. The SMP shall also address management of site risks and previously unknown conditions during earthwork activities in areas where impacted soil, soil vapor, and/or groundwater are present or suspected. Recommendations for elements to be included in site-specific Health and Safety Plans (HSPs), to be prepared by individual contractors for their employees’ safety based on their work scope, may also be included in the SMP. Worker training requirements and health and safety shall be described in the SMP. The SMP shall be reviewed and approved by a qualified environmental regulatory agency such as California Department of Toxic Substances Control (DTSC), San Francisco Bay Regional Water Quality Control Board (RWQCB), or Santa Clara County Department of Environmental Health (SCCDEH).

- **10.3.1-3:** Phase II Environmental Site Assessment. At properties with known or suspected environmental impacts that require additional investigation prior to subsurface disturbance activities, a Phase II ESA shall be prepared and implemented prior to development activities to determine the nature and extent of impacts. The Phase II ESA shall be reviewed and approved by a qualified environmental regulatory agency such as DTSC, RWQCB, or SCCDEH. Consideration should be given to obtaining approval for an investigation plan from the oversight agency prior to completing the Phase II investigation. The scope of work shall include soil, groundwater, and/or soil vapor sampling in areas of potential concern to evaluate if site-specific measures are needed to protect the health and safety of property occupants and construction workers. Field techniques that may be employed under include but are not limited to:
 - Collecting samples of soil, soil vapor, groundwater, sediment, indoor air, outdoor air, and other media of interest for laboratory analysis;

- Drilling using methods such as direct-push, hollow-stem auger, vibracore, air rotary, and mud rotary;
 - Trenching, potholing, and excavating;
 - Constructing temporary or permanent soil vapor or groundwater wells or sampling points; and
 - Profiling geologic, hydrologic, geophysical, and chemical parameters of the subsurface using invasive and noninvasive tools.
- **10.3.1-4: Remediation and/or Management Measures.** At properties with known environmental impacts that must be addressed to make the property compatible with its future use, appropriate remediation and/or management measures must be implemented under the oversight and to the satisfaction of a qualified environmental regulatory agency such as DTSC, RWQCB, or SCCDEH. Remediation techniques may include but are not limited to excavation, extraction, bioremediation, oxidation, reduction, phytoremediation, and thermal treatment. Management measures may include engineering and administrative controls such as but not limited to impermeable surface caps, vapor intrusion mitigation systems, permeable reactive barriers, land use covenants, and deed restrictions. Field techniques that may be employed under include but are not limited to:
 - Excavation, extraction, or removal of impacted material for off-site disposal or temporary on-site storage or treatment;
 - Ex-situ (i.e., above-ground) treatment of impacted material via physical and/or chemical processing; and
 - In-situ (i.e., below-ground) treatment of impacted material via intrusive physical and/or chemical processing.

These field techniques include those currently known and used (e.g, dig-and-haul, landfarming, groundwater and soil vapor extraction and treatment, subsurface injection, etc.) and those that will become state of the art in the future.

- **10.3.1-5: Dewatering Management Plan.** For future development projects that require dewatering, a Dewatering Management Plan shall be prepared to determine how the dewatering activities will affect local groundwater quality, especially regarding movement of known or interpolated contaminated groundwater plumes. The Dewatering Management Plan also shall include protocols to evaluate extracted water quality and perform proper disposal of the water. Compliance with permitting requirements shall be described if required by the disposal method. The Dewatering Management Plan shall be prepared by a California Certified Hydrogeologist and approved by a qualified environmental regulatory agency such as DTSC, RWQCB, or SCCDEH.

Future development in compliance with existing regulations and policies (including the above Specific Plan Project Requirements) would reduce impacts from on-site soil, soil vapor, and/or groundwater contamination by requiring sampling for contaminants, proper handling of hazardous materials contamination, and remediation of contamination under regulatory agency oversight. **(Less than Significant Impact)**

Asbestos-Containing Materials, Lead-Based Paint, and Polychlorinated Biphenyls

As discussed under Section 3.9.1.1, Regulatory Framework, the demolition of buildings constructed prior to 1978 could expose the public to ACMs, LBP, or PCBs. Future Specific Plan development would NESHAP, CCR Title 8, Section 1532.1, and MRP Provision C.12.f to reduce impacts from ACMs, LBP, and PCBs.

The following Specific Plan Project Requirements assist in compliance with existing regulations to reduce potential impacts to the public and environment from exposure to ACMs, LBP, and PCBs:

Hazards and Hazardous Materials Project Requirements:

- **10.3.1-6:** Asbestos Survey. Prior to issuance of demolition permits, an asbestos survey shall be completed on all structures proposed for demolition that are known or suspected to have been constructed prior to 1978 in accordance with National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines. NESHAP guidelines require the removal of potentially friable asbestos-containing materials (ACMs) prior to building demolition or renovation that may disturb the ACM.
- **10.3.1-7:** Lead-Based Paint Survey. Prior to issuance of a demolition permit, a lead-based paint (LBP) survey shall be completed on all structures proposed for demolition that are known or suspected to have been constructed prior to 1978. If LBP is identified, then federal and state construction worker health and safety regulations shall be followed during renovation or demolition activities. If loose or peeling LBP is identified at the building, it shall be removed by a qualified lead abatement contractor and disposed of in accordance with existing hazardous waste regulations. Requirements set forth in the CCR Title 8, Section 1532.1 shall be followed during demolition activities, including employee training, employee air monitoring, and dust control. Any debris or soil containing LBP or coatings shall be disposed of at landfills that meet acceptance criteria for the waste being disposed.

Future development in compliance with existing regulations and policies (including the above Specific Plan Project Requirements) would reduce impacts from ACMs, LBP, and PCBs by requiring a survey and proper removal of ACMs, LBP, and PCBs. **(Less than Significant Impact)**

Impact HAZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. **(Less than Significant Impact)**

As stated in Section 3.9.1.2 Existing Conditions, there are currently no schools with children under the age of 16 in Moffett Park or within one quarter mile of Moffett Park. The nearest school is Summit Denali Middle School located approximately 0.5-mile south of Moffett Park.

As described in Section 2.3 Project Description, Table 2.3-3, the Specific Plan could include future school facilities. No school is proposed as part of the project at this time. If a future school is developed within or adjacent to Moffett Park, it and proposed development in proximity to it would

be subject to separate environmental review to identify the suitability of the use and any potential impacts from hazardous materials in the area. As discussed in Section 3.7.1.1 Regulatory Framework, public schools are subject to state siting criteria to ensure that they are not located on a hazardous materials site. Future development projects under the Specific Plan would comply with existing regulations and the Specific Plan Project Requirements discussed under Impact HAZ-2 to reduce hazardous materials impacts, including those to schools, to a less than significant level. Therefore, implementation of the Specific Plan would not have a significant impact to schools due to the release of hazardous materials, substances, or waste. **(Less than Significant Impact)**

Impact HAZ-4: The project would be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; however, it would not create a significant hazard to the public or the environment. **(Less than Significant Impact)**

Three facilities (refer to Section 3.9.1.2 Existing Conditions) within Moffett Park are on the list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. In compliance with existing regulations and policies (including the Specific Plan Project Requirements identified under Impact HAZ-2), future development would not create a significant hazard to the public or the environment due to the redevelopment of sites on the Cortese List. **(Less than Significant Impact)**

Impact HAZ-5: The project would be located within an airport land use plan and would not result in a safety hazard or excessive noise for people residing or working in the project area. **(Less than Significant Impact)**

As discussed in Section 3.9.1 Environmental Setting, all of Moffett Park is located within the Moffett Airfield AIA. Development proposals within the AIA are required to be reviewed by the ALUC. The CLUP focuses on the three areas of ALUC's responsibility: (1) aircraft noise, (2) the safety of persons on the ground and in aircraft, and (3) the control of objects in navigable airspace. Moffett Park's relationship to these three areas is described below.

Aircraft Noise

As discussed in detail in Section 3.13 Noise and Vibration under Impact NOI-3, future development under the Specific Plan would comply with CLUP noise policies in Section 3.9.1.1 Regulatory Framework and Specific Plan Project Requirement 10.3.4-8. **(Less than Significant Impact)**

Safety of Persons

The objective of CLUP safety compatibility criteria is to minimize the risks associated with potential aircraft accidents. These include the safety of people on the ground and the safety of aircraft occupants. The CLUP has safety restriction areas categorized in six safety restriction zones to minimize the number of people exposed to potential aircraft accidents in the vicinity of the Airfield by imposing density and use limitations within these zones. These zones include the (1) Runway Protection Zone, (2) Inner Safety Zone, (3) Turning Safety Zone, (4) Outer Safety Zone, (5) Sideline Safety Zone, and (6) Traffic Safety Zone.

The southwest corner of Moffett Park is located within the turning safety zone of the CLUP, which restricts land use to non-residential uses, with a maximum of 200 people per acre (including open space and parking). The CLUP stipulates that if non-residential uses are not feasible, residential infill is allowed. No regional shopping centers, theaters, meeting halls, stadiums, schools, day care centers, hospitals, nursing homes, or hazardous material facilities are allowed to be developed within the turning safety zone.¹⁰⁵ Office uses are proposed within the turning safety zone (refer to Figure 2.3-1). Future Specific Plan development would comply with CLUP safety compatibility policies requiring compatible land uses and prohibition of above ground storage of hazardous materials, as well as the applicable density limitations, to ensure the safety compatibility with the Airfield. **(Less than Significant Impact)**

Objects in Navigable Airspace

The objective of the CLUP height compatibility criteria is to avoid development of land uses, which, by posing hazards to flight, can increase the risk of an accident occurring. Structures of a height greater than 200 feet above ground level can be a special hazard to aircraft in flight.¹⁰⁶ The CLUP relies on the FAA FAR Part 77 obstructions standards as elevations above which structures may constitute an aircraft safety hazard. As discussed in Section 3.7 Geology and Soils and shown on Figure 3.7-1 the ground level elevation in Moffett Park varies from below two feet to approximately 18 feet. Most of Moffett Park has a Part 77 surface of 182 above mean sea level for structures. The southeastern corner of Moffett Park has a height restriction of approximately 182 to 310 feet above mean sea level. The southwest corner of Moffett Park has a height restriction of 57 to 182 feet above mean sea level. Refer to Figure 3.9-4 for the FAA FAR Part 77 map.

Future Specific Plan development would comply with CLUP height compatibility policies requiring FAA notification for any construction equipment (such as cranes) or new structures that exceed the FAR Part 77 surfaces. Through the notification process, future development exceeding FAR Part 77 surfaces would obtain a “Determination of No Hazard” and comply with any conditions set forth by the FAA in its determinations.

Future development under the Specific Plan would comply with CLUP height compatibility policies, including notification requirements and obtaining necessary No Hazard Determinations, to prevent aviation hazards. **(Less than Significant Impact)**

Impact HAZ-6: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. **(Less than Significant Impact)**

Compared to existing conditions, the Specific Plan would result in a net increase of approximately 42,000 residents and 60,414 employees in Moffett Park. The increase in development and population in Moffett Park would result in an increase in demand for emergency services. Future development projects would be subject to the City’s development review process, which includes review of site plans by the DPS to ensure adequate design and infrastructure for fire protection. Future development

¹⁰⁵ Windus, Walter B. *Comprehensive Land Use Plan Santa Clara County, Moffett Federal Airfield*. Adopted by the Santa Clara County Airport Land Use Commission November 2, 2012. Amended November 18, 2016. Page 4-8.

¹⁰⁶ Ibid. Page 4-7.

would also comply with Building and Fire Code standard that ensure building design and fire protection features (such as sprinkler systems) are incorporated. In addition, the Specific Plan would not modify U.S. 101 or Central Expressway, which are the designated major evacuation routes for the City in the City's Hazard Mitigation Plan. For this reason, implementation of the Specific Plan would not impair implementation of or physically interfere with the City's Local Hazard Mitigation Plan. **(Less than Significant Impact)**

Impact HAZ-7: The project would not expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires. **(No Impact)**

As described in Section 3.20 Wildfire, the Specific Plan is located in an urbanized area and is not in or adjacent to a very high fire hazard severity zone.¹⁰⁷ For this reason, future development in under the Specific Plan would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. **(No Impact)**

3.9.2.2 *Cumulative Impacts*

Impact HAZ-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant hazards and hazardous materials impact. **(Less than Significant Cumulative Impact)**

Moffett Park is not subject to wildland fires; therefore, the Specific Plan would not contribute to a cumulative wildland fire impact.

The geographic area for cumulative hazards and hazardous materials impacts is Moffett Park and the surrounding area because common sources of contamination (e.g., an underground plume) or hazards from a release of hazardous materials would be localized. Moffett Park and surrounding areas have similar history of former agricultural use and potential contamination due to the use of hazardous materials by commercial and industrial uses. Existing regulations are in place to reduce hazardous materials impacts to acceptable levels, preventing cumulative impacts. Future development projects within and outside Moffett Park are subject to existing regulations, including the ones summarized in Section 3.9.1.1 Regulatory Framework, that ensure the safe storage, management, and disposal of hazardous materials. Future development projects are also subject to the City's development review process, which requires site-specific evaluation of impacts under CEQA. Development in adjacent jurisdictions, such as the City of Mountain View, are subject to a similar development review process. Projects resulting in hazardous materials impacts would be mitigated to a less than significant level through compliance with existing regulations and implementation of project-specific measures (such as those identified in the Specific Plan Project Requirements identified under Impact HAZ-2). For these reasons, the cumulative hazardous materials impact would be less than significant. **(Less than Significant Cumulative Impact)**

¹⁰⁷ California Department of Forestry and Fire Protection's Fire and Resource Assessment Program. FHSZ Viewer. Accessed June 1, 2022. <https://egis.fire.ca.gov/FHSZ/>.

3.10 HYDROLOGY AND WATER QUALITY

The following discussion is based, in part, on the Sea Level Rise Adaptation Strategy: Background report completed by Environmental Science Associates dated November 23, 2020, Shoreline Resilience Vision Technical Memorandum completed by San Francisco Estuary Institute (SFEI) dated May 2021, and Sea-level Rise Impacts on Shallow Groundwater in Moffett Park Technical Addendum prepared by SFEI dated November 2021. These reports are included as Appendix G to this EIR.

3.10.1 Environmental Setting

3.10.1.1 *Regulatory Framework*

Federal and State

Clean Water Act, Porter-Cologne Water Quality Control Act, and National Pollution Discharge Elimination System

The federal Clean Water Act and California’s Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the Environmental Protection Agency (EPA) and the SWRCB have been developed to fulfill the requirements of this legislation. EPA regulations include the NPDES permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). These regulations are implemented at the regional level by the RWQCBs.

Under Section 303(d) of the federal Clean Water Act, the SWRCB and RWQCBs are required to identify impaired surface water bodies that do not meet water quality standards and develop total maximum daily loads for contaminants of concern. The list of the state’s identified impaired surface water bodies, known as the “303(d) list” can be found on the on the RWQCB’s website.¹⁰⁸

Statewide Construction General Permit

The SWRCB has implemented an NPDES General Construction Permit for the State of California (Construction General Permit). For projects disturbing one acre or more of soil, a Notice of Intent (NOI) must be filed with the RWQCB by the project sponsor, and a SWPPP must be prepared by a qualified professional prior to commencement of construction and filed with the RWQCB by the project sponsor. The Construction General Permit includes requirements for implementing best management practices, training, inspections, record keeping, and, for projects of certain risk levels, monitoring. The general purpose of the requirements is to minimize the discharge of pollutants and to protect beneficial uses and receiving waters from the adverse effects of construction-related stormwater discharges.

¹⁰⁸ San Francisco Regional Water Quality Control Board. “The 303(d) List of Impaired Water Bodies.” Accessed June 5, 2022. https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/303dlist.html.

National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) established the National Flood Insurance Program (NFIP) to reduce impacts of flooding on private and public properties. The program provides subsidized flood insurance to communities that comply with FEMA regulations protecting development in floodplains. As part of the program, FEMA publishes Flood Insurance Rate Maps (FIRMs) that identify Special Flood Hazard Areas (SFHAs). An SFHA is an area that would be inundated by the one-percent annual chance flood, which is also referred to as the base flood or 100-year flood.

Regional and Local

San Francisco Bay Basin Plan

The San Francisco Bay RWQCB regulates water quality in accordance with the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan). The Basin Plan lists the beneficial uses that the San Francisco Bay RWQCB has identified for local aquifers, streams, marshes, rivers, and the San Francisco Bay, as well as the water quality objectives and criteria that must be met to protect these uses. The San Francisco Bay RWQCB implements the Basin Plan by issuing and enforcing waste discharge requirements, including permits for nonpoint sources such as the urban runoff discharged by a City's stormwater drainage system. The Basin Plan also describes watershed management programs and water quality attainment strategies.

Municipal Regional Stormwater NPDES Permit/Provision C.3

The San Francisco Bay RWQCB has issued the Municipal Regional Stormwater NPDES Permit (MRP) to regulate stormwater discharges from municipalities and local agencies (co-permittees) in Alameda, Contra Costa, San Mateo, and Santa Clara counties, and the cities of Fairfield, Suisun City, and Vallejo.¹⁰⁹ Under Provision C.3 of the MRP, new and redevelopment projects that create or replace 5,000 square feet or more of impervious surface area are required to implement site design (in compliance with the MRP and SMC Section 12.60.155 discussed below), source control, and Low Impact Development (LID)-based stormwater treatment controls to treat post-construction stormwater runoff. LID-based treatment controls are intended to maintain or restore the site's natural hydrologic functions, maximizing opportunities for infiltration and evapotranspiration, and using stormwater as a resource (e.g., rainwater harvesting for non-potable uses). The MRP also requires that stormwater treatment measures are properly installed, operated, and maintained.

In addition to water quality controls, the MRP requires new and redevelopment projects that create or replace one acre or more of impervious surface to manage development-related increases in peak runoff flow, volume, and duration, where such hydromodification is likely to cause increased erosion, silt pollutant generation, or other impacts to local rivers, streams, and creeks. Projects may be deemed exempt from these requirements if they do not meet the minimized size threshold, drain into tidally influenced areas or directly into the Bay, or drain into hardened channels, or if they are infill projects in subwatersheds or catchment areas that are greater than or equal to 65 percent impervious (per the Santa Clara Valley Permittees Hydromodification Management Applicability Map). Projects that include creek restoration in areas that drain into hardened channels, tidally

¹⁰⁹ MRP Number CAS612008

influenced areas, or directly into the Bay, may be subject to hydromodification management requirements, unless the creek restoration is designed to accommodate the potential hydromodification impacts of future development.

Municipal Regional Permit Provision C.12.f

Provision C.12.f of the MRP requires co-permittee agencies to implement a control program for PCBs that reduces PCB loads by a specified amount during the term of the permit, thereby making substantial progress toward achieving the urban runoff PCBs wasteload allocation in the Basin Plan by March 2030.¹¹⁰ Programs must include focused implementation of PCB control measures, such as source control, treatment control, and pollution prevention strategies. Buildings constructed between 1955 and 1978 that are proposed for demolition must be screened for the presence of PCBs prior to the issuance of a demolition permit.

To comply with Municipal Regional Permit Provision C.12.f, on July 1, 2019, the City adopted a PCB screening process that requires all projects complete a PCBs Screening Assessment form prior to approval of a building demolition permit. Projects are required to complete the assessment form if the building slated for demolition meets the following requirements:

1. Was constructed or remodeled between January 1, 1950, and December 31, 1980; and
2. Will be completely destroyed

The City requires sampling of priority building materials (i.e., calk, fiberglass insulation, thermal insulation, adhesive mastics, and rubber window gaskets) be collected and tested for PCBs per Bay Area Stormwater Management Agencies Association's Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition. If collected samples contain PCBs concentrations are equal to or greater than 50 parts per million (ppm) in one or more priority materials, abatement procedures are required in accordance with federal and state regulations. Documentation and inspection are also required to verify that proper abatement was conducted.

Water Resources Protection Ordinance and District Well Ordinance

Valley Water operates as the flood control agency for Santa Clara County. Their stewardship also includes creek restoration, pollution prevention efforts, and groundwater recharge. Permits for well construction and destruction work, most exploratory boring for groundwater exploration, and projects within Valley Water property or easements are required under Valley Water's Water Resources Protection Ordinance and District Well Ordinance.

2021 Groundwater Management Plan

The 2021 Groundwater Management Plan (GWMP) describes the Valley Water's comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The GWMP covers the Santa Clara and Llagas subbasins, which are located entirely in Santa Clara County. Valley Water manages a diverse water supply portfolio, with sources including groundwater, local surface water,

¹¹⁰ San Francisco Bay Regional Water Quality Control Board. *Municipal Regional Stormwater Permit, Provision C.12*. November 19, 2015.

imported water, and recycled water. About half of the county’s water supply comes from local sources and the other half comes from imported sources. Imported water includes Valley Water’s State Water Project and Central Valley contract supplies and supplies delivered by the San Francisco Public Utilities Commission (SFPUC) to cities in northern Santa Clara County. Local sources include natural groundwater recharge and surface water supplies. A small portion of the county’s water supply is recycled water.

Local groundwater resources make up the foundation of the county’s water supply, but they need to be augmented by Valley Water’s comprehensive water supply management activities to reliably meet the county’s needs. These include the managed recharge of imported and local surface water and in-lieu recharge through the provision of treated surface water, acquisition of supplemental water supplies, and water conservation and recycling.¹¹¹

Construction Dewatering Waste Discharge Requirements

Each of the RWQCBs regulate construction dewatering discharges to storm drains or surface waters within its Region under the NPDES program and Waste Discharge Requirements.

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to the General Plan hydrology and water quality policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-1.10a	Protect and preserve the diked wetland areas in the baylands to preserve or enhance flood protection
<i>Safety and Noise Element</i>	
SN-1.2	Take measures to protect life and property from the effects of a one percent (100 year) flood.
SN-1.3	Operate and maintain the storm drainage system at a level to minimize damages and ensure public safety.
SN-1.4	Monitor and plan for hydraulic changes due to global warming, earthquakes, and/or subsidence.
<i>Environmental Management Element</i>	
EM-8.3	Ensure that stormwater control measures and best management practices (BMPs) are implemented to reduce the discharge of pollutants in storm water to the maximum extent practicable.
EM-8.4	Effectively prohibit illicit discharges and improper disposal of wastes into the storm drain system.

¹¹¹ Valley Water. 2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins. November 2021.

Policy	Description
EM-8.5	Prevent accelerated soil erosion. Continue implementation of a construction site inspection and control program to prevent discharges of sediment from erosion and discharges of other pollutants from new and redevelopment projects.
EM-8.6	Minimize the impacts from stormwater and urban runoff on the biological integrity of natural drainage systems and water bodies.
EM-10.1	Consider the impacts of surface runoff as part of land use and development decisions and implement BMPs to minimize the total volume and rate of runoff of waste quality and quantity (hydro modification) of surface runoff as part of land use and development decisions.
EM-10.2	Consider the ability of a land parcel to detain excess storm water runoff in flood prone areas and require incorporation of appropriate controls. Require the incorporation of appropriate stormwater treatment and control measures for new and redevelopment regulated projects and/or any sites that may reasonably be considered to cause or contribute to the pollution of stormwater and urban runoff as defined in the current version of the stormwater Municipal Regional Permit.
EM-10.3	Require the incorporation of appropriate stormwater treatment and control measures for industrial and commercial facilities as identified in the stormwater Municipal Regional Permit.

Sunnyvale Wastewater Collection System Master Plan

The City’s 2015 Wastewater Collection System Master Plan (WWMP) evaluated the capacity and condition of the sanitary sewer and storm drain collection system in order to recommend a long-term Capital Improvement Program with Capital Improvement Projects (CIPs). The capacity of the City of Sunnyvale’s storm drain and sanitary sewer collection systems were evaluated using hydrologic model and hydraulic models. Results of the evaluation were used to identify storm drain and sanitary sewer lines with capacities substantially less than the imposed flows and develop recommended improvements to these systems. Based on the results of the City’s 2015 WWMP analysis, 20 storm drain lines were identified as having one or more sections with less than adequate capacity. Three of the 20 hydraulically deficient storm drain lines are located within Moffett Park including lines along Borregas Avenue, between Humboldt Court and Caspian Drive, along the Sunnyvale West Channel at Java Drive, and along Caribbean Drive, from Moffett Park Drive to the Sunnyvale East Channel. No recommended improvements were identified for these deficiencies given they were not related to known flooding issues.

The City is currently completing an update to its wastewater hydraulic model. This effort also includes updates to CIPs that were originally proposed in the 2015 WWMP.

Sunnyvale Green Infrastructure Plan

In 2017, the City of Sunnyvale adopted a Green Stormwater Infrastructure Plan. The purpose of the Plan is for the City to gradually transform its urban landscape and storm drainage systems from “gray” to “green.” This requires that projects shift from traditional storm drain infrastructure, where stormwater runoff flows directly from impervious surfaces into storm drains and receiving waters, to

a more sustainable system that reduces and slows runoff by dispersing it to vegetated areas, promotes infiltration and evapotranspiration, and collects runoff for non-potable uses, and treats runoff using biotreatment and other green infrastructure practices. The Plan was also prepared in accordance with the City's long-term commitment to implementation of green infrastructure to help reduce loads of pollutants of concern, particularly mercury and PCBs, discharged in stormwater to local waterways. and treats runoff using biotreatment and other green infrastructure practices.

Sunnyvale Municipal Code

Chapter 12.60 (Stormwater Management) in Title 12 of the SMC includes the currently adopted water quality, wastewater, and stormwater management regulations. This includes regulations for compliance with NPDES permits, best management practices, project design, and water quality. Section 12.60.155 (of Chapter 12.60) requires new developments to reduce runoff by implementing specific practices to control sources of potential pollution and site design strategies to treat stormwater. All regulated projects are required to implement LID source control measures, site design strategies, and to treat 100 percent of the amount of runoff using the criteria identified in SMC 12.60.150 for the regulated project's drainage area with LID treatment measures on-site or with LID treatment measures at a joint stormwater treatment facility.

Chapter 16.62 of the SMC provides regulations to prevent flood damage in Sunnyvale. This chapter establishes provisions for reducing flood hazards, including standards for construction, utilities, subdivisions, manufactured homes, floodways, and coastal high hazard areas.

3.10.1.2 *Existing Conditions*

Water Quality

The water quality of streams, creeks, ponds, and other surface water bodies (such as the Sunnyvale West Channel and Sunnyvale East Channel within Moffett Park) can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from dispersed or areawide sources, known as non-point source pollutants, are washed from streets, construction sites, parking lots, and other exposed surfaces into storm drains. Urban stormwater runoff often contains contaminants such as oil and grease, plant and animal debris (e.g., leaves, dust, animal feces, etc.), pesticides, litter, and heavy metals. In sufficient concentration, these pollutants have been found to adversely affect the aquatic habitats to which they drain.

Groundwater

The City of Sunnyvale is located within the Santa Clara Valley Groundwater Basin. Groundwater basins are naturally replenished by rainfall and other sources. Valley Water manages groundwater and surface water to ensure continued water supplies.

Hydrologically, the groundwater basin is separated into recharge and confined zones. Geological conditions in the recharge areas allow precipitation, stream flow, and water diverted into percolation areas to recharge the deeper aquifers. The confined zones include areas of the valley where low permeability clays and silts overlie the major groundwater aquifers which impedes the vertical flow

of groundwater into the deeper aquifers. The City of Sunnyvale (including Moffett Park) lies entirely within the area of the confined zone. Moffett Park is not located within a designated recharge area¹¹²

The depth of groundwater can vary seasonally, and can be influenced by underground drainage patterns, regional fluctuations, and other factors (including sea-level rise). The San Francisco Bay RWQCB's Geotracker database includes groundwater quality data and the depth to the groundwater table data collected from monitoring wells within Moffett Park. Based on the data collected at 26 monitoring wells, from 2005 to 2021, the depth to groundwater levels (at the highest groundwater table elevations) in Moffett Park mostly ranges from three to nine feet below the ground surface (at 20 monitoring wells) with shallow aquifers being about five to 20 feet thick.¹¹³ Groundwater levels are higher towards the San Francisco Bay. Groundwater levels range from zero feet (at ground surface) to three feet below the ground surface at the Lockheed Martin stormwater detention ponds (at three monitoring wells) where there are seasonal wetlands. These stormwater detention ponds are shown on Figure 3.10-1. Three monitoring wells northwestern section (adjacent to a wetland area), central section, and southwestern section, respectively, showed depth of groundwater levels ranging from nine to 15 feet below the ground surface. A map of the approximate groundwater depth in Moffett Park is shown on Figure 3.10-2.

Studies completed to assess the influence of tides on groundwater elevations at the shallowest aquifers generally conclude that tidal influence was not measurable at the locations monitored. Due to geologic conditions within Moffett Park (clay layers with low hydraulic conductivity), the rate of groundwater flow is several orders of magnitude slower than tides. Therefore, tidal influence is not evident in Moffett Park's groundwater table. The presence of the former salt evaporation ponds to the north of Moffett Park may further prevent tidal influence on the groundwater table inland of the ponds (e.g., Moffett Park).

Storm Drainage System

Most of Moffett Park consists of impervious surfaces (e.g., paved parking lots and buildings). Stormwater runoff from impervious surfaces within Moffett Park is collected by the City's stormwater system and by a private storm drainage system located generally west of Mathilda Avenue that does not flow to the City's system. Moffett Park is located in an area where catchments drain to hardened channels (e.g., Lockheed Martin, Sunnyvale West Channel and Sunnyvale East Channels and/or tidal areas (e.g., San Francisco Bay) as described below.¹¹⁴ Based on the Santa Clara Valley Urban Runoff's Hydromodification Management Applicability Map for Sunnyvale, Moffett Park is not subject to the MRP's hydromodification management control requirements.

Moffett Park is located within Sunnyvale West Channel and Sunnyvale East Channel watersheds. Together, the channels drain a watershed of approximately 15 square miles, encompassing most of Sunnyvale, as well as parts of Mountain View, Cupertino, and unincorporated Santa Clara County.

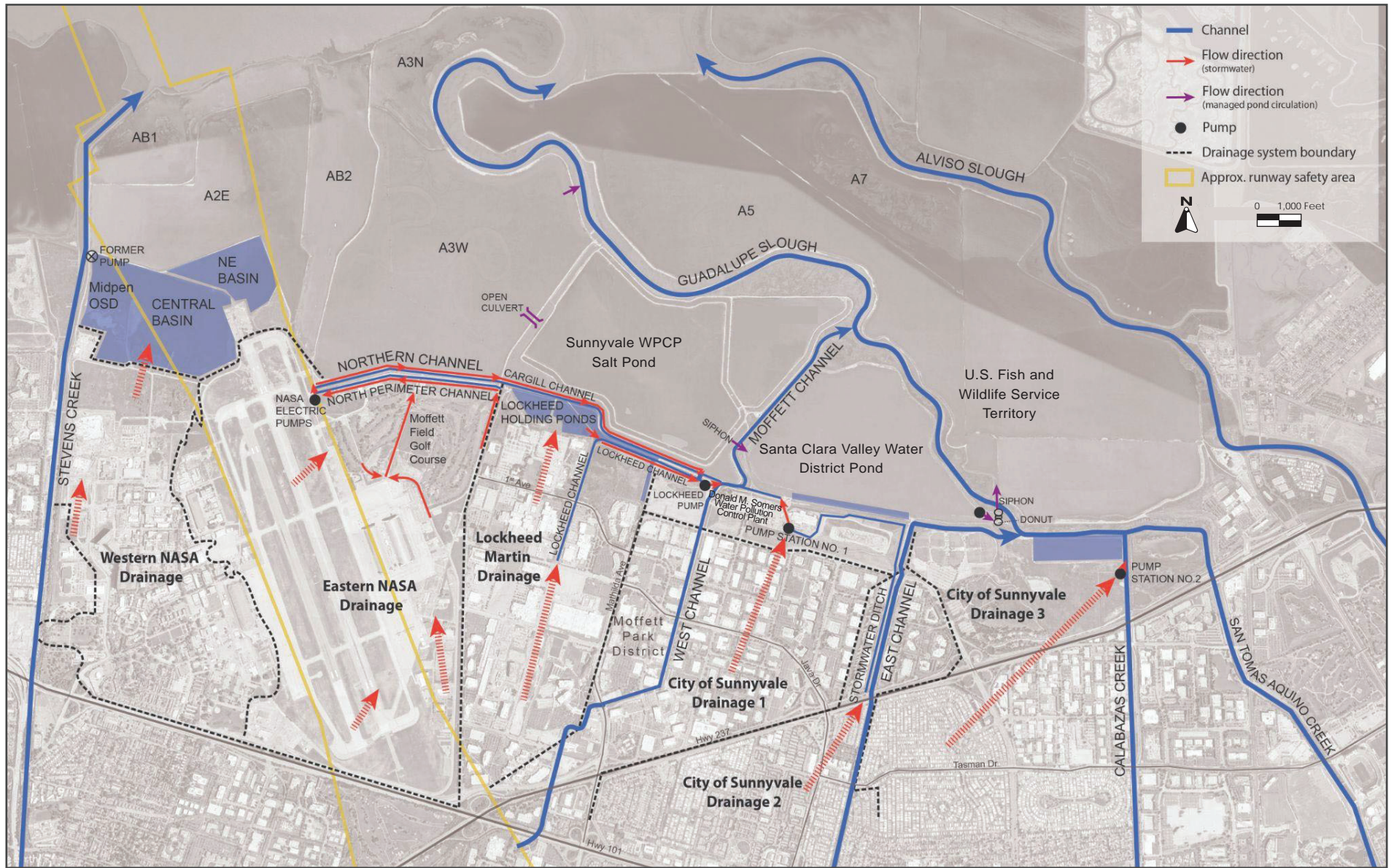
¹¹² Santa Clara Valley Water District. *2021 Groundwater Management Plan for the Santa Clara and Llagas Subbasins*. Figure 2-1, Santa Clara Subbasin. November 2021. Accessed June 5, 2022.

<https://www.valleywater.org/your-water/where-your-water-comes/groundwater/sustainable>.

¹¹³ SFEI. *Sea-level rise impacts on shallow groundwater in Moffett Park*. November 2021. Page 6.

¹¹⁴ Santa Clara Urban Runoff Pollution Prevention Program. *Hydromodification Management Plan Applicability Map*. Accessed June 5, 2022. <https://scvurppp.org/hmp-maps/>.

- Appendix E, Hydromodification Management Requirements



Legend:

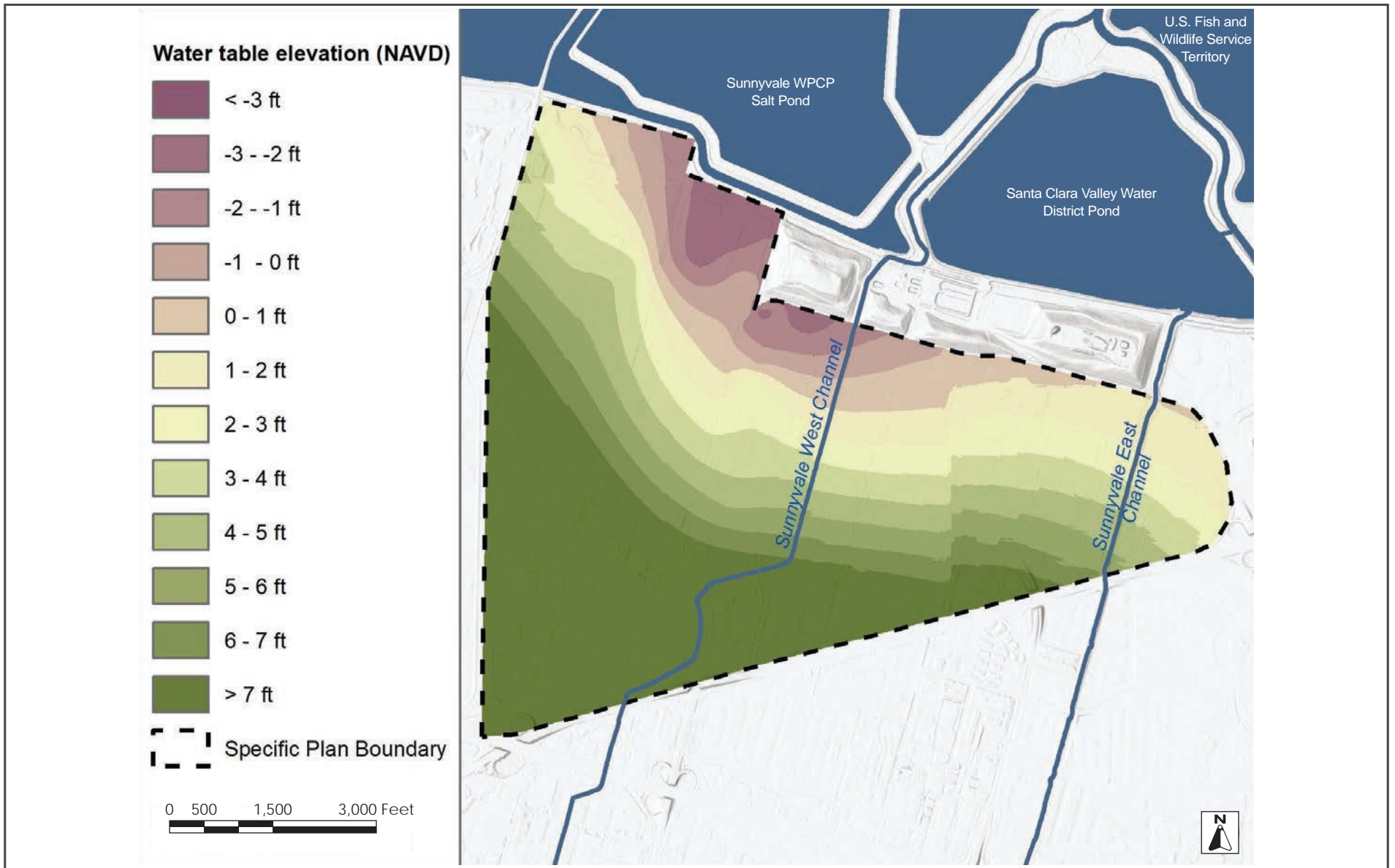
- Channel
- Flow direction (stormwater)
- Flow direction (managed pond circulation)
- Pump
- Drainage system boundary
- Approx. runway safety area

Scale: 0 1,000 Feet

North Arrow

MOFFETT PARK DRAINAGE SYSTEM

FIGURE 3.10-1



GROUNDWATER DEPTH IN MOFFETT PARK

FIGURE 3.10-2

The channels and their levees were designed with capacity to carry flows from the storm drain systems during a 10-year storm.

The City manages an extensive stormwater system with about 3,000 pipes, 100 outfalls, five watersheds, and two pump stations. There are six drainage areas (three within Moffett Park) that collect and convey stormwater to the shoreline. Within Moffett Park there is the Lockheed Martin drainage area (managed by Lockheed Martin) that includes the western portion of Moffett Park to Mathilda Avenue, the Sunnyvale Drainage Area 1 that includes the area west of Mathilda Avenue to a stormwater ditch adjacent to the Sunnyvale East Channel, and the Sunnyvale Drainage Area 2 that extends from the stormwater ditch to the eastern border of Moffett Park.

In the Lockheed Martin drainage area, stormwater flows to detention ponds located at the northern edge of Moffett Park. From the detention ponds, water flows along the Lockheed Martin Channel to the Lockheed Martin pump station. The pump station conveys stormwater from the Lockheed Martin Channel into Sunnyvale West Channel, which then flows to the Guadalupe Slough and the San Francisco Bay. Pump Station No. 1, which is located at the SMaRT Station[®] north of Moffett Park, drains Moffett Park east of Mathilda Avenue (Drainage Areas 1 and 2) including water collected in the stormwater ditch parallel to the East Channel (refer to Figure 3.10-1). Pump Station No. 2, located 0.75 mile east of Moffett Park and adjacent to Calabazas Creek, drains the area south of SR 237 to Tasman Drive, which is outside of Moffett Park.

Flooding and Other Inundation Hazards

Flood Hazards

The primary hydrologic sources affecting Moffett Park are San Francisco Bay, which borders the northwest corner of Moffett Park, and the Sunnyvale East and West Channels, which pass through Moffett Park from south to north before discharging to the San Francisco Bay (refer to Figure 3.10-1 which shows the location of the channels). Moffett Park is relatively flat, with low elevations due in part to past subsidence.¹¹⁵ The adjacent baylands¹¹⁶ provide some separation between Moffett Park and the San Francisco Bay, as do the levees along the shoreline and landfill to the north.

The existing flood hazards to Moffett Park are posed by coastal flooding from the Bay and fluvial flooding from the Sunnyvale East and West Channels.¹¹⁷ Coastal flooding refers to floodwaters sourced from the Bay and is more likely during a storm surge event. The non-accredited levees located along the shoreline protect low areas of Moffett Park from inundated by daily high tides. Non-accredited levees area also present along the banks of the Sunnyvale East and West channels. These levees are considered non-accredited by FEMA because they do not meet FEMA's accreditation criteria for crest elevation and geotechnical properties.

¹¹⁵ Substantial regional groundwater pumping caused the ground surface to subside approximately six feet by the 1960s. Further subsidence was halted by switching to local and imported surface water supplies and recharging the groundwater aquifer. Source: ESA and SFEI. *Sunnyvale Sea-Level Rise Adaptation Strategy: Background*. November 2020. Pages 9-10.

¹¹⁶ The baylands include the channels, non-accredited levees, and managed wetlands located between the Specific Plan area and the bay.

¹¹⁷ ESA and SFEI. *Sunnyvale Sea-Level Rise Adaptation Strategy: Background*. November 2020. Page 16.

The FIRM currently in effect for Moffett Park shows the locations of the shoreline levees; however, since these levees are non-accredited, for mapping purposes, these levels and floodwalls are assumed to fail completely during a flood event.¹¹⁸ Despite the reality that these levees do prevent flooding, the FIRM shows the northern and eastern portions of Moffett Park and along the East and West Channels as within a SFHA.¹¹⁹ The FIRM designation for these portions of Moffett Park is Zone AE, a SFHA subject to the one percent chance (100-year) flood. These areas have a base flood elevation of 11 feet above mean sea level.

The Sunnyvale East and West Channels are at risk of flooding due to several factors: (1) insufficient conveyance capacity for discharge from the channels' watersheds; (2) backwater flows from Calabazas and San Tomas Aquino Creeks during 100-year discharge in these creeks, and (3) elevated bay water levels.¹²⁰ Modeling conducted for FEMA's flood insurance study map for the City of Sunnyvale indicate that flooding from the channels would occur for a 100-year storm event. Generally, the flood risks are larger in the downstream reaches of the drainage channel, where the 100-year water surface elevation is due to the combination of water levels in the Bay, backwater flow from Calabazas and San Tomas Aquino Creeks, and large runoff volumes from the watershed.

The Shoreline Project, a joint effort between Valley Water, Coastal Conservancy, and the United States Army Corps of Engineers (USACE), is planning, designing, and constructing a shoreline levee to replace the protection provided by the salt pond berms. After the coastal levee is constructed (the date of completion is currently unknown and pending funding) and the Sunnyvale East and West channel upgrades are completed (the date of completion is currently unknown and pending permitting), internal flooding from insufficient stormwater capacity will be the primary remaining flood risk for the area.

There are several projects in the process that would reduce the risk of flooding within Moffett Park, including:

- South San Francisco Bay Shoreline Phase III Feasibility Study – undertaken by the USACE, Valley Water, and the California Coastal Conservancy that is evaluating the feasibility of implementing levee improvements and habitat restoration that would benefit Moffett Park. The design and construction of improvements is unknown at this time.
- South Bay Salt Ponds Restoration Project – a collaboration between the California Coastal Conservancy, CDFW, and USFWS to manage former salt ponds north of the area, with plans to breach outboard levees and restore habitat once the Shoreline Project described above provides flood protection between the former salt ponds and Moffett Park. Construction of this improvement would occur after the completion of the above Shoreline Project.
- Sunnyvale East and West Channel Flood Protection Project – undertaken by Valley Water and in collaboration with Google to raise and improve the levees and floodwalls. Construction of this project is anticipated to begin in 2024.¹²¹

¹¹⁸ ESA and SFEI. *Sunnyvale Sea-Level Rise Adaptation Strategy: Background*. November 2020. Page 17.

¹¹⁹ Federal Emergency Management Agency. Flood Insurance Rate Map. Map Number 06085C0045H. May 18, 2009.

¹²⁰ ESA and SFEI. *Sunnyvale Sea-Level Rise Adaptation Strategy: Background*. November 2020. Pages 19-20.

¹²¹ Valley Water. "2012 Sunnyvale East and West Channels Flood Protection." April 2021. Accessed July 26, 2022. <https://www.valleywater.org/project-updates/2012-sunnyvale-east-and-west-channels-flood-protection>

- Water Pollution Control Plant Master Plan – construct a wall around the perimeter of the plant. Construction of this level is to be completed in 2024.¹²²

Tsunami and Seiche Zones

The downstream segments of the Lockheed Channel, a wetland area approximately 300 feet north of the West Caribbean Drive and North Mathilda Avenue, and Sunnyvale West Channel are within a mapped tsunami hazard area (refer to Figure 3.10-1 for the location of these channels and wetland area).¹²³ Moffett Park is not subject to seiches as there are no enclosed bodies of water (e.g., lakes or ponds) within or adjacent to the area.

3.10.2 Impact Discussion

For the purpose of determining the significance of the project’s impact on hydrology and water quality, would the project:

- 1) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?
- 2) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
- 3) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - result in substantial erosion or siltation on- or off-site;
 - substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
 - create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or
 - impede or redirect flood flows?
- 4) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?
- 5) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

¹²² ESA and SFEI. *Sunnyvale Sea-Level Rise Adaptation Strategy: Background*. November 2020. Table 1, Page 8.

¹²³ State of California. *Tsunami Hazard Area Map, Santa Clara County*. Produced by the California Geological Survey, California Governor’s Office of Emergency Services, and AECOM. 2020/2021.

3.10.2.1 *Project Impacts*

Impact HYD-1: The project would not violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. **(Less than Significant Impact)**

Implementation of the Specific Plan could impact water quality during and post-construction of future development. During construction, future development could require demolition of buildings constructed or remodeled between January 1, 1950 and December 31, 1980 may contain building materials with PCBs. During demolition, building materials containing PCBs would impact stormwater quality if not properly abated. Compliance with MRP Provision C.12.f and the City's adopted PCB screening process would ensure buildings with the potential to include PCBs are identified, samples taken and tested per established standards, and abated in accordance with existing regulations.

Future excavation and grading of sites within Moffett Park could result in sediment and other pollutants being transported from active construction sites to nearby waterways and San Francisco Bay through soil erosion, stormwater runoff, and/or wind-blown dust. To reduce water quality impacts during construction, future development projects that would disturb one acre or more of soil are required to comply with the statewide NPDES Construction General Permit to reduce runoff and pollution in runoff from construction activities, including preparation of a NOI and SWPPP, and implementation of stormwater control BMPs. In the event contaminated groundwater is encountered during future construction activities, compliance with Specific Plan Project Requirement 10.3.1-5 identified in Section 3.9 Hazards and Hazardous Materials under Impact HAZ-2 would ensure proper disposal.

To reduce water quality impacts post-construction, future development that disturbs more than 5,000 square feet are required to comply with the MRP (including Provision C.3) and SMC Section 12.60.155 regarding LID site design. LID features for future development could include self-treating and self-retaining areas to allow on-site retention, percolation, and evaporation of stormwater runoff.

In summary, future Specific Plan development in compliance with existing regulations including the MRP, City adopted PCB screening process, Construction General Permit, Specific Plan Project Requirement 10.3.1-5, and SMC would not result in significant water quality impacts during or post-construction. **(Less than Significant Impact)**

Impact HYD-2: The project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin. **(Less than Significant Impact)**

Percolation of precipitation within recharge areas replenishes groundwater and contributes to the recharge of the deeper aquifers. It is expected that implementation of the Specific Plan would result in an increase in pervious surfaces within Moffett Park, allowing for greater percolation of rainfall compared to existing conditions. There is evidence of some recharge from the surface into upper

aquifers, however, extensive clay aquitards restrict groundwater movement between the upper, shallow aquifers and the deeper, principal aquifers.¹²⁴ This is representative of the entire Moffett Park as it lies entirely within a confined zone. Furthermore, Moffett Park is not located within a groundwater recharge area managed by Valley Water. For these reasons, implementation of the Specific Plan would increase percolation of precipitation compared to existing conditions and would not impact Valley Water groundwater recharge facilities.

Other ways development could affect groundwater supplies and/or recharge is through dewatering activities or direct pumping. Given the shallow depth of groundwater in Moffett Park (generally three to nine feet below the ground surface), groundwater could be encountered during future Specific Plan development and dewatering may be required. Temporary or permanent dewatering could affect groundwater supplies. Future projects would comply with Specific Plan Project Requirement 10.3.1-5 (listed in Section 3.9 Hazards and Hazardous Materials) to prevent substantial impacts to the groundwater aquifers and their management from dewatering.

Compliance with Specific Plan Project Requirement 10.3.1-5 would reduce the impacts of future Specific Plan development on groundwater supplies from dewatering activities or direct pumping. Dewatering would also be required to follow all NPDES and LID site design identified in Section 3.10.1.1 Regulatory Framework to minimize the discharge of pollutants into waterways.

In addition, as discussed in detail under Impact UTL-1 in Section 3.19 Utilities and Service Systems, the current and projected water supply system would be sufficient to meet the demands from the buildout of the Specific Plan in normal years. In single dry and multiple dry years, the City would implement water shortage contingency plans as necessary to conserve water and meet the anticipated demands. The implementation of the Specific Plan would not require additional groundwater extraction for irrigation or other purposes.

Based on the above discussion, future development under the Specific Plan in compliance with the above Specific Plan standard and existing regulations (including the NPDES General Construction Permit and MRP) would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. **(Less than Significant Impact)**

¹²⁴ An aquitard is confining bed (a body of impermeable or distinctly less permeable material stratigraphically adjacent to one or more aquifers) that slows down but does not prevent the flow of water to or from an adjacent aquifer. Source: U.S. Geological Survey. *Glossary of Hydrologic Terms*. Accessed June 6, 2022. https://or.water.usgs.gov/projs_dir/willgw/glossary.html. City of Sunnyvale. *Sea Level Rise Impacts on Shallow Groundwater in Moffett Park: A Technical Addendum to the Moffett Park Specific Plan*. November 2021. Page 7

Impact HYD-3: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site; substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or impede or redirect flood flows. **(Less than Significant Impact)**

Moffett Park is highly urbanized and consists mostly of impervious surfaces. The proposed Specific Plan would increase pervious surfaces around the Sunnyvale East and West Channels and would not modify the primary drainage system (e.g., Lockheed Martin Channel and pump station, Sunnyvale West Channel, and Sunnyvale East Channel). The implementation of the Specific Plan would add 215 to 240 acres of park and open space areas. Future development projects would comply with the following Specific Plan development standards pertaining to reducing impervious surfaces in Moffett Park.

Proposed Specific Plan Development Standards:

- **5.2.3, Standard 2:** Development shall comply with paving area maximums in Table 6 (in the Specific Plan). Maximum area is based on net parcel areas excluding publicly accessible open spaces and complete street easements and dedications. Paving area includes any paved or landscaped area used for vehicular circulation and parking of vehicles.

Based on Table 6 in the Specific Plan, future residential developments would be allowed to have a maximum of 15 percent paved areas/impervious surfaces, commercial developments would have a maximum of 10 percent paved areas, and non-residential development along the perimeter of Moffett Park would have a maximum of 25 percent paved areas. The park and open space areas and Specific Plan policies listed above would increase the overall amount of landscaping and pervious surfaces in Moffett Park. This decrease in impervious surfaces would result in a corresponding increase in percolation of runoff within Moffett Park as a whole compared to existing conditions. This decrease in impervious surfaces would not result in flooding or stormwater runoff greater than existing conditions.

Future development would reduce water quality, siltation, and soil erosion impacts by compliance with applicable regulations including the MRP, City adopted PCB screening process, Construction General Permit, and SMC requirements.

As stated in Section 3.10.1.2, based on the Santa Clara Valley Urban Runoff Management Pollution Prevention Program Hydromodification Management Applicability Map, Moffett Park is located in an area where catchments draining to hardened channels and tidally influenced areas. Based the Santa Clara Valley Urban Runoff Management Pollution Prevention Program's for hydromodification management applicability standards, Moffett Park is not subject to hydromodification management requirements as it is not located in an area where hydromodification

is likely to cause increased erosion, silt pollutant generation, or other impacts to local rivers, streams, and creeks.

Based on the above discussion, future development in compliance with the Specific Plan policies and existing regulations would not result in substantial erosion, siltation, or flooding on- or off-site; exceed the capacity of the existing storm drain system; or provide substantial additional sources of polluted runoff or impede or redirect flood flows compared to existing conditions. **(Less than Significant Impact)**

Independent of the Specific Plan, the City and Valley Water have discussed stormwater system improvements that would further reduce flood risks including the following:

- Reduce the size and number of shore-parallel channels running east-west by discharging stormwater along former channels between Pond A3W and the oxidation ponds or directly into Pond A4 or Pond A3W (refer to Figure 2.2-3 for the location of these ponds)
- Combine the Northern Perimeter and Lockheed Martin Channels with the Northern Channel to create more space and fill for a future levee
- Create more detention along the golf course reach

These improvements would be subject to environmental review, if ultimately proposed.

Impact HYD-4: The project would not risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. **(Less than Significant Impact)**

As stated in Section 3.10.1.2 Existing Conditions, the northern and eastern portions of Moffett Park and along the Sunnyvale East and West Channels are within a SFHA.¹²⁵ Several projects are in process that would reduce the risk of flooding within Moffett Park (refer to Section 3.10.1.2). In addition, downstream segments of the Lockheed Channel, the wetland area 300 feet north of Mathilda Avenue and West Caribbean Drive, and Sunnyvale West Channel in Moffett Park are mapped within a tsunami hazard area.

Existing and future development in Moffett Park may use, store, and generate hazardous materials; however, as stated in Section 3.9.2, under Impact HAZ-1, hazardous materials would be contained and stored properly on-site pursuant to existing federal, state, and local laws, regulations, and programs, including the RCRA, TSCA, CFR 49, and hazardous materials regulations in CCR Title 26 on the federal and state levels. On the local level, the City's Hazard Mitigation Plan, CUPA programs, and SMC requirements would be implemented to ensure the safe storage, management, and disposal of hazardous materials.

For these reasons, the Specific Plan would not risk release of pollutants due to inundation. **(Less than Significant Impact)**

¹²⁵ Federal Emergency Management Agency. Flood Insurance Rate Map. Map Number 06085C0045H. May 18, 2009.

Impact HYD-5: The project would not conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. **(Less than Significant Impact)**

As discussed in Section 3.10.1.2, Valley Water prepared an updated GWMP for the Santa Clara and Llagas subbasins in 2021, establishing recharge facilities, recycled water systems, and conservation strategies to proactively manage groundwater and surface water resources within its jurisdiction. In addition, Valley Water manages the recharge of imported and local surface water and in-lieu recharge through the provision of treated surface water, acquisition of supplemental water supplies, and water conservation and recycling. There are no recharge facilities in Moffett Park; therefore, development under the Specific Plan would not impact any of these facilities.¹²⁶

Future development under the Specific Plan would be consistent with the Basin Plan by complying with existing water quality control regulations including the MRP, City adopted PCB screening process, Construction General Permit, and SMC regulations.

For the above reasons, implementation of the Specific Plan would not conflict or obstruct implementation of a groundwater management or water quality control plan. **(Less than Significant Impact)**

3.10.2.2 Cumulative Impacts

Impact HYD-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant hydrology and water quality impact. **(Less than Significant Cumulative Impact with Mitigation Incorporated)**

The geographic area for cumulative hydrology and water quality impacts are the boundaries of the Sunnyvale West Channel and Sunnyvale East Channel watersheds since the effects of future Specific Plan projects on hydrology and water quality would be limited to the watershed in which they are located.

Water Quality Standards and Discharge Requirements

All cumulative projects are required to adhere to state and local regulations, in accordance with the MRP (as identified under Impact HYD-1), to comply with water quality standards and waste discharge requirements, thereby resulting in less than significant impacts to surface or ground water quality. These regulations are in place to ensure individual projects do not result in a significant cumulative impact. For these reasons, the cumulative projects (including the Specific Plan) would not result in a significant cumulative impact to water quality.

¹²⁶Valley Water. 2021 *Groundwater Management Plan for the Santa Clara and Llagas Subbasins*. Figure 2-1. Page 47. November 2021.

Groundwater Supplies and Recharge

The impact of cumulative projects within the Sunnyvale East West and Sunnyvale West Channel watersheds on groundwater supplies and recharge is contingent on the condition of its associated groundwater basin, its water demand, project-specific information (e.g., any permanent dewatering requirements), and effects on recharge facilities. All cumulative projects within these watersheds would be required to comply with Valley Water's Santa Clara and Llagas Subbasin GWMP and state regulations (including those identified in Section 3.10.1.1 Regulatory Framework) protecting groundwater resources.

As discussed in detail in Section 3.19 Utilities and Service Systems, existing water supplies are available to meet the demand of the Specific Plan buildout in addition to existing and projected demand during normal, dry, and multiple dry years. In, single dry, and multiple dry years, the City would implement water shortage contingency plans as necessary to conserve water and meet the anticipated demands. Future Specific Plan development would not impact Valley Water recharge facilities, would be consistent with Specific Plan Policies to reduce impacts on groundwater supplies, and would result in an increase of pervious surfaces compared to existing conditions (thereby resulting in a corresponding increase in surface infiltration). For these reasons, the implementation of the Specific Plan would not result in a cumulatively considerable decrease in groundwater supplies or interfere substantially with groundwater recharge such that the implementation of the Specific Plan would impede sustainable groundwater management of the basin.

Alteration of Existing Drainage Patterns

Cumulative projects are required to adhere to existing regulations (including the Construction General Permit and Provision C.3) to manage stormwater runoff and erosion and reduce impacts to a less than significant level. These regulations are in place to ensure individual projects do not result in a significant cumulative impact. As discussed under Impact HYD-3, future projects would comply with existing regulations and implementation of the Specific Plan would result in a net reduction of impervious surfaces in Moffett Park compared to existing conditions. In addition, implementation of the Specific Plan would not contribute to erosion or silt pollutant impacts on local rivers, streams, and creeks due to hydromodification. For these reasons, the cumulative projects would not result in a significant cumulative impact regarding on- or off-site erosion or flooding. **(Less than Significant Cumulative Impact)**

Risk of Pollutant Release from Inundation

Cumulative projects within a SFHA and tsunami inundation area (such as portions of the Specific Plan) would properly contain, store, and manage hazardous materials in accordance with existing laws and regulations (refer to Section 3.9 Hazards and Hazardous Materials, Impact HAZ-1). Therefore, the risk of release of chemicals/pollutants due to inundation by cumulative projects would be less than significant. **(Less than Significant Cumulative Impact)**

Consistency with Water Quality Control and Sustainable Groundwater Management Plans

All cumulative projects would be required to adhere to existing regulations to ensure compliance with water quality control plans and the GWMP. The plans are in place to ensure individual projects do not result in a cumulative impact to water quality or groundwater management. As discussed

under Impact HYD-5, the future development would be consistent with the Basin Plan by complying with existing water quality control regulations including the MRP, City adopted PCB screening process, Construction General Permit, and SMC requirements, and not conflict with the GWMP. For these reasons, the implementation of the Specific Plan would not result in a cumulatively considerable contribution to a significant cumulative impact on water quality or groundwater management.

3.10.3 Non-CEQA Effects

Per *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (*BIA v. BAAQMD*), effects of the environment on a project or Specific Plan are not considered CEQA impacts. The following discussion on sea-level rise is included for informational purposes only.

Sea level rise results from climate change caused by global increases in greenhouse gas emissions. The increased temperatures cause sea level rise through thermal expansion of the oceans and melting of ice sheets. Sea level rise of about eight inches has occurred in the last century, and several feet or more of sea-level rise is projected by the end of this century. More than three feet of sea level rise could occur in the San Francisco Bay by 2070 at the earliest and 2100 at the latest.¹²⁷ Sea level rise would increase the frequency and severity of flooding along the Sunnyvale shoreline.

A number of state and federal agencies have been regularly updating global projections for sea-level rise and precipitation. These agencies have also provided regional and local projections. This data will be reviewed regularly by the City, as well as projections of future change, and used to understand how flood hazards will change in Sunnyvale. Because the flooding extent is governed by topographic boundaries, managing Sunnyvale's flood risk requires perimeter flood protection that extends outside the City's boundaries. Therefore, the City will continue to coordinate adaptation strategies with neighboring entities, including the City of Mountain View, Moffett Federal Airfield (operated by NASA), and the City of Santa Clara, as well as Santa Clara County (primarily via Valley Water) and the USACE.

Projects that are in process that reduce flood risk listed in Section 3.10.1.2 Existing Conditions, would improve flood protection for up to three feet of sea level rise. In order for future development to adapt to inundation with less damage, the City would consider requiring the following:

- Raising the finished floor elevation for non-residential buildings by one foot, which would provide additional accommodation for higher floodwaters due to sea-level rise,
- Expanding the use of wetlands to detain stormwater in the northwest portion of the Specific Plan, and/or
- Addressing surface inundation from groundwater in coordination with the stormwater system.

¹²⁷ ESA and SFEL. *Sunnyvale Sea-Level Rise Adaptation Strategy: Background*. November 2020. Page 2 and 3.

3.11 LAND USE AND PLANNING

3.11.1 Environmental Setting

3.11.1.1 *Regulatory Framework*

Regional and Local

Comprehensive Land Use Plan for Moffett Federal Airfield

Moffett Federal Airfield is located west of Moffett Park (see Figure 2.2-3). The Moffett Federal Airfield CLUP is intended to safeguard the general welfare of the inhabitants within the vicinity of the airport, as well as aircraft occupants.¹²⁸ The CLUP is also intended to ensure that surrounding new land uses do not affect the airport's continued operation.

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to the General Plan land use and planning policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-1.2	Minimize regional sprawl by endorsing strategically placed development density in Sunnyvale and by utilizing a regional approach to providing and preserving open space for the broader community.
LT-1.3	Contribute to a healthy jobs-to housing ratio in the region by considering jobs, housing, transportation, and quality of life as inseparable when making planning decisions that affect any of these components.
LT-3.23	Ensure that the movement of cars, trucks and transit vehicles, bicycles, and pedestrians of all ages and abilities does not divide the community. City streets are public spaces and an integral part of the community fabric.

Moffett Park Specific Plan

In general, a Specific Plan is a comprehensive planning and zoning tool for a smaller area within a community. It establishes the vision and guiding principles for the area and the standards to guide future development. They are separate from, but are consistent with, a jurisdiction's adopted General Plan.

The City of Sunnyvale adopted the Specific Plan in 2004 and amended it in 2006, 2009, 2011, 2013, and 2016. All of the Specific Plan amendments were focused on including additional sites as Moffett Park Transit Oriented Development (MP-TOD) which allows higher FAR to accommodate Class A

¹²⁸ Santa Clara County Airport Land Use Commission. *Moffett Federal Airfield Comprehensive Land Use Plan*. November 2, 2012. Page 1-1.

office. None of the amendments changed the total buildout envisioned for Moffett Park. The adopted Specific Plan allows for a maximum buildout of 24.33 million square feet of commercial and office/R&D/industrial uses.

Sunnyvale Municipal Code

The Zoning Code defines the various zoning districts and allowable land uses within the City and provides development standards (i.e., building height limits, building density, sign regulations, etc.) to enhance the visual appeal of new development.

3.11.1.2 Existing Conditions

Moffett Park is designated as Moffett Park Specific Plan in the City’s General Plan and is zoned Moffett Park Specific Plan – Industrial (MP-I), Moffett Park Specific Plan – TOD (MP-TOD), and Moffett Park Specific Plan – Commercial (MP-C). Currently, Moffett Park is developed with approximately 18.5 million square feet of commercial, office/R&D/industrial, and institutional uses. Approximately 4.1 million square feet of additional office/R&D/industrial uses were recently approved within the Specific Plan by the City.

As shown on Figure 2.2-3, surrounding land uses include the closed Sunnyvale Landfill, WPCP, SMaRT Station®, and Twin Creeks Sports Complex to the north of Caribbean Drive, Baylands Park to the east, retail and residential uses to the south of SR 237, and the Moffett Federal Airfield and a golf course to the west.

3.11.2 Impact Discussion

For the purpose of determining the significance of the project’s impact on land use and planning, would the project:

- 1) Physically divide an established community?
- 2) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

3.11.2.1 Project Impacts

Impact LU-1: The project would not physically divide an established community. (**Less than Significant Impact**)

The implementation of the Specific Plan would allow for the addition of 20,000 residential uses (where none exists today) and overall intensification of development within Moffett Park. The total amount of non-residential development would increase from approximately 18.5 under existing conditions to 33.5 million square feet under the proposed project (refer to Table 2.3-1). While the project would allow for growth and development of Moffett Park, the area is separated from adjacent communities by roadways. For example, Moffett Park is separated from the existing residential community to the south by a six-lane freeway (SR 237) and two, two-lane frontage roads (Moffett Park Drive and Persian Drive). Caribbean Drive, an approximately 90-foot wide, five- to six-lane

roadway, separates Moffett Park from the industrial and recreational uses (i.e., the closed landfill, WPCP, SMaRT Station®, quarry, sports complex, and park) to the north.

A new street network is proposed as part of the project that would facilitate multimodal transportation use and break large blocks down into smaller and more walkable units within Moffett Park, and the project would improve connectivity between Moffett Park and adjacent communities by establishing complete streets; transit, bicycle, and pedestrian improvements; and accessible parks and recreational uses. Furthermore, the Specific Plan does not include the provision of dividing infrastructure such as highways or railways that could be expected to physically divide existing, adjacent communities. For these reasons, the Specific Plan would improve connectivity between Moffett Park and adjacent communities and would not physically divide an existing community. **(Less than Significant Impact)**

Impact LU-2: The project would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. **(Less than Significant Impact)**

Comprehensive Land Use Plan for Moffett Federal Airfield

As discussed in Section 3.9 Hazards and Hazardous Materials, future Specific Plan development would comply with FAA notification requirements and CLUP policies to prevent aviation-related hazards. **(Less than Significant Impact)**

General Plan and Specific Plan

The General Plan would need to be amended to incorporate the proposed Specific Plan, if approved. The Specific Plan is consistent with the General Plan policies identified in Section 3.11.1.1 Regulatory Framework by intensifying and providing for mixed-use development within an urbanized, infill area of the City in proximity to transit (General Plan Policies LT-1.2 and -1.3) and incorporating open space (General Plan Policy LT-1.2). The Specific Plan would also comply with General Plan Policy LT-3.23 by proposing a multi-modal transportation network that would facilitate and improve connectivity within Moffett Park and to adjacent areas.

For the above reasons, the project would not conflict with the General Plan. **(Less than Significant Impact)**

3.11.2.2 Cumulative Impacts

Impact LU-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant land use and planning impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative land use and planning impacts is the city boundaries, as the City plans for land use comprehensively and citywide.

Physically Divide an Established Community

As discussed under Impact LU-1 above, the Specific Plan does not include any features that would physically divide adjacent communities. There are no cumulative projects that, if combined with the Specific Plan, would divide adjacent communities. For this reason, the project would not result in a cumulatively considerable contribution to a significant cumulative land use impact from physically dividing an established community. **(Less than Significant Cumulative Impact)**

Conflicts with Land Use Plan, Policy, or Regulation

Comprehensive Land Use Plan for Moffett Federal Airfield

The Specific Plan is consistent with the CLUP. As discussed in Section 3.9.2.2 Cumulative Impacts, cumulative projects within the AIA would comply with CLUP and would not result in aviation-related hazards. **(Less than Significant Cumulative Impact)**

General Plan

Future development projects (within and outside Moffett Park) are required to comply with applicable General Plan policies. As discussed under Impact LU-2, the project is consistent with applicable land use General Plan policies LT-1.2, LT-1.3, and LT-3.23. Therefore, the Specific Plan would not result in a cumulatively considerable contribution to a significant cumulative land use impact from conflicts with the General Plan. **(Less than Significant Cumulative Impact)**

3.12 MINERAL RESOURCES

3.12.1 Environmental Setting

3.12.1.1 *Regulatory Framework*

State

Surface Mining and Reclamation Act

The Surface Mining and Reclamation Act (SMARA) was enacted by the California legislature in 1975 to address the need for a continuing supply of mineral resources, and to prevent or minimize the negative impacts of surface mining to public health, property, and the environment. As mandated under SMARA, the State Geologist has designated mineral land classifications in order to help identify and protect mineral resources in areas within the state subject to urban expansion or other irreversible land uses which would preclude mineral extraction. SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State Geologist, to designate lands containing mineral deposits of regional or statewide significance.

3.12.1.2 *Existing Conditions*

The Santa Clara Valley was formed when sediments derived from the Santa Cruz Mountains and the Mt. Hamilton-Diablo Range were exposed by continued tectonic uplift and regression of the inland sea that had previously inundated the project area. As a result of this process, the topography of Moffett Park is relatively flat and there are no mapped mineral resources.¹²⁹

3.12.2 Impact Discussion

For the purpose of determining the significance of the project's impact on mineral resources, would the project:

- 1) Result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?
- 2) 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?

¹²⁹ Stanley, R. G., R. C. Jachens, P. G. Lillis, R. J. McLaughlin, K. A. Kvenvolden, F. D. Hostettler, K. A. McDougall, and L. B. Magoon. 2002. *Subsurface and petroleum geology of the southwestern Santa Clara Valley ("Silicon Valley"), California*. (Professional Paper 1663) Washington, DC: U. S. Government Printing Office.

3.12.2.1 *Project Impacts*

Impact MIN-1: The project would not result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. **(No Impact)**

Moffett Park is not in the vicinity of any mineral extraction sites, and no known mineral resources are present within Moffett Park. Therefore, the Specific Plan would not result in impacts to mineral resources. **(No Impact)**

Impact MIN-2: The project would not 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. **(No Impact)**

Moffett Park is not identified as a natural resource area containing mineral resources in the City's General Plan or other land use plans. Therefore, the Specific Plan would not result in impacts to mineral resource recovery sites. **(No Impact)**

3.12.2.2 *Cumulative Impacts*

Impact MIN-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant mineral resources impact. **(No Cumulative Impact)**

As discussed above under Impact MIN-1 and MIN-2, Moffett Park is not designated as a mineral resource recovery site, nor does it contain any known mineral resource. Implementation of the Specific Plan, therefore, would not contribute to a cumulative impact on mineral resources. **(No Cumulative Impact)**

3.13 NOISE AND VIBRATION

The following discussion is based, in part, on a Noise and Vibration Assessment completed by Illingworth & Rodkin, Inc. dated September 19, 2022. This report is included as Appendix H to this EIR.

3.13.1 Environmental Setting

3.13.1.1 *Background Information*

Noise

Factors that influence sound as it is perceived by the human ear, include the actual level of sound, period of exposure, frequencies involved, and fluctuation in the noise level during exposure. Noise is measured on a decibel scale, which serves as an index of loudness. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness. Because the human ear cannot hear all pitches or frequencies, sound levels are frequently adjusted or weighted to correspond to human hearing. This adjusted unit is known as the A-weighted decibel, or dBA.

Since excessive noise levels can adversely affect human activities and human health, federal, state, and local governmental agencies have set forth criteria or planning goals to minimize or avoid these effects. Noise guidelines are generally expressed using one of several noise averaging methods, including L_{eq} , L_{dn} , or CNEL.¹³⁰ These descriptors are used to measure a location's overall noise exposure, given that there are times when noise levels are higher (e.g., when a jet is taking off from an airport or when a leaf blower is operating) and times when noise levels are lower (e.g., during lulls in traffic flows on freeways or in the middle of the night). L_{max} is the maximum A-weighted noise level during a measurement period.

Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Vibration amplitude can be quantified using Peak Particle Velocity (PPV), which is defined as the maximum instantaneous positive or negative peak of the vibration wave. PPV has been routinely used to measure and assess ground-borne construction vibration. Studies have shown that the threshold of perception for average persons is in the range of 0.008 to 0.012 inches/second (in/sec) PPV.

¹³⁰ L_{eq} is a measurement of average energy level intensity of noise over a given period of time. Day-Night Level (L_{dn}) is a 24-hour average of noise levels, with a 10 dB penalty applied to noise occurring between 10:00 PM and 7:00 AM. Community Noise Equivalent Level (CNEL) includes an additional five dB applied to noise occurring between 7:00 PM and 10:00 PM. Where traffic noise predominates, the CNEL and DNL are typically within two dBA of the peak-hour L_{eq} .

3.13.1.2 *Regulatory Framework*

Federal

Federal Transit Administration Vibration Limits

The Federal Transit Administration (FTA) has developed vibration impact assessment criteria for evaluating vibration impacts associated with transit projects. The FTA has proposed vibration impact criteria based on maximum overall levels for a single event. The impact criteria for groundborne vibration are shown in Table 3.13-1 below. These criteria can be applied to development projects in jurisdictions that lack vibration impact standards.

Table 3.13-1: FTA Groundborne Vibration Impact Criteria			
Land Use Category	Groundborne Vibration Impact Levels (VdB inch/sec)		
	Frequent Event	Occasional Events	Infrequent Events
Category 1: Buildings where vibration would interfere with interior operations	65	65	65
Category 2: Residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime use	75	78	83
<u>Notes:</u> Vdb inch/sec = vibration decibels related to inches per second. Source: Federal Transit Administration. <i>Transit Noise and Vibration Assessment Manual</i> . September 2018.			

State and Local

California Building Standards Code

The CBC establishes uniform minimum noise insulation performance standards to protect persons within new buildings housing people, including hotels, motels, dormitories, apartments, and dwellings other than single-family residences. Title 24 mandates that interior noise levels attributable to exterior sources do not exceed 45 $L_{dn}/CNEL$ in any habitable room. Exterior windows must have a minimum Sound Transmission Class (STC) of 40 or Outdoor-Indoor Transmission Class (OITC) of 30 when the property falls within the 65 dBA L_{dn} noise contour for a freeway or expressway, railroad, or industrial source.

California Green Building Standards Code

For commercial uses, CALGreen (Sections 5.507.4.1 and 5.507.4.2) requires that wall and roof-ceiling assemblies exposed to the adjacent roadways have a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 when the commercial property falls within the 65 dBA L_{dn} or greater noise contour for a freeway or expressway, railroad, or industrial or stationary noise source. The state requires interior

noise levels to be maintained at 50 dBA $L_{eq}(1-hr)$ or less during hours of operation at a proposed commercial use.

Moffett Federal Airfield Comprehensive Land Use Plan

As stated in Section 3.9.1 of this EIR, the Moffett CLUP was adopted by the Santa Clara County ALUC and is intended to safeguard the general welfare of the inhabitants within the vicinity of the airport, as well as aircraft occupants. The CLUP establishes an airport land use planning area, the AIA, which sets the boundaries for application of the CLUP. Development proposals within the AIA are required to be reviewed by the ALUC.

The CLUP focuses on the three areas of ALUC’s responsibility: (1) aircraft noise, (2) the safety of persons on the ground and in aircraft, and (3) the control of objects in navigable airspace. Refer to Figure 3.9-2 for the noise contours map.

The below compatibility noise policies from the CLUP are to be used for ALUC consistency review.

Policy	Description
<i>Noise Compatibility Policies</i>	
N-1	The Community Noise Equivalent Level (CNEL) method of representing noise levels shall be used to determine if a specific land use is consistent with the CLUP.
N-2	In addition to the other policies herein, the Noise Compatibility policies presented in Table 3.13-2 shall be used to determine if a specific land use is consistent with this CLUP.
N-3	Noise impacts shall be evaluated according to the Aircraft Noise Contours presented on Figure 5 shown in the CLUP.
N-6	Noise level compatibility standards for other types of land uses shall be applied in the same manner as the above residential noise level criteria. Table 3.13-2 presents acceptable noise levels for other land uses in the vicinity of the airport.

Table 3.13-2: Santa Clara County Airport Land Use Commission Noise Compatibility Policies

Land Use Category	CNEL					
	55-60	60-65	65-70	70-75	75-80	80-85
Residential – low density single-family, duplex, mobile homes	*	**	***	****	****	****
Residential – multi-family, condominiums, townhouses	*	**	***	****	****	****
Transient lodging – motels, hotels	*	*	**	****	****	****
Schools, libraries, indoor religious assemblies, hospitals, nursing homes	*	***	****	****	****	****
Auditoriums, concert halls, amphitheaters	*	***	***	****	****	****
Sports arena, outdoor spectator sports, parking	*	*	*	**	***	****
Playgrounds, neighborhood parks	*	*	***	****	****	****
Golf courses, riding stables, water recreation, cemeteries	*	*	*	**	***	****
Office buildings, business commercial and professional, retail	*	*	**	***	****	****
Industrial, manufacturing, utilities, agriculture	*	*	*	***	***	****

Notes:

* Generally Acceptable: Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements. Mobile homes may not be acceptable in these areas. Some outdoor activities might be adversely affected.

** Conditionally Acceptable: New Construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Outdoor activities may be adversely affected. For residential uses, conventional construction with closed windows and fresh air supply systems or air conditioning will normally suffice.

*** Generally Unacceptable: New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction measures must be made and needed noise insulation features included in the design. Outdoor activities are likely to be adversely affected.

**** Unacceptable: New construction or development shall not be undertaken.

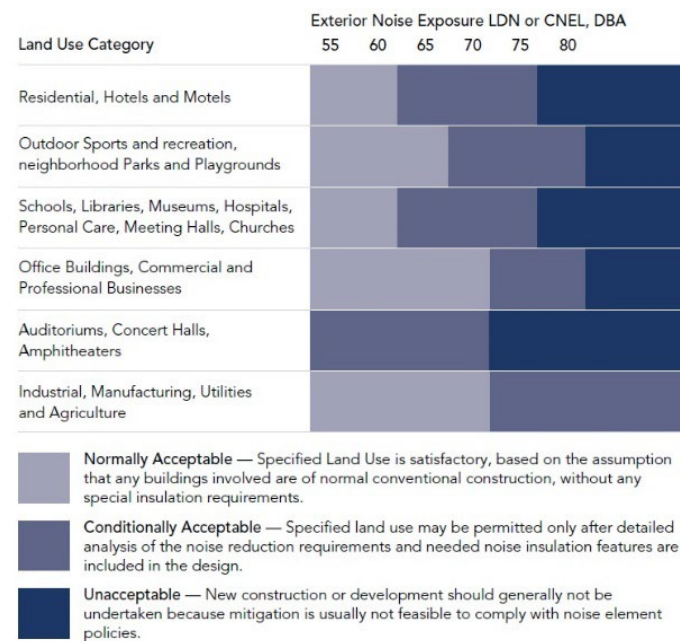
Source: Santa Clara County Airport Land Use Commission. *Comprehensive Land Use Plan, Santa Clara County, Moffett Federal Airfield*. November 2, 2012. Amended December 19, 2018.

Sunnyvale General Plan

The General Plan includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the proposed Specific Plan would be subject to the General Plan noise policies including the ones listed below.

Policy	Description
<i>Safety and Noise Element</i>	
SN-8.1	Enforce and supplement state laws regarding interior noise levels of residential units.
SN-8.3	Attempt to achieve a maximum instantaneous noise level of 50 dBA in bedrooms and 55 dBA in other areas of residential units exposed to train or aircraft noise, where the exterior L_{dn} exceeds 55 dBA.
SN-8.4	Prevent significant noise impacts from new development by applying state noise guidelines and Sunnyvale Municipal Code noise regulations in the evaluation of land use issues and proposals.
SN-8.5	Comply with Figure 6-5 “State of California Noise Guidelines for Land Use Planning” for the compatibility of land uses with their noise environments, except where the City determines that there are prevailing circumstances of a unique or special nature.

Figure 6-5: State of California Noise Guidelines for Land Use Planning
Summary of Land Use Compatibility for Community Noise Environment



SN-8.6 Use Figure 6-6, “Significant Noise Impacts from new Development on Existing Land Use” to determine if proposed development results in a “significant noise impact” on existing development.

Policy	Description
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Figure 6-6: Significant Noise Impacts from New Development on Existing Land Use

Ldn Category of Existing Development Per Figure 6-4	Noise Increase Considered "Significant" over Existing Noise Levels
Normally Acceptable	An increase of more than 3 dBA and the total Ldn exceeds the "normally acceptable" category
Normally Acceptable	An increase of more than 5 dBA
Conditionally Acceptable	An increase of more than 3 dBA
Unacceptable	An increase of more than 3 dBA

- SN-8.7 Supplement Figure 6-5, "State of California Noise guidelines for Land Use Planning" for residential uses by attempting to achieve an outdoor L_{dn} of no greater than 60 dBA for common recreational areas, backyards, patios and medium and large-size balconies. These guidelines should not apply where the noise source is railroad or an airport. If the noise source is a railroad, then a L_{dn} of no greater than 70 dBA should be achieved in common areas, backyards, patios and medium and large balconies. If the noise source is from aircraft, then preventing new residential uses within areas of high L_{dn} from aircraft noise is recommended.
- SN-8.8 Avoid construction of new residential uses where the outdoor L_{dn} is greater than 70 dBA as a result from train noise.
- SN-8.9 Consider techniques which block the path of noise and insulate people from noise.
- SN-9.1 Regulate land use operation noise.
- SN-9.2 Regulate select single-event noises and periodically monitor the effectiveness of the regulations.
- SN-9.3 Apply conditions to discretionary land use permits which limit hours of operation, hours of delivery and other factors which affect noise.
- SN-10.1 Refrain from increasing or reduce the noise impacts of major roadways.
- SN-10.2 Support efforts to reduce or mitigate airport noise, including noise impacts of Moffett Federal Airfield, San José International Airport and helicopters.
- SN-10.4 Mitigate and avoid the noise impacts from trains and light rail facilities.

Sunnyvale Municipal Code

SMC Section 16.08.030 establishes construction noise regulations. Construction activity is permitted between the hours of 7:00 a.m. and 6:00 p.m. daily Monday through Friday. Saturday hours of operation shall be between 8:00 a.m. and 5:00 p.m. No construction activity is allowed on Sundays or federal holidays when city offices are closed. No loud environmentally disruptive noises, such as air compressors without mufflers, continuously running motors or generators, loud playing musical

instruments, radios, etc., will be allowed where such noises may be a nuisance to adjacent residential neighborhoods. SMC Section 16.08.030 lists the following exceptions:

- Construction activity is permitted for detached single-family residential properties when the work is being performed by the owner of the property, provided no construction activity is conducted prior to 7:00 AM or after 7:00 PM Monday through Friday, prior to 8:00 AM or after 7:00 PM on Saturday and prior to 9:00 AM or after 6:00 PM on Sunday and national holidays when city offices are closed. It is permissible for up to two persons to assist the owner of the property so long as they are not hired by the owner to perform the work. For purposes of this section, “detached single-family residential property” refers only to housing that stands completely along with no adjoining roof, foundation, or sides.
- As determined by the chief building official:
 - No loud environmentally disruptive noises, such as air compressors without mufflers, continuously running motors or generators, loud playing musical instruments, radios, etc., will be allowed where such noises may be a nuisance to adjacent properties.
 - Where emergency conditions exist, construction activity may be permitted at any hour or day of the week. Such emergencies shall be completed as rapidly as possible to prevent any disruption to other properties.
 - Where additional construction activity will not be a nuisance to surrounding properties, based on location and type of construction, a waiver may be granted to allow hours of construction other than as stated in this section. (Ord. 3006-13 § 2).

SMC Section 19.42.030 includes operational noise standards enforced on residentially zoned property lines, listed below.

- Operational noise shall not exceed 75 dBA at any point on the property line of the premises upon which the noise or sound is generated or produced; provided, however, that the noise or sound level shall not exceed 50 dBA during nighttime or 60 dBA during daytime hours at any point on adjacent residentially zoned property. If the noise occurs during nighttime hours and the enforcing officer has determined that the noise involves a steady, audible tone such as a whine, screech or hum, or is a staccato or intermittent noise (e.g., hammering) or includes music or speech, the allowable noise or sound level shall not exceed 45 dBA.
- Powered equipment used on a temporary, occasional, or infrequent basis which produces a noise greater than the applicable operational noise limit set forth in subsection (a) shall be used only during daytime hours when used adjacent to a property with a residential zoning district. Powered equipment used on other than a temporary, occasional or infrequent basis shall comply with the operational noise requirements. For the purpose of this section, powered equipment does not include leaf blowers. Construction activity regulated by Title 16 of this code shall not be governed by this section.
- It is unlawful for any person to make or allow to be made a nighttime delivery to a commercial or industrial establishment when the loading/unloading area of the establishment is adjacent to a property in a residential zoning district. Businesses legally operating at a specific location as of February 1, 1995, are exempt from this requirement.
- A “leaf blower” is a small, combustion engine-powered device used for property or landscape maintenance that can be hand-held or carried on the operator’s back and which operates by

propelling air under pressure through a cylindrical tube. It is unlawful for any person to operate a leaf blower on private property in or adjacent to a residential area except between the hours of 8:00 am and 8:00 pm. Effective January 1, 2000, all leaf blowers operated in or adjacent to a residential area shall operate at or below a noise level of sixty-five dBA at a distance of fifty feet, as determined by a test conducted by the American National Standards Institute or an equivalent. The dBA rating shall be prominently displayed on the leaf blower. (Ord. 2623-99 § 1 (part); prior zoning code § 19.24.020(b)--(d))

3.13.1.3 *Existing Conditions*

Noise Environment

The noise environment in Moffett Park predominantly consists of vehicular traffic along SR 237, US 101, North Mathilda Avenue, Caribbean Avenue, and Java Drive. Aircraft operations associated with Moffett Federal Airfield and light-rail trains along the VTA tracks, which run along the west side of North Mathilda Avenue and in the center of Java Drive, also contribute to the ambient noise environment.

A noise monitoring survey consisting of five long-term (LT-1 through LT-5) and five short-term (ST-1 through ST-5) measurements was completed. Each of the short-term measurements were made in 10-minute intervals. During the short-term noise measurements at ST-2, ST-3, and ST-4, construction noise was observed. While efforts were made to avoid construction noise contamination in the existing ambient noise data, some construction noise was included in the in the ambient noise measurements. The predominant noise source at each location was traffic noise. The results of these measurements are summarized in Tables Table 3.13-3 and Table 3.13-4 below, and measurement locations are shown on Figure 3.13-1. Existing traffic noise contours on Moffett Park and its vicinity are shown on Figure 3.13-2.

Table 3.13-3: Summary of Long-Term Noise Measurement Data (dBA)				
Noise Measurement Location¹	Predominant Noise Source	Hourly Average L_{eq}²		dBA L_{dn}⁵
		Daytime Hours³	Nighttime Hours⁴	
LT-1	Traffic along North Mathilda Avenue	59 to 68	55 to 66	69
LT-2	Traffic along West Java Drive and VTA tracks	58 to 68	57 to 61	65
LT-3	Traffic along East Caribbean Drive	63 to 74	53 to 70	72
LT-4	Traffic along SR 237	65 to 70	59 to 70	73
LT-5 ⁶	Traffic along Enterprise Way and Macon Road	48 to 72	44 to 63	56 to 65

Notes:

¹ Refer to Figure 3.13-1 for noise measurement locations.

² L_{eq} is the average A-weighted noise level during the measurement period.

³ Daytime hours were between 7:00 AM and 10:00 PM.

⁴ Nighttime hours were between 10:00 PM and 7:00 AM

⁵ L_{dn} is the average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10:00 pm and 7:00 am.

⁶ A considerable number of buses were observed along Macon Road, which contributed to the overall measured noise levels for LT-5.

Source: Illingworth & Rodkin, Inc. *Moffett Park Specific Plan Noise and Vibration Assessment*. September 19, 2022.

Table 3.13-4: Summary of Short-Term Noise Measurement Data (dBA)							
Noise Measurement Locations*	Predominant Noise Source	Measured Noise Level, dBA					
		L_{max}¹	L₍₁₎²	L₍₁₀₎²	L₍₅₀₎²	L₍₉₀₎²	L_{eq(10-min)}³
ST-1	Traffic along Enterprise Way	73	71	68	61	52	64
ST-2	Traffic along East Java Drive	69	67	56	52	48	55
ST-3	Traffic along East Java Drive	81	76	72	61	53	67
ST-4	Traffic along Borregas Avenue	92	84	67	53	47	70
ST-5	Traffic along Crossman Avenue	82	76	68	55	49	64

Notes:

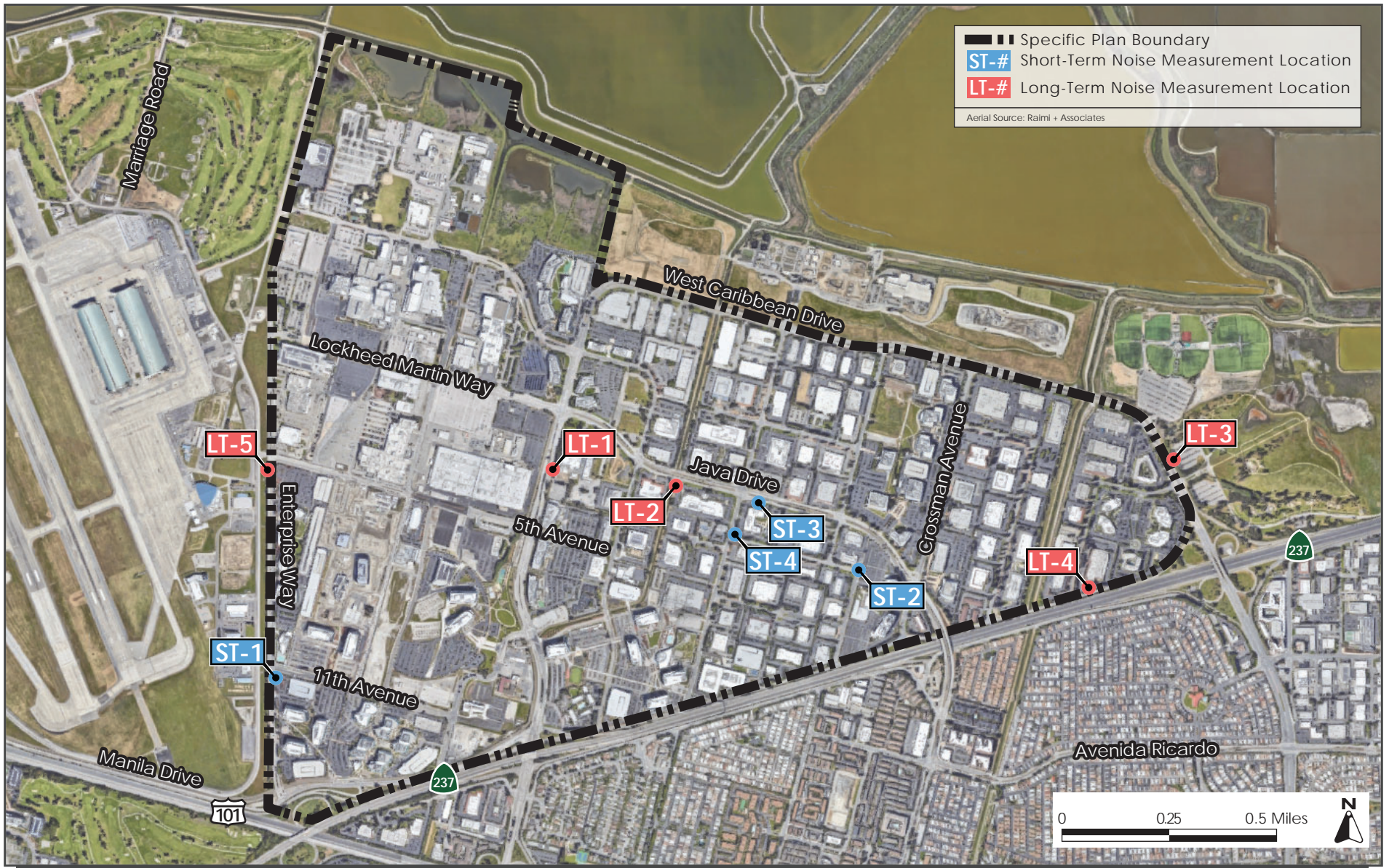
* Refer to Figure 3.13-1 for noise measurement locations.

¹ L_{max} = The maximum A-weighted noise level during the measurement period.

² L₍₀₁₎, L₍₁₀₎, L₍₅₀₎, L₍₉₀₎ = The A-weighted noise levels that are exceeded one percent, 10 percent, 50 percent, and 90 percent of the time during the measurement period.

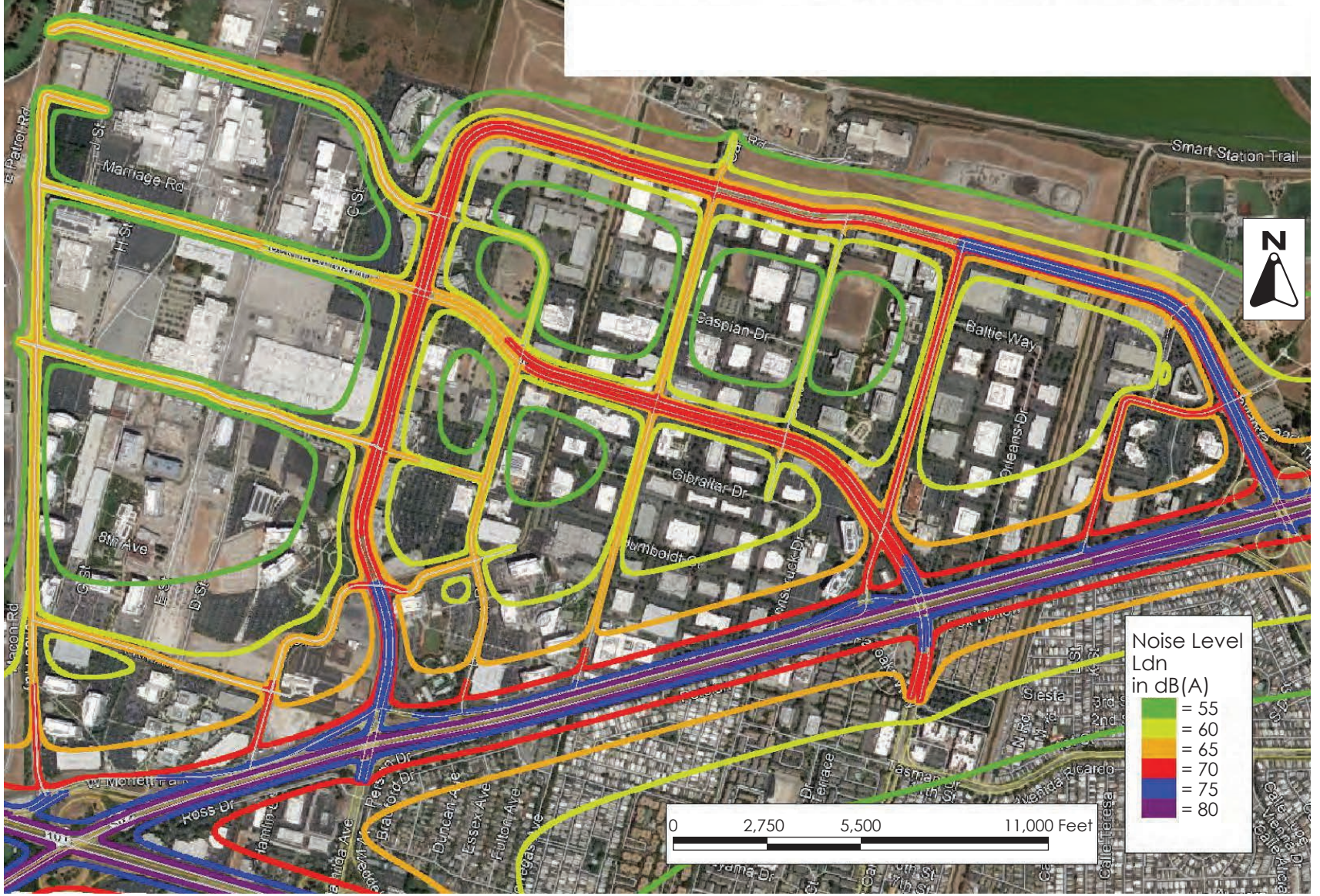
³ L_{eq} = Average A-weighted noise level during the measurement period (10-minute intervals).

Source: Illingworth & Rodkin, Inc. *Moffett Park Specific Plan Noise and Vibration Assessment*. September 19, 2022.



NOISE MEASUREMENT LOCATIONS

FIGURE 3.13-1



EXISTING TRAFFIC NOISE CONTOURS

FIGURE 3.13-2

Sensitive Receptors

There are no sensitive receptors located within Moffett Park. The nearest sensitive receptors are residences located approximately 200 feet south of the Moffett Park, south of SR 237 (refer to Figure 2.2-3).

Airport Influence Areas

Moffett Federal Airfield is located approximately 100 feet west of Moffett Park. Employees and other users of Moffett Park are exposed to noise levels from Moffett Federal Airfield aircraft operations. Most of the plan area falls outside of the 65 dBA noise contour line. The southwestern corner of the plan area (west of the U.S. Highway 101 on-ramp at West Moffett Park Drive) falls within the 65 dBA CNEL noise contour. The 70 dBA CNEL noise contour generally runs along the plan area's westernmost boundary (Enterprise Way). The noise levels at Moffett Park from aircraft operations are shown on Figure 3.9-2 in Section 3.9 Hazards and Hazardous Materials.

3.13.2 Impact Discussion

For the purpose of determining the significance of the project's impact on noise, would the project result in:

- 1) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
- 2) Generation of excessive groundborne vibration or groundborne noise levels?
- 3) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

CEQA does not define what noise level increase would be considered substantial. The significance criteria used in this EIR are based on City practice and standards identified by the FTA, CBC, CALGreen, and City General Plan, and SMC.

3.13.2.1 *Project Impacts*

Impact NOI-1:	The project would not result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (Less than Significant Impact)
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Construction Noise Impacts

No specific development or construction is proposed as part of the proposed Specific Plan. The Specific Plan would be built out over the span of approximately 20 years. As such, construction activities would occur intermittently at different sites within Moffett Park until full buildout. Although the related construction noise impacts at any one location would be temporary,

construction of individual projects could cause adverse localized effects on the ambient noise environment. Noise impacts resulting from construction depend upon the noise generated by various pieces of construction equipment, timing and duration of noise-generating activities, and distance between construction noise sources and noise-sensitive areas. Construction noise impacts primarily result when construction activities occur during noise-sensitive times of the day, in areas adjoining noise-sensitive land uses, or over extended periods of time.

Chapter 16.08 of the SMC allows for construction between the hours of 7:00 AM and 6:00 PM on weekdays and between 8:00 AM and 5:00 PM on Saturdays. Construction activity is not permitted on Sundays or federal holidays when the City offices are closed. This chapter also states that no loud environmentally disruptive noises, such as air compressors without mufflers, continuously running motors or generators, loud playing musical instruments, radios, etc., would be allowed where such noises may be a nuisance to adjacent residential neighborhoods. Chapter 19.42.030 provides quantitative limits on noise levels; however, those limits do not apply to construction noise that is regulated by Chapter 16.08 of the SMC. The City does not have established quantitative thresholds for the impact of temporary increases in noise due to construction. It is the City's practice that hourly average noise levels during construction that would exceed 60 dBA L_{eq} at residential land uses, and the ambient by at least five dBA L_{eq} for a period of more than one year, would require the implementation of noise attenuating mitigation measures to reduce impacts to a less than significant level.¹³¹

Major noise-generating construction activities associated with buildout of Moffett Park would likely include removal of existing structures; site grading and excavation; installation of utilities; construction of building foundations, cores, and shells; paving; and landscaping. Construction activities generate considerable amounts of noise, especially during earth-moving activities when heavy equipment is used. Construction of building foundations for future high-rise buildings could require impact or vibratory pile driving activities, which would generate high noise levels. Site grading, excavation activities, operation of heavy construction equipment, and arrival and departure of heavy-duty trucks would also generate high noise levels, as these phases often require the simultaneous use of multiple pieces of heavy equipment such as dozers, excavators, scrapers, and loaders.

Typical hourly average construction generated noise levels are about 81 to 88 dBA L_{eq} , measured at a distance of 50 feet from the center of the site during busy construction periods (e.g., earth moving equipment, impact tools, etc.). Construction-generated noise levels drop off at a rate of about six dBA per doubling of distance between the source and receptor. Shielding by buildings or terrain often result in lower construction noise levels at distant receptors. Lower noise levels result from building construction activities when these activities move indoors, and less heavy equipment is required to complete the tasks.

Future development projects under the Specific Plan would implement the following noise control strategies and construction BMPs outlined in the proposed policies below:

¹³¹ City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. SCH# 2012032003. August 2016. Page 3.6-42.

Noise and Vibration Project Requirements:

- **10.3.4-1:** Construction Noise Measures. Future development projects shall implement site-specific noise attenuation measures during construction to reduce the generation of construction noise and vibration. These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the City prior to issuance of demolition, grading, and/or building permits. Measures specified in the Noise Control Plan and implemented during construction shall include the following noise control strategies:
 - Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds).
 - Impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools.
 - Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other similar measures.
 - Noise and vibration reducing pile-driving techniques shall be implemented during construction and shall be monitored to ensure no damage to nearby structures occurs (i.e., vibrations above PPVs of 0.25 in/sec at nearby structures). These techniques shall include:
 - Installing intake and exhaust mufflers on pile-driving equipment
 - Vibrating piles into place when feasible, and installing shrouds around the pile-driving hammer where feasible
 - Implementing “quiet” pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions
 - Using cushion blocks to dampen impact noise, if feasible based on soil conditions.¹³²
 - At least 48 hours prior to pile-driving activities, notifying building owners and occupants within 600 feet of the project area of the dates, hours, and expected duration of such activities
 - Prohibit unnecessary idling of internal combustion engines.
 - Construction staging areas shall be established at locations that create the greatest distance between the construction-related noise sources and noise-sensitive receptors nearest the project site during all project construction. Material stockpiles, as well as maintenance/equipment staging and parking areas, shall be located as far as feasible from residential receptors.

¹³² Cushion blocks are blocks of material that are used with impact hammer pile drivers. They consist of blocks of material placed atop a piling during installation to minimize noise generated when driving the pile. Materials typically used for cushion blocks include wood, nylon, and micarta.

- Control noise from construction workers' radios to a point where they are not audible at existing residences bordering the project site.
- Where feasible, temporary power service from local utility companies shall be used instead of portable generators.
- Locate cranes as far from adjoining noise-sensitive receptors as possible.
- During final grading, substitute graders for bulldozers, where feasible. Wheeled heavy equipment are quieter than track equipment and should be used where feasible.
- Maintain smooth vehicle pathways for trucks and equipment accessing the site, and avoid local residential neighborhoods as much as possible.
- During interior construction, the exterior windows facing noise-sensitive receptors should be closed.
- During interior construction, locate noise-generating equipment within the building to break the line-of-sight to the adjoining receptors.
- The contractor shall prepare a detailed construction schedule for major noise-generating construction activities (including pile driving, removal of existing structures; site grading and excavation; installation of utilities; construction of building foundations, cores, and shells; paving; and landscaping). The construction plan shall identify a procedure for coordination with adjacent residential land uses so that construction activities can be scheduled to minimize noise disturbance.
- Designate a "disturbance coordinator" who would be responsible for responding to any complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint (e.g., bad muffler, etc.) and will require that reasonable measures be implemented to correct the problem. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include in it the notice sent to neighbors regarding the construction schedule.

Future development under the Specific Plan would comply with SMC 16.08.30 and the above Specific Plan Project Requirement 10.3.4-1 and would result in less than significant construction noise impacts by limiting the days and hours allowed for construction activity and requiring the implementation of construction noise control and attenuation measures. **(Less than Significant Impact)**

There is a potential for multiple projects under the Specific Plan to undergo construction simultaneously, which could result in heightened levels of aggregate construction noise. Future development projects would comply with the SMC Section 16.08.030 and Specific Plan Project Requirement 10.3.4-1 that require implementation of construction noise BMPs and making appropriate repairs or compensation as needed to reduce construction noise to the extent practicable.

Operational Noise Impacts

Land Use

Moffett Park would consist of office/industrial/R&D, commercial, institutional, and residential uses at buildout of the Specific Plan. Future projects under the Specific Plan could include noise-generating sources such as truck deliveries for the above uses. Future development under the Specific

Plan would comply with General Plan Policies (including SN-8.4, SN-8.5, SN-8.6, SN-8.9, SN-9.1, and SN-9.3) and SMC Section 19.42.030 to reduce operational noise impacts to a less than significant by requiring new development to meet the City’s noise standards established to avoid operational noise impacts on existing land uses. **(Less than Significant Impact)**

Traffic Noise

Increases in traffic noise gradually degrade the environment in areas sensitive to noise as development occurs. An impact would be considered significant if traffic generated by future development would substantially increase noise levels at sensitive receptors within Moffett Park or in the vicinity. Based on General Plan Policy SN-8.6, a permanent increase in noise levels would be considered substantial if: 1) the noise level increase is more than five dBA L_{dn} over existing noise levels, where existing noise levels are normally acceptable (e.g., 60 dBA L_{dn} or less at residential and hotel/motel land uses), 2) the noise level increase is more than three dBA L_{dn}, where the existing noise levels are normally acceptable and the future L_{dn} exceeds the “normally acceptable category, 3) or if there is an increase of more than three dBA L_{dn} where existing noise levels are conditionally acceptable and unacceptable. In addition, a cumulatively considerable contribution to a significant permanent noise level increase would be one dBA L_{dn}.

Traffic noise contours were calculated for the existing and future traffic conditions along major roadways, expressways, and highways in the Moffett Park. Calculations accounted for traffic noise, the frequency spectra of the noise source, traffic speeds, vehicle mix information, and the topography of the area.

Table 3.13-5 below summarizes the existing and projected future noise levels on select roadway segments. Figures Figure 3.13-3 and Figure 3.13-4 provide the corresponding cumulative 2040 buildout and cumulative 2040 buildout plus project traffic noise contours for Moffett Park, respectively.

Table 3.13-5: Existing and Future Modeled Noise Levels Along Surrounding Roadways							
Roadway	Segment	L_{dn} at 75 feet from the Roadway Centerline, dBA			Increase Over Existing, dBA		Increase of 2040 Plus Project Over 2040 No Project, dBA
		Existing	2040 No Project	2040 Project	2040 No Project	2040 Project	
1 st Avenue	West of North Mathilda Avenue	62	63	64	1	2	1
5 th Avenue	West of North Mathilda Avenue	61	62	62	1	1	0
	North Mathilda Avenue to Bordeaux Drive	60	61	62	1	2	1

Table 3.13-5: Existing and Future Modeled Noise Levels Along Surrounding Roadways

Roadway	Segment	L _{dn} at 75 feet from the Roadway Centerline, dBA			Increase Over Existing, dBA		Increase of 2040 Plus Project Over 2040 No Project, dBA
		Existing	2040 No Project	2040 Project	2040 No Project	2040 Project	
11 th Avenue	Enterprise Way to Innovation Way	63	64	64	1	1	0
	East of Innovation Way	64	65	65	1	1	0
Bordeaux Drive	North Mathilda Avenue to Java Drive	56	57	60	1	4	3
	West Java Drive to 5th Avenue	60	60	61	0	1	1
	5th Avenue to Innovation Way	60	60	60	0	0	0
	Innovation Way to Moffett Park Drive	64	65	65	1	1	0
Borregas Avenue	North of Caribbean Drive	60	60	61	0	1	1
	Caribbean Drive to Java Drive	62	62	62	0	0	0
	Java Drive to Moffett Park Drive	63	63	63	0	0	0
Caribbean Drive (West)	West of Borregas Avenue	67	68	69	1	2	1
Caribbean Drive (East)	Borregas Avenue to Crossman Avenue	69	69	70	0	1	1
	Crossman Avenue to Twin Creeks Driveway	70	70	71	0	1	1
	Twin Creeks Driveway to Moffett Park Drive	70	70	71	0	1	1
	East of Moffett Park Drive	71	71	72	0	1	1

Table 3.13-5: Existing and Future Modeled Noise Levels Along Surrounding Roadways

Roadway	Segment	L _{dn} at 75 feet from the Roadway Centerline, dBA			Increase Over Existing, dBA		Increase of 2040 Plus Project Over 2040 No Project, dBA
		Existing	2040 No Project	2040 Project	2040 No Project	2040 Project	
Crossman Avenue	East Caribbean Drive to East Java Drive	65	66	67	1	2	1
	East Java Drive to Moffett Park Drive	69	69	70	0	1	1
Enterprise Way	North of 11th Avenue	60	60	61	0	1	1
	11th Avenue to Manila Drive	65	65	66	0	1	1
Geneva Drive	North of East Java Drive	56	58	60	2	4	2
	South of East Java Drive	60	60	61	0	1	1
Innovation Way	West Moffett Park Drive to 11th Avenue	68	68	68	0	0	0
	11th Avenue to North Mathilda Avenue	64	65	65	1	1	0
	North Mathilda Avenue to Bordeaux Drive	64	64	65	0	1	1
	East of Bordeaux Drive	59	60	60	1	1	0
Java Drive (West)	North Mathilda Avenue to Bordeaux Drive	62	64	65	2	3	1
	Bordeaux Drive to Borregas Avenue	65	66	66	1	1	0
Java Drive (East)	Borregas Avenue to Geneva Drive	66	66	66	0	0	0

Table 3.13-5: Existing and Future Modeled Noise Levels Along Surrounding Roadways

Roadway	Segment	L _{dn} at 75 feet from the Roadway Centerline, dBA			Increase Over Existing, dBA		Increase of 2040 Plus Project Over 2040 No Project, dBA
		Existing	2040 No Project	2040 Project	2040 No Project	2040 Project	
	Geneva Drive to Crossman Avenue	67	67	67	0	0	0
	East of Crossman Avenue	70	70	71	0	1	1
Lockheed Martin Way	West of North Mathilda Avenue	60	61	63	1	3	2
Manila Drive	West of Enterprise Way	76	77	77	1	1	0
Moffett Park Drive (West)	Enterprise Way to Highway 101 northbound on-ramp	70	70	70	0	0	0
	Highway 101 northbound on-ramp to Innovation Way	73	73	73	0	0	0
	Innovation Way to North Mathilda Avenue	73	74	74	1	1	0
	East of North Mathilda Avenue	72	72	73	0	1	1
Moffett Park Drive	West of Borregas Avenue	75	75	75	0	0	0
	Borregas Avenue to Crossman Avenue	75	76	76	1	1	0
	Crossman Avenue to Moffett Park Court	75	75	75	0	0	0
	Moffett Park Ct. to East Caribbean Drive	66	66	67	0	1	1
	East of East Caribbean Drive	66	66	67	0	1	1

Table 3.13-5: Existing and Future Modeled Noise Levels Along Surrounding Roadways

Roadway	Segment	L _{dn} at 75 feet from the Roadway Centerline, dBA			Increase Over Existing, dBA		Increase of 2040 Plus Project Over 2040 No Project, dBA
		Existing	2040 No Project	2040 Project	2040 No Project	2040 Project	
North Mathilda Avenue	North of 1st Avenue/Bordeaux Drive	67	68	69	1	2	1
	1st Avenue/Bordeaux Drive to Lockheed Martin Way/West Java Drive	67	68	69	1	2	1
	Lockheed Martin Way/West Java Drive to 5th Avenue	67	68	70	1	3	2
	5th Avenue to Innovation Way	68	69	71	1	3	2
	Innovation Way to West Moffett Park Drive	70	71	72	1	2	1
	West Moffett Park Drive to SR 237 westbound ramps	74	74	74	0	0	0
	South of SR 237 eastbound ramps	75	75	75	0	0	0
Twin Creeks Driveway	North of East Caribbean Drive	64	65	66	1	2	1
	South of East Caribbean Drive	60	61	62	1	2	1
SR 237 Westbound on-ramp	At West Moffett Park Drive/Crossman Avenue intersection	75	75	76	0	1	1
	At North Mathilda Avenue	73	73	73	0	0	0

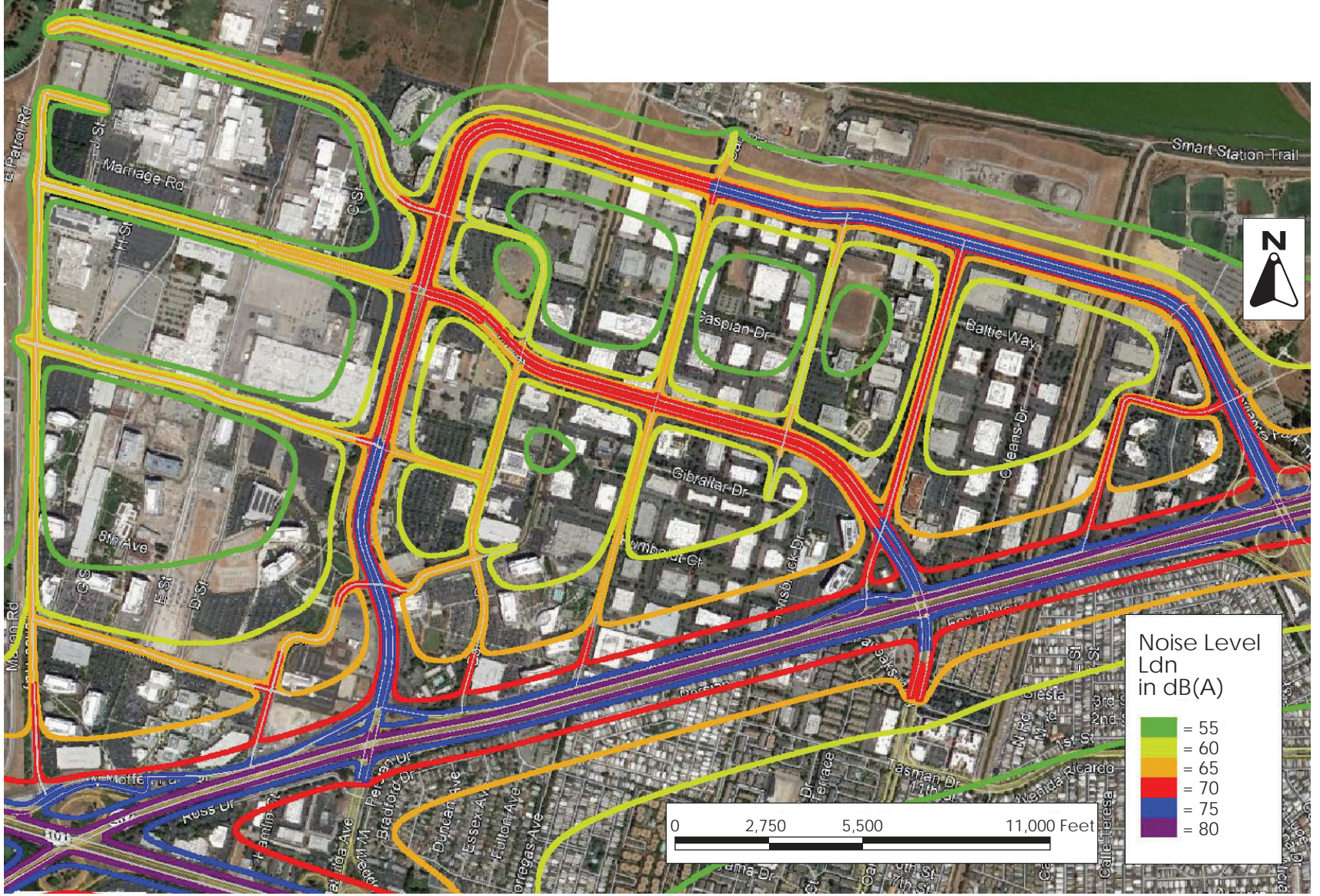
Table 3.13-5: Existing and Future Modeled Noise Levels Along Surrounding Roadways

Roadway	Segment	L _{dn} at 75 feet from the Roadway Centerline, dBA			Increase Over Existing, dBA		Increase of 2040 Plus Project Over 2040 No Project, dBA
		Existing	2040 No Project	2040 Project	2040 No Project	2040 Project	
SR 237 Eastbound off-ramp	At North Mathilda Avenue	74	74	74	0	0	0
SR 237 Eastbound on-ramp	At North Mathilda Avenue	75	75	75	0	0	0
SR 237	Highway 101 interchange to North Mathilda Avenue	80	80	80	0	0	0
	North Mathilda Avenue to East Java Drive	80	80	80	0	0	0
	East Java Drive to East Caribbean Drive	80	80	80	0	0	0
	East of East Caribbean Drive	81	82	82	1	1	0
U.S. 101 Northbound on-ramp	At West Moffett Park Drive	71	72	72	1	1	0

Notes:

The shaded cells with **bold** text include values that represent significant noise increases.

Source: Illingworth & Rodkin, Inc. *Moffett Park Specific Plan Noise and Vibration Assessment*. September 19, 2022.



CUMULATIVE 2040 TRAFFIC NOISE CONTOURS

FIGURE 3.13-3



CUMULATIVE PLUS PROJECT 2040 TRAFFIC NOISE CONTOURS

FIGURE 3.13-4

As shown in Table 3.13-5 above, buildout of the Specific Plan would result in an increase of more than dBA L_{dn} at two roadway segments when the 2040 cumulative plus project scenario is compared to existing conditions and more than one dBA compared to the 2040 cumulative no project conditions. However, since there are no existing noise-sensitive receptors located along these roadway segments, buildout of the Specific Plan would not generate a substantial permanent increase in ambient noise levels (due to traffic) in excess of established regulatory standards at existing sensitive receptors. **(Less than Significant Impact)**

Mechanical Equipment

Future development under the proposed Specific Plan would likely include mechanical equipment for heating, ventilation, and cooling purposes; exhaust fans; emergency generators; and other similar equipment. Such equipment could produce noise levels exceeding the 75 dBA the property line SMC Section 19.42.030 standard. However, there are no residential properties adjacent to Moffett Park and, therefore, mechanical equipment noise generated by future development noise would not exceed 50 dBA during nighttime or 60 dBA during daytime hours at an existing residentially zoned property. As stated in Section 3.13.1.3 Existing Conditions, the nearest noise-sensitive receptors to Moffett Park are approximately 200 feet to the south, across SR 237. Therefore, future development under the Specific Plan would not generate a substantial permanent increase in noise levels (from mechanical equipment) in excess of established regulatory standards at existing noise-sensitive receptors. **(Less than Significant Impact)**

As the Specific Plan is implemented, new residential land uses would be developed. Future development adjacent to residential development in Moffett Park may include mechanical equipment. Future development with mechanical equipment would be required to comply with the below Specific Plan Project Requirement.

Noise and Vibration Project Requirement:

- **10.3.4-2: Operational Noise.** Prior to the issuance of building permits, a qualified acoustical consultant shall be retained to review mechanical equipment systems during final design of future projects. The consultant shall review selected equipment and determine specific noise reduction measures necessary to reduce noise to comply with the City's noise level requirements (including SMC Section 19.42.030 requires that operational noise not exceed 75 dBA along the property line, and that the noise levels not exceed 60 dBA during daytime hours or 50 dBA during nighttime hours at any point on adjacent residential properties). Noise reduction measures could include, but are not limited to, selection of equipment that emits low noise levels and/or installation of noise barriers, such as enclosures and parapet walls, to block the line-of-sight between the noise source and the nearest receptors. Additionally, enclosures and interior wall treatments shall be considered to reduce noise exposure within the on-site units. Alternate measures may include locating equipment in less noise-sensitive areas, where feasible. The specific equipment shall be included on the approved building permit plan set.

Future development, in compliance with the above Specific Plan Project Requirement 10.3.4-1, would not result in mechanical equipment noise exceeding City standards at adjacent residential

properties by reviewing proposed mechanical equipment and implementing necessary controls to meet these standards. **(Less than Significant Impact)**

Impact NOI-2: The project would not result in generation of excessive groundborne vibration or groundborne noise levels. **(Less than Significant Impact)**

VTA light train lines run east-west, parallel to Manila Drive/West Moffett Park Drive until North Mathilda Avenue where the lines turn north, running parallel to North Mathilda Avenue. The tracks turn east at Java Drive, running between the eastbound and westbound directions of the roadway. The Specific Plan does not include new permanent sources of vibration.

Caltrans recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, which typically consist of buildings constructed since the 1990s. Conservative vibration limits of 0.25 to 0.3 in/sec PPV have been used for buildings that are found to be structurally sound but where structural damage is a major concern. For historical buildings or buildings that are documented to be structurally weakened, a cautious limit of 0.08 in/sec PPV is often used to provide the highest level of protection. No historical buildings or buildings that are documented to be structurally weakened are adjacent to Moffett Park. For the purposes of this analysis, groundborne vibration levels exceeding the conservative 0.08 in/sec PPV at historical buildings and 0.25 in/sec PPV limit at nonhistorical buildings in the Moffett Park vicinity would have the potential to result in a significant vibration impact.

The Specific Plan would be built out over the span of approximately 20 years. As such, future construction activities and associated groundborne vibration, would occur intermittently at different sites within Moffett Park until full buildout.

Construction activities of future projects within Moffett Park may include demolition of existing structures, site preparation work, excavation, foundation work, pile driving, and new building erection. Project construction activities, such as drilling; use of jackhammers, rock drills, and other high-power or vibratory tools; and rolling stock equipment may generate substantial vibration in the immediate vicinity. Jackhammers typically generate vibration levels of 0.035 in/sec PPV and drilling typically generates vibration levels of 0.09 in/sec PPV at a distance of 25 feet. Vibration levels would vary depending on soil conditions, construction methods, and equipment used.

Pile driving has the potential of generating the highest ground vibration levels and is of primary concern to architectural damage, particularly when it occurs within 100 to 200 feet of structures. Vibration levels generated by pile driving activities would vary depending on project conditions, such as soil conditions, construction methods, and equipment used, but could exceed the recommended PPV thresholds to avoid architectural damage. Other project construction activities, such as caisson drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.), may also potentially generate substantial vibration in the immediate vicinity (i.e., within 200 feet of Moffett Park).

Depending on the proximity of existing structures to each construction site, the structural soundness of the existing buildings, and the methods of construction used, vibration levels may be high enough to damage existing structures. Given the location of Moffett Park with respect to existing structures

in the immediate vicinity (i.e., within 200 feet), groundborne vibration impacts of future projects could be potentially significant.

As with any type of construction, vibration levels may at times be perceptible. However, construction phases that have the highest potential of producing vibration (pile driving and use of jackhammers and other high-power tools) would be intermittent and would only occur for short periods of time for any individual project site. The City of Sunnyvale General Plan, and SMC do not address construction vibration. However, administrative controls such as notifying neighbors of scheduled construction activities and scheduling construction activities with the highest potential to produce perceptible vibration to hours with least potential to affect nearby businesses, would minimize perceptible vibration.

Future development projects would comply with the following Specific Plan Project Requirements to reduce construction-related vibration:

Noise and Vibration Project Requirements:

- **10.3.4-3: Heavy Vibration-Generating Construction Equipment.** Prohibit the use of heavy vibration-generating construction equipment within 25 feet of residences and hotels/motels. Use a smaller vibratory roller, such as the Caterpillar model CP433E vibratory compactor, when compacting materials within 25 feet of residences and hotels/motels adjoining the site.
- **10.3.4-4: Dropping Heavy Equipment.** Avoid dropping heavy equipment within 25 feet of residences and hotels/motels. Use alternative methods for breaking up existing pavement, such as a pavement grinder, instead of dropping heavy objects within 25 feet of residences and hotels/motels adjoining the site.
- **10.3.4-5: Pile-Driving Techniques.** Noise and vibration reducing pile-driving techniques shall be employed during construction and monitored to ensure no damage to nearby structures occurs (i.e., vibrations above PPVs of 0.25 in/sec at nearby structures). These techniques shall include:
 - Installing intake and exhaust mufflers on pile-driving equipment
 - Vibrating piles into place when feasible, and installing shrouds around the pile-driving hammer where feasible
 - Implementing “quiet” pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions
 - Using cushion blocks to dampen impact noise, if feasible based on soil conditions¹³³
 - At least 48 hours prior to pile-driving activities, notifying building owners and occupants within 600 feet of the project area of the dates, hours, and expected duration of such activities
- **10.3.4-6: Heavy Equipment Communications.** The contractor shall alert heavy equipment operators to the proximity of the adjacent structures so they can exercise extra care.

¹³³ Cushion blocks are blocks of material that are used with impact hammer pile drivers. They consist of blocks of material placed atop a piling during installation to minimize noise generated when driving the pile. Materials typically used for cushion blocks include wood, nylon, and micarta

- **10.3.4-7: Construction Vibration Monitoring, Treatment, and Reporting Plan.** For projects requiring impact or vibratory pile driving, a Construction Vibration Monitoring, Treatment, and Reporting Plan shall be implemented to document conditions prior to, during, and after vibration-generating construction activities. All plan tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of California and be in accordance with industry-accepted standard methods. The construction vibration monitoring plan shall include, but not be limited to, the following measures:
 - Document conditions at all structures located within 100 feet of pile driving activities and at historic structures located within 275 feet of pile driving activities prior to, during, and after vibration-generating construction activities. All plan tasks shall be undertaken under the direction of a licensed Professional Structural Engineer in the State of California and be in accordance with industry-accepted standard methods. Specifically:
 - Vibration limits shall be applied to vibration-sensitive structures located within 100 feet of any high impact construction activities, such as pile driving, and 275 feet of historic buildings.
 - Performance of a photo survey, elevation survey, and crack monitoring survey for each structure of normal construction within 100 feet of any high impact construction activities and each historic structure within 275 feet of pile driving activities. Surveys shall be performed prior to any construction activity, in regular intervals during construction, and after project completion, and shall include internal and external crack monitoring in structures, settlement, and distress, and shall document the condition of foundations, walls and other structural elements in the interior and exterior of said structures.
 - Develop a vibration monitoring and construction contingency plan to identify structures where monitoring would be conducted, set up a vibration monitoring schedule, define structure-specific vibration limits, and address the need to conduct photo, elevation, and crack surveys to document before and after construction conditions. Construction contingencies shall be identified for when vibration levels approached the limits.
 - At a minimum, vibration monitoring shall be conducted during all pile driving activities.
 - If vibration levels approach limits, suspend construction, and implement contingency measures to either lower vibration levels or secure the affected structures.
 - Designate a person responsible for registering and investigating claims of excessive vibration. The contact information of such person shall be clearly posted on the construction site.
 - Conduct a post-construction survey on structures where either monitoring has indicated high vibration levels or complaints of damage has been made. Make appropriate repairs or compensation where damage has occurred as a result of construction activities.

Future development projects, in compliance with the above Specific Plan Project Requirements 10.3.4-3 through 10.3.4-7 and Caltrans standards which prohibit the use of heavy vibration-generating construction equipment within 25 feet of residences and hotels/motels and require noise

and vibration reducing pile-driving techniques to be implemented and monitored during construction to ensure no damage to nearby structures occurs, would not generate excessive groundborne vibration or noise levels. **(Less than Significant Impact)**

There is a potential for multiple projects under the Specific Plan to undergo construction simultaneously, which could result in heightened levels of aggregate construction noise. Future development projects would comply with Caltrans standards and Specific Plan Project Requirements 10.3.4-3 through 10.3.4-7 (requiring the measures mentioned above) to reduce construction vibration to the extent practicable.

Impact NOI-3: The project would be located within the vicinity of an airport land use plan; however, the project would not expose people residing or working in the project area to excessive noise levels. **(Less than Significant Impact)**

The objective of CLUP noise compatibility criteria is to minimize the number of people exposed to frequent and/or high levels of aircraft noise. Pursuant to the CLUP, the Noise Restriction Area is defined as the 65 dB CNEL contour. As shown on Figure 3.9-2, the southwest corner of Moffett Park would be exposed to 2022 aircraft noise levels ranging from 65 to 75 dB CNEL. Under the proposed Specific Plan land use plan, office, R&D, hotel, retail, commercial, and public open space uses (MP-O1: Office 1 and MP-P: Public 1) are proposed within the 65 dB CNEL contour. Residential uses are prohibited. Pursuant to the CLUP, the land use/noise compatibility of these uses are considered generally acceptable, conditionally acceptable, or generally unacceptable (refer to Table 3.13-2). All other areas within Moffett Park would have exterior aircraft noise levels less than 65 dB CNEL.

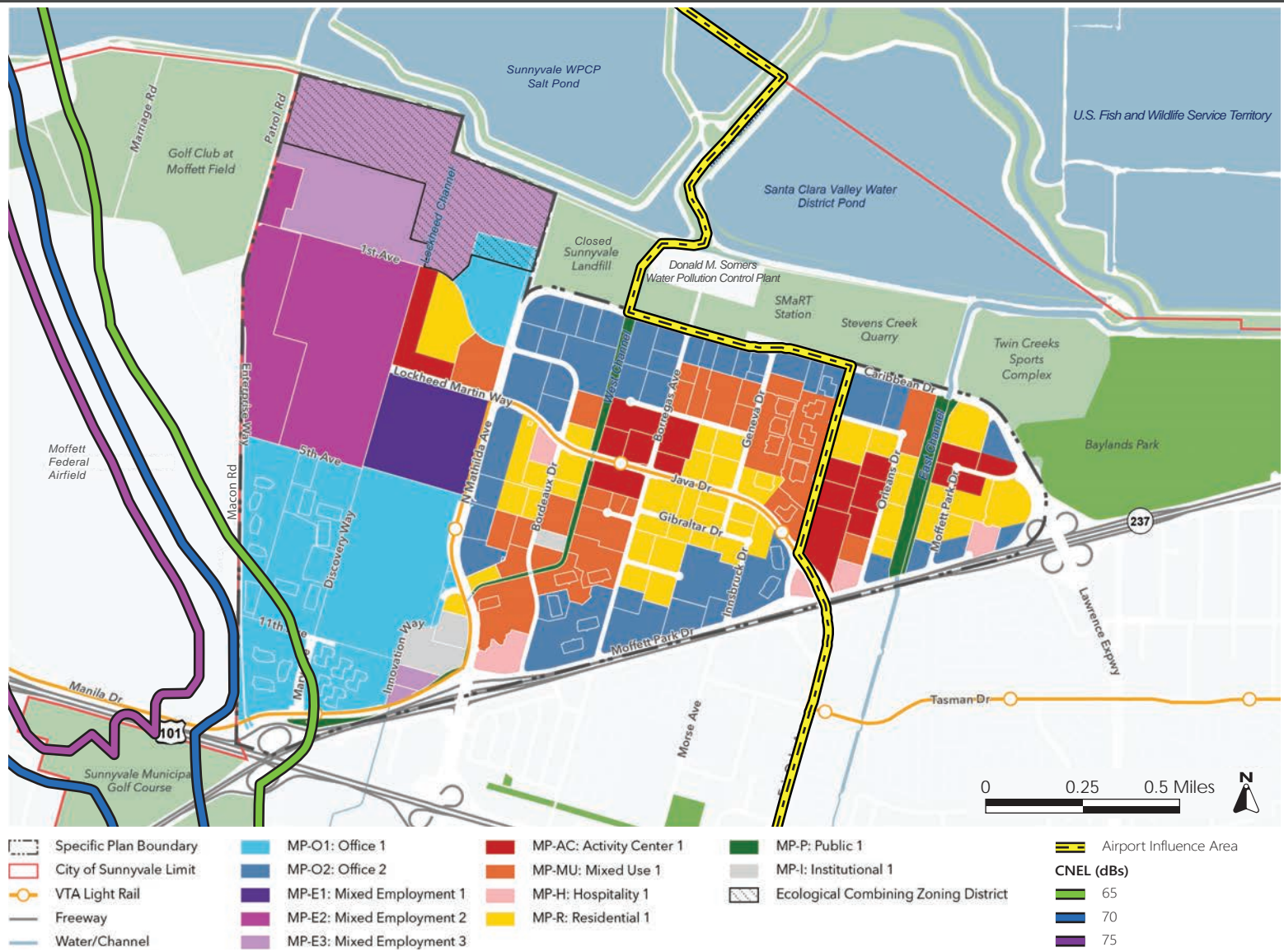
Additionally, as discussed in Section 3.7.1.1 Regulatory Framework, public schools are subject to state siting criteria which considers a future school site's proximity to an existing airport. No school is proposed as part of the project at this time. In the event a new school is proposed, separate environmental review would be required that will include evaluation of the school site's proximity to Moffett Federal Airfield.

In addition to complying with CLUP noise compatibility policies, future development under the Specific Plan would comply with the proposed Specific Plan Project Requirements.

Noise and Vibration Project Requirements:

- **10.3.4-8:** CLUP Noise Levels. Future developments under the Specific Plan exposed to conditionally acceptable and generally unacceptable aircraft noise levels, as defined by the Moffett Federal Airfield CLUP, shall complete a detailed noise analysis that includes the required noise reduction measures and noise insulation features included in the design to ensure compatibility with the CLUP noise standards.

Compliance with CLUP noise compatibility policies and Specific Plan Project Requirement 10.3.4-8 by implementing the necessary noise reduction measures and including insulation features, implementation of the Specific Plan would not expose people residing or working in Moffett Park to excessive noise level. **(Less than Significant Impact)**



Source: City of Sunnyvale, County of Santa Clara, ESRI, July 2022.

MOFFETT FEDERAL AIRFIELD NOISE LEVELS AT PROPOSED LAND USES

FIGURE 3.13-5

3.13.2.2 *Cumulative Impacts*

Impact NOI-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant noise impact. **(Less than Significant Cumulative Impact)**

Construction and Vibration Noise

The geographic area for cumulative construction and vibration noise impacts are locations within 500 feet. As described under Impact NOI-1, future development under the Specific Plan would comply with SMC Section 16.08.030 which limits days and hours allowed for construction activity and Specific Plan which requires implementation of construction noise control and attenuation measures to ensure construction noise would have a less than significant impact on noise receptors. As discussed under Impact NOI-2, future projects that require construction equipment with high vibration levels would comply with Caltrans standards and Specific Plan Project Requirements 10.3.4-3 through 10.3.4-7 which prohibits the use of heavy vibration-generating construction equipment within 25 feet residences and hotels/motels and application of pile driving techniques to reduce construction vibration levels to less than significant. Therefore, implementation of the proposed Specific Plan would not result in a cumulatively considerable contribution to a significant cumulative construction noise or vibration impact to noise-sensitive receptors or adjacent structures. **(Less than Significant Cumulative Impact)**

Operational Noise

Traffic Noise

The geographic area for cumulative traffic noise impacts is the surrounding roadway network. As discussed under Impact NOI-2 above, the traffic noise increase expected for the 2040 cumulative no project scenario and for the 2040 cumulative plus project scenario was calculated. As shown in Table 3.13-5: Existing and Future Modeled Noise Levels Along Surrounding Roadways, an increase of three dBA L_{dn} or more, when the 2040 cumulative plus project scenario is compared to existing conditions, and of one dBA L_{dn} or more, when 2040 cumulative plus project conditions is compared to 2040 cumulative no project conditions, would occur at six roadway segments. Therefore, buildout of the Specific Plan would result in a cumulatively considerable contribution to a substantial increase in overall traffic noise at these roadway segments. However, there are no existing noise-sensitive receptors along these segments; as a result, there would be a less than significant cumulative noise impact from traffic noise on sensitive receptors. **(Less than Significant Cumulative Impact)**.

Mechanical Equipment Noise

The geographic areas for cumulative mechanical equipment noise are locations adjacent to Moffett Park. As described under Impact NOI-1, future development under the Specific Plan would comply with Specific Plan Project Requirements 10.3.4-2 to ensure operational mechanical equipment noise levels do not exceed 75 dBA at the property line and that these noise levels do not exceed 60 dBA during daytime hours or 50 dBA during nighttime hours at any point on adjacent residential properties. Therefore, implementation of the proposed Specific Plan would not result in a

cumulatively considerable contribution to a significant cumulative mechanical equipment noise impact to residential noise receptors. **(Less than Significant Cumulative Impact)**

Airport Noise

The geographic area for cumulative airport noise impacts is the Moffett Federal Airfield CLUP AIA. All future cumulative projects within the AIA would be subject to the CLUP and comply with applicable policies to reduce airport-related noise impacts to less than significant. As described under Impact NOI-3, future development under the Specific Plan would comply with Specific Plan Project Requirement 10.3.4-8 to ensure compliance with the CLUP noise compatibility policies. Therefore, implementation of the proposed Specific Plan would not result in a cumulatively considerable contribution to a significant cumulative aircraft noise impact to people working and residing within the Moffett Federal Airfield AIA. **(Less than Significant Cumulative Impact)**

3.13.3 Non-CEQA Effects

Per *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (*BIA v. BAAQMD*), effects of the environment on the project are not considered CEQA impacts. The following discussion is included for informational purposes only because CALGreen and the City of Sunnyvale has policies such as General Plan Policies SN-8.1, SN-8.3, SN-8.5, SN-8.7, SN-8.8, and SN-10.4 that address existing noise conditions affecting a proposed project or plan area.

Future Exterior Noise Environment

Noise produced by vehicular traffic along roadways in the vicinity of Moffett Park could potentially expose the proposed land uses to levels exceeding the exterior compatibility thresholds. Future exterior noise levels at a distance of 75 feet from the centerline of the primary roadways within Moffett Park would typically range from 57 dBA L_{dn} , along Bordeaux Drive between North Mathilda Avenue to Java Drive, to 77 dBA L_{dn} along Manila Avenue. Future exterior noise levels within 75 feet of the nearest through lane of SR 237 would range from 80 to 82 dBA L_{dn} . These exterior noise levels exceed the City's residential, hotel/motel, and school exterior (i.e., noise-sensitive outdoor use areas) normally acceptable noise standard of 60 dBA L_{dn} and commercial (e.g., retail) and office/industrial/R&D standard of 70 dBA L_{dn} .

Future development projections would implement the following proposed Specific Plan Project Requirements to reduce exterior noise levels at future residential, school, and hotel/motel outdoor areas to the normally acceptable levels pursuant to General Plan Policy SN-8.5.

Noise and Vibration Project Requirements:

- **10.3.4-9:** Noise Sensitive Outdoor Uses. Residential, hotel/motel, and school projects shall be designed in such a way to locate noise-sensitive outdoor use areas away from major roadways or other significant sources of noise.
 - Projects shall shield noise-sensitive outdoor use spaces with buildings or noise barriers to reduce exterior noise levels.

- The final detailed design of the heights and limits of proposed noise barriers shall be completed at the time that the final site and grading plans are submitted.

Future Interior Noise Environments

Land Use Compatibility at Future Residential, Hotel/Motel, and School Uses

Standard construction provides approximately 15 dBA of exterior-to-interior noise reduction for residential and school uses, assuming the windows are partially open for ventilation. Standard construction for residences, hotels/motels, and schools with the windows closed provides approximately 20 to 25 dBA of noise reduction in interior spaces. Where exterior noise levels range from 60 to 65 dBA L_{dn} , the inclusion of adequate forced-air mechanical ventilation is often the method selected to reduce interior noise levels to acceptable levels for residential uses, which is the CALGreen standard of 45 dBA L_{dn} , by closing the windows to control noise. Where noise levels exceed 65 dBA L_{dn} , forced-air mechanical ventilation systems and sound-rated construction methods are normally required. Such methods or materials may include a combination of smaller window and door sizes as a percentage of the total building façade facing the noise source, sound-rated windows and doors, sound-rated exterior wall assemblies, and mechanical ventilation so windows may be kept closed at the occupant's discretion.

Land Use Compatibility at Future Commercial, Office/R&D, and Industrial Uses

Standard construction materials for commercial, office/R&D, and industrial uses would provide about 25 dBA of noise reduction in interior spaces. The inclusion of adequate forced-air mechanical ventilation systems is normally required so that windows may be kept closed at the occupant's discretion and would provide an additional five dBA reduction. The standard construction materials in combination with forced-air mechanical ventilation would satisfy the CALGreen daytime standard of 50 dBA $L_{eq(1-hr)}$ at most of these uses. Spaces where lower noise levels would be desired, such as private offices and conference rooms, may benefit from additional noise control in order to meet a lower, more desirable interior noise level. Additional noise control could be accomplished by selecting higher sound-rated windows.

Future projects would implement the following Specific Plan Project Requirements to comply with CALGreen interior noise standards.

Noise and Vibration Project Requirements:

- **10.3.4-10:** Acoustical Analysis. A project-specific acoustical analysis shall be prepared, in compliance with State Building Codes and City noise standards, to ensure that the design incorporates controls to reduce interior noise levels to 45 dBA L_{dn} or lower within the residential units and to 50 dBA $L_{eq(1-hr)}$ or lower within nonresidential interiors. Additionally for residential units located adjacent to the VTA light-rail tracks, maximum instantaneous noise levels shall be at or below 50 dBA L_{max} within bedrooms and at or below 55 dBA L_{max} within all other residential rooms. The project applicant shall conform with any special building construction techniques requested by the City's Building Department, which may include sound-rated windows and doors, sound-rated wall constructions, and acoustical caulking.

If future projects do not meet the 45 dBA L_{dn} (for residential interiors) or 50 dBA $L_{eq(1-hr)}$ (for nonresidential interiors) standards, other site-specific measures, such as increasing setbacks of the buildings from the adjacent roadways, using shielding by other buildings or noise barriers to reduce noise levels, implementing additional sound treatments to the building design shall be considered to reduce interior noise levels to meet the State and City standards.

Train Vibration and Land Use Compatibility

FTA vibration standards are used by the City of Sunnyvale to evaluate the compatibility of future projects exposed to vibration levels produced by heavy-rail and light-rail trains (refer to Table 3.13-1). The FTA vibration standards are based on maximum overall levels for a single event. There are FTA criteria for frequent events (more than 70 events of the same source per day), occasional events (30 to 70 vibration events of the same source per day), and infrequent events (less than 30 vibration events of the same source per day).

Future Vibration Environment

For purposes of this analysis, it is assumed that occasional events would occur along the VTA light rail train lines through Moffett Park under future conditions. This would require vibration levels due to train pass-bys to be below 75 VdB for residential buildings and below 78 VdB for commercial, office, and institutional buildings.

Vibration levels due to train pass-bys were estimated based on typical vibration levels by light rail trains included in the FTA manual. VTA trains traveling in developed areas, such as Moffett Park, typically travel at slower speeds ranging from 30 to 45 miles per hour. Along roadways where the train tracks are located between travel lanes, such as along Java Drive, trains reach speeds up to 55 miles per hour. According to the FTA manual, light rail train systems with speeds of 50 miles per hour generate 72 VdB at 60 feet. At speeds of 30 to 45 miles per hour, vibration levels from light rail train systems within Moffett Park would range from 68 to 71 VdB at 60 feet. At a speed of 55 miles per hour, vibration levels would be 73 VdB at 60 feet. Based on these vibration levels, the minimum setback distances shown in Table 3.13-5 for residential and non-residential buildings in Moffett Park would be required to comply with FTA standards.

Table 3.13-6: Minimum Distances to the Vibration Thresholds for Proposed Buildings within Moffett Park		
Roadway Segment	Residential (75 VdB)^a	Nonresidential (78 VdB)^b
	Minimum Setback Distance Required from Edge of Nearest Train Tracks	
Manila Drive/West Moffett Park Drive. (30 to 45 miles per hour)	10 to 24 feet	5 to 12 feet
North Mathilda Avenue (30 to 45 miles per hour)	10 to 24 feet	5 to 12 feet
Java Drive (55 miles per hour)	35 feet	18 feet
Notes:		
^a 75 VdB = Vibration decibel standard for residential buildings.		
^b 78 VdB = Vibration decibel standard for nonresidential buildings.		

Future development projects would comply with the below Specific Plan Project Requirement, which would reduce vibration effects of train operations on future uses to adhere to FTA standards.

Noise and Vibration Project Requirements:

- 10.3.4-11:** Vibration Analysis Near VTA Light Rail. Project-specific vibration analyses shall be prepared for future residential developments within 35 feet of the VTA light rail lines within Moffett Park and within 20 feet of the VTA light rail lines for commercial, office/industrial/R&D, or institutional developments. These analyses shall include vibration measurements at future project sites and a comparison of the measurements to the established FTA standards to verify vibration and land use compatibility. If FTA vibration standards are not met at future project sites, measures (such as requiring greater setback distances from the rail lines) to reduce vibration effects will be determined by the City at the time a specific development is proposed.

3.14 POPULATION AND HOUSING

3.14.1 Environmental Setting

3.14.1.1 *Regulatory Framework*

State

Housing-Element Law

State requirements mandating that housing be included as an element of each jurisdiction’s general plan is known as housing-element law. The Regional Housing Need Allocation (RHNA) is the state-mandated process to identify the total number of housing units (by affordability level) that each jurisdiction must accommodate in its housing element. California housing-element law requires cities to: (1) zone adequate lands to accommodate its RHNA; (2) produce an inventory of sites that can accommodate its share of the RHNA; (3) identify governmental and non-governmental constraints to residential development; (4) develop strategies and a work plan to mitigate or eliminate those constraints; and (5) adopt a housing element and update it on a regular basis.¹³⁴

Regional and Local

Plan Bay Area 2040/2050

Plan Bay Area 2040 is a long-range transportation, land-use, and housing plan intended to support a growing economy, provide more housing and transportation choices, and reduce transportation-related pollution and GHG emissions in the Bay Area. Plan Bay Area 2040 promotes compact, mixed-use residential and commercial neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).¹³⁵

ABAG allocates regional housing needs to each city and county within the nine-county San Francisco Bay Area, based on statewide goals. ABAG also develops forecasts for population, households, and economic activity in the Bay Area. ABAG, MTC, and local jurisdiction planning staff created the Regional Forecast of Jobs, Population, and Housing, which is an integrated land use and transportation plan through the year 2040 (upon which Plan Bay Area 2040 is based).

In October 2021, ABAG adopted Plan Bay Area 2050 which includes 35 strategies for housing, transportation, economic viability and the environment and lays out a vision for policies and investments to make the bay area more affordable, connected, diverse, healthy and economically vibrant.

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future

¹³⁴ California Department of Housing and Community Development. “Regional Housing Needs Allocation and Housing Elements.” Accessed October 21, 2021. <http://hcd.ca.gov/community-development/housing-element/index.shtml>.

¹³⁵ Association of Bay Area Governments and Metropolitan Transportation Commission. “Project Mapper.” <http://projectmapper.planbayarea.org/>. Accessed October 21, 2021.

development projects implementing the Specific Plan would be subject to the General Plan population and housing policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-1.3	Contribute to a healthy jobs-to-housing ratio in the region by considering jobs, housing, transportation, and quality of life as inseparable when making planning decisions that affect any of these components.
<i>Housing Element</i>	
HE-1.4	Continue to require office and industrial development to mitigate the demand for affordable housing.
HE-4.1	Provide site opportunities for development of housing that responds to diverse community needs in terms of density, tenure type, location, and cost.
HE-4.2	Continue to direct new residential development into Moffett Parks, near transit, and close to employment and activity centers.
HE-4.3	Require new development to build to at least 75 percent of the maximum zoning density, unless an exception is granted by the City Council.
HE-4.6	Provide expanded areas for higher density housing through the conversion of underutilized industrial areas to residential use, if the sites are fit for residential uses (i.e., no health hazards exist).

3.14.1.2 Existing Conditions

The City of Sunnyvale Housing Element and related land use policies were last updated in December 2014. As of January 1, 2022, the City of Sunnyvale had an approximate population of 156,234 with an average of 2.62 persons per household, and total household number of 62,491.¹³⁶

ABAG estimated that in 2040, the City would have a population of 222,210 and have 84,170 households.¹³⁷ ABAG projected that jobs in the City would increase from approximately 92,305 in 2020 to 108,640 in 2040.¹³⁸ According to Plan Bay Area 2050, the North Santa Clara County area (which includes the City of Sunnyvale and portions of the cities of Santa Clara, Mountain View, Milpitas, San José, and Palo Alto) is projected to have a total of 320,000 households and 629,000 jobs by 2050.¹³⁹ Plan Bay Area 2050 does not include projections by city.

The RHNA has identified a need for 11,966 additional housing units for the City of Sunnyvale.¹⁴⁰ The City recently published its 2023-2031 Draft Housing Element, which is anticipated to be adopted

¹³⁶ California Department of Finance. “E-5 City/County Population and Housing Estimates for Cities, Counties, and the State, January 2021-2022.” May 2022. Accessed June 3, 2022. Available at: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>.

¹³⁷ Association of Bay Area Governments. *Plan Bay Area Projections 2040*. November 2018. Page 130.

¹³⁸ Ibid. Page 135.

¹³⁹ Plan Bay Area 2050. *Growth Pattern*. January 21, 2021. Page 1.

¹⁴⁰ Association of Bay Area Government. *Regional Housing Need Plan, San Francisco Bay Area 2023-2031*. Page 28.

in early 2023. The 2023-2031 Draft Housing Element includes housing sites proposed by the Specific Plan in the inventory. To meet the City's RHNA, Moffett Park was identified to accommodate approximately 7,579 housing units.¹⁴¹

Moffett Park is currently developed with 18.5 million square feet of office/R&D/industrial, commercial uses, and institutional uses, and contains no residential units. The existing development within Moffett Park provides approximately 35,269 jobs (refer to Appendix C for calculation details).¹⁴²

3.14.2 Impact Discussion

For the purpose of determining the significance of the project's impact on population and housing, would the project:

- 1) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?
- 2) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

3.14.2.1 *Project Impacts*

Impact POP-1: The project would not induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).
(Less than Significant Impact)

Direct Impact

Table 3.14-1 below provides a summary of the number of households, residents, employment square footage, and jobs/employees estimated under existing conditions, the adopted Specific Plan, and proposed Specific Plan. The proposed Specific Plan would result in a net increase in residents and jobs in Moffett Park compared to existing conditions and compared to what is projected under the buildout of the adopted Specific Plan.

¹⁴¹ City of Sunnyvale. *2023-2031 Housing Element*. May 2022. Page 5-50.

¹⁴² Under existing conditions, Moffett Park provides approximately 35,269 jobs. Buildout of the Adopted Specific Plan would result in 5.8 million additional square feet of development and would provide a total of approximately 51,584 jobs. See discussion under Impact POP-1 in Section 3.14.2.1 Project Impacts.

Table 3.14-1: Estimated Residents and Employees under Existing, Adopted Specific Plan, and Proposed Specific Plan Conditions

	Households	Residents	Employment Use in Millions of Square Footage	Jobs/ Employees
A. Existing Conditions	0	0	18.5	35,269
B. Adopted Specific Plan	0	0	24.3	51,584
C. Proposed Specific Plan	20,000	42,000	33.5	95,683
<i>Change between Existing and Proposed (C – A)</i>	<i>20,000</i>	<i>42,000</i>	<i>15.0</i>	<i>60,414</i>
<i>Change between Adopted and Proposed (C – B)</i>	<i>20,000</i>	<i>42,000</i>	<i>9.2</i>	<i>26,954</i>

Implementation of the proposed Specific Plan would result in an overall intensification of development within Moffett Park and would introduce employment and residential uses beyond what was accounted for in the City’s General Plan (see Change between Adopted and Proposed row in Table 3.14-1). The number of residential units allowed by the proposed Specific Plan would help the City meet and exceed its near-term RHNA number.

Buildout of the City’s General Plan (which includes the adopted Specific Plan, as well as recently approved plans including the Downtown Sunnyvale Specific Plan, El Camino Real Specific Plan, and Lawrence Station Area Plan) is estimated to result in a total population of 197,785 and 121,689 jobs. As described above in Section 3.14.1.2 Existing Conditions, the City was projected to have a population of 222,210 and 108,640 jobs in 2040. As shown in Table 3.14-2 below, the buildout of the General Plan, with the net growth resulting from the proposed project, is beyond the growth projected for the City.

Table 3.14-2: Projected Growth Citywide

	Households	Residents/ Population	Jobs/Employees
A. General Plan Buildout	82,122	203,985	43,856
B. Net Increase from Proposed Specific Plan	20,000	42,000	26,954
<i>Total (A+B)</i>	<i>102,122</i>	<i>245,985</i>	<i>70,810</i>
2040 Projected Citywide Growth	84,170	222,210	108,640

Population projections and projections at the city-level are not provided in Plan Bay Area 2050. The updated Plan Bay Area 2050 projections for the North Santa Clara County area (which includes the City of Sunnyvale and portions of the cities of Santa Clara, Mountain View, Milpitas, San José, and Palo Alto) estimate a total of 320,000 households and 629,000 jobs by 2050. In general, growth is

estimated to continue and the amount of development that would result from the proposed Specific Plan reflects and accommodates that projected growth. The proposed Specific Plan is consistent with the goals of Plan Bay Area 2050 by:

- Proposing mixed-use residential development in proximity to transit;
- Providing affordable housing options;
- Creating additional employment opportunities within the City and regionally;
- Conserving natural resources and contributing additional parks/open space and recreation areas within the City; and
- Increasing connectivity by improving transportation infrastructure.

In addition, the project would be consistent with the City's General Plan policies identified in Section 3.14.1.1 Regulatory Framework by:

- Maximizing an opportunity for higher-density housing;
- Facilitating additional residential development that would help the City meet its RHNA;
- Creating new residential development, employment opportunities, and activity centers near transit in Moffett Park; and
- Providing affordable housing options.

Based on the above discussion, the proposed Specific Plan is consistent with growth projected in the North Santa Clara County and would not result in unplanned population growth in an area. **(Less than Significant Impact)**

Indirect Impact

The proposed Specific Plan includes infrastructure improvements, including a new multi-modal street network (see Figure 2.3-4) and utility upgrades (see Section 3.19 Utilities and Service Systems). These infrastructure improvements would serve the existing and future development that would occur under the proposed Specific Plan. The Specific Plan does not include extension of roads or other infrastructure that would serve additional growth beyond what is proposed by the Specific Plan. For these reasons, the proposed Specific Plan would not indirectly result in unplanned population growth in an area. **(Less than Significant Impact)**

Impact POP-2: The project would not displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere. **(No Impact)**

As discussed in Section 3.14.1.2 Existing Conditions, Moffett Park currently has no residential units. For this reason, implementation of the proposed Specific Plan would not displace substantial numbers of existing people or housing, necessitate the construction of replacement housing elsewhere. **(No Impact)**

3.14.2.2 *Cumulative Impacts*

Impact POP-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant population and housing impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative population and housing impacts is the City boundaries and can be extended further to the North Santa Clara County area.

Population Growth

As discussed under Impact POP-1 above, although implementation of the proposed Specific Plan would result in an increase in population and housing compared to existing conditions and what is planned for in the adopted General Plan, the proposed Specific Plan would be consistent with General Plan policies and growth projections for the City and North Santa Clara County area. Of the growth projected for the North Santa Clara County area in 2050, the net growth associated with the Specific Plan represents a six percent of the projected 320,000 households and four percent of the projected 629,00 jobs. These percentages of growth are not substantial. For these reasons, the proposed Specific Plan would not have a cumulatively considerable contribution to a significant cumulative growth impact. **(Less than Significant Cumulative Impact)**

Displacement of Existing Housing

As discussed under Impact POP-2, the Specific Plan would not displace residents or housing. Therefore, the Specific Plan would not contribute to a cumulative displacement of substantial numbers of residents. **(No Cumulative Impact)**

3.15 PUBLIC SERVICES

3.15.1 Environmental Setting

3.15.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Government Code Section 65995 through 65998

California Government Code Section 65996 specifies that an acceptable method of offsetting a project's effect on the adequacy of school facilities is the payment of a school impact fee prior to the issuance of a building permit. Government Code Sections 65995 through 65998 set forth provisions for the payment of school impact fees by new development by "mitigating impacts on school facilities that occur (as a result of the planning, use, or development of real property)" (Section 65996[a]). The legislation states that the payment of school impact fees "are hereby deemed to provide full and complete school facilities mitigation" under CEQA (Section 65996[b]).

Developers are required to pay a school impact fee to the school district to offset the increased demands on school facilities caused by the proposed residential development project. The school district is responsible for implementing the specific methods for mitigating school impacts under the Government Code.

Section 21151.8 of the Public Resources Code (CEQA)

Projects that involve the acquisition of school sites and/or construction of new schools are subject to additional environmental review requirements beyond typical land use development projects. Pursuant to Section 21151.8 of the Public Resources Code, an environmental document analyzing such a project will need to disclose if a proposed school site is:

- A current or former hazardous waste disposal site or solid waste disposal site and, if so, whether the wastes have been removed.
- A hazardous substance release site identified by the State Department of Health Services in a current list adopted pursuant to §25356 for removal or remedial action pursuant to Chapter 6.8 (commencing with §25300) of Division 20 of the Health and Safety Code.
- A site which contains one or more pipelines, situated underground or aboveground, which carries hazardous substances, acutely hazardous materials, or hazardous wastes, unless the pipeline is a natural gas line which is used only to supply natural gas to that school or neighborhood.

- A site that is within 500 feet of the edge of the closest traffic lane of a freeway or other busy traffic corridor.

The lead agency will need to notify in writing and consult with BAAQMD to identify facilities within one-fourth of a mile of the proposed school site which might reasonably be anticipated to emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste. Based on the written findings, the lead agency shall make one of the following findings:

- No such facilities were identified;
- Such facilities exist but the health risks do not or will not constitute an actual or potential endangerment of public health at the site;
- Such facilities exist and corrective measures will be taken that will result in emissions mitigation to levels that will not constitute endangerment. In this instance, the school district should make an additional finding that emissions will have been mitigated before occupancy of the school; or
- Such facilities exist but conditions cannot be met and a statement of overriding considerations must be adopted.

California Department of Education School Site Selection Criteria

Pursuant to Section 17251(b) of the Education Code, the California Department of Education (CDE) developed the School Site Selection and Approval Guide to assist school districts in (1) selecting appropriate sites in compliance with regulations and CDE policies and (2) gaining state approval for the selected sites. The guide refers to the standards for school site selection as outlined in CEQA, California Education Code, Title 5 of the CCR, and other state codes. The guide includes site selection criteria based on a variety of factors such as location, size, and cost; however, it focuses on safety as the most important criteria to be considered during site selection.

According to the guide, the following safety factors shall be considered when evaluating a potential school site: (1) proximity to airports; (2) proximity to high-voltage power transmission lines; (3) presence of toxic and hazardous substances; (4) hazardous air emissions and facilities within a quarter mile; (5) other health hazards; (6) proximity to railroads; (7) proximity to high-pressure natural gas lines, gasoline lines, pressurized sewer lines, or high-pressure water pipelines; (8) proximity to propane tanks; (9) proximity to major roadways; (10) noise; (11) results of geological studies and soils analyses; (12) condition of traffic and school bus safety; (13) safe routes to school; and (14) safety issues for joint-use projects.

Regional and Local

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the proposed Specific Plan would be subject to the General Plan public services policies including the ones listed below.

Policy	Description
<i>Community Character Element</i>	
CC-4.2	Maintain beautiful and comfortable outdoor public places which provide a shared sense of ownership and belonging for Sunnyvale residents, business owners, and visitors.
CC-7.1	Provide access to the Library and materials.
CC-7.2	Maintain a full-service Library adequate to meet community needs.
<i>Land Use and Transportation Element</i>	
LT-3.26	Support the proliferation of multiuse trails within Sunnyvale and their connection to regional trails in order to provide enhanced access to open space, promote alternative transportation options, and increase recreational opportunities while balancing those needs with the preservation of natural habitat, public safety, and quality of life in residential neighborhoods.
LT-9.1	Ensure that the planned availability of open space in both the City and the region is adequate.
LT-9.18	Improve accessibility to parks and open space by removing barriers.
LT-14.8	Ensure that development projects provide appropriate improvements or resources to meet the City’s future infrastructure and facility needs, and provide development incentives that result in community benefits and enhance the quality of life for residents and workers.
<i>Safety and Noise Element</i>	
SN-3.1	Provide rapid and timely response to all emergencies.
SN-5.1	Assure that equipment and facilities are provided and maintained to meet reasonable standards of safety, dependability and compatibility with fire service operations.

Sunnyvale Municipal Code

SMC Chapter 19.74 (Parks Dedication for Rental Housing Projects) defines the park in-lieu fees or land dedication required for multi-family rental housing projects within Sunnyvale. In accordance with the open space and recreation sub-element of the General Plan, development projects must dedicate five acres of land to public park and recreational facilities, per each one thousand persons. New rental housing developments must pay a fee equivalent to the cost of purchasing parkland or to compensate for the anticipated increased usage of existing parklands. Alternatively, a new project may develop or dedicate land for future use, which is the City’s preferred approach.

SMC Chapter 16.52 is the City’s Fire Code. The Fire Code includes the 2018 International Fire Code (IFC) in its entirety as published by the International Code Council and the California Fire Code (CFC) under Ordinance 3172-21. The Fire Code regulates, among other things, issuance of permits where operations or businesses or the installation or modification of any systems regulated under the Code are planned (Section 16.52.105), application and collection of applicable fire permit fees (Section 16.52.106), and installation of residential and commercial automatic sprinkler systems

(Section 16.52.903). City Council has adopted Ordinance 3201-22 to adopt by reference the 2022 CFC (2021 IFC) with local amendments, effective January 1, 2023.

3.15.1.2 *Existing Conditions*

Fire and Police Protection Services

Fire and police protection services for Moffett Park is provided by the Sunnyvale DPS. DPS is staffed by Public Safety Officers who are cross-trained as police officers, firefighters, and emergency medical technicians.¹⁴³ DPS is divided into three Bureaus: Bureau of Fire Services, Bureau of Police Services, and Bureau of Special Operations. The three Bureaus are organized into nine programs: Police Services, Fire Services, Community Safety Services, Personnel and Training Services, Investigation Services, Communication Services, Public Safety Administration Services, Records Management and Property Services, and Fire Prevention and Hazardous Materials Services. The Fire Services program is responsible for responding to fire calls and providing emergency medical services. The Fire Services program provides fire prevention compliance inspections, fire code enforcement, and hazardous materials regulation. The Police Services program is responsible for providing law enforcement.¹⁴⁴

The Fire Services program operates a total of six fire stations that serve the City of Sunnyvale. Fire Department Station #5, located at 1210 Bordeaux Drive, is relatively centrally located within Moffett Park. Fire Department Station #6, located at 1282 Lawrence Station Road, is approximately 1,600 feet east of Moffett Park. DPS has an established response time goal of seven minutes and 59 seconds for the Fire Services program.¹⁴⁵ In fiscal year 2020/21, 94 percent of emergency events were responded to within the established goal.¹⁴⁶

The Police Services program is based out of the Sunnyvale DPS headquarters at 700 All America Way, located approximately four miles south of Moffett Park. DPS does not have established response time goals or service ratio for the Police Services program; however, they do track average response times throughout each fiscal year. In fiscal year 2021/22, the average response time was four minutes and sixteen seconds.¹⁴⁷

The Bureau of Fire Services has mutual and/or auto aid agreements with Santa Clara County Fire, San José Fire, Mountain View Fire, and City of Santa Clara Fire. These agreements cover responses to freeway incidents and structure fire incidents in areas of common shared boundaries between jurisdictions.

¹⁴³ City of Sunnyvale. "Departments: Public Safety." May 2022. Accessed June 2, 2022.

<https://www.sunnyvale.ca.gov/your-government/departments/public-safety>

¹⁴⁴ City of Sunnyvale. "DPS Organizational Chart." May 2022. Accessed June 3, 2022.

<https://www.sunnyvale.ca.gov/home/showpublisheddocument/3052/637896107934370000>

¹⁴⁵ Hunter, Jeff. Public Safety Department Deputy Chief, City of Sunnyvale. Personal Communication. May 20, 2022.

¹⁴⁶ Ibid.

¹⁴⁷ Ibid.

Schools

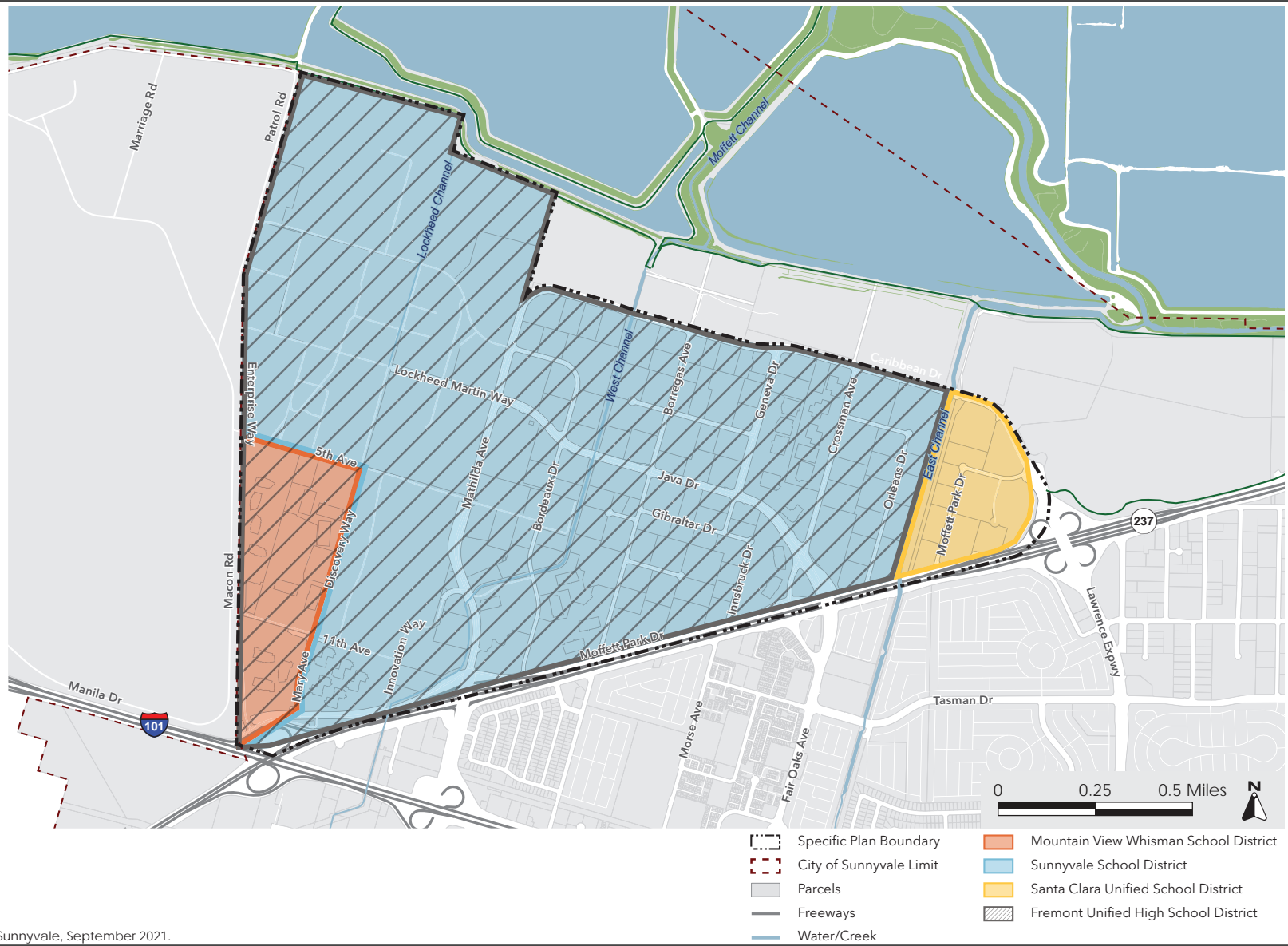
Moffett Park is within the Sunnyvale School District (SSD), Fremont Union High School District (FUHSD), Santa Clara Unified School District (SCUSD) boundaries, and Mountain View Whisman School District (MVWSD) boundaries, as shown on Figure 3.15-1. Residential uses are proposed within the boundaries of the SSD, FUHSD, and SCUSD. No residential uses are proposed within the boundaries of the MVWSD.

Within the SSD and FUHSD boundaries, Moffett Park is within the enrollment boundaries of Lakewood Elementary School located at 750 Lakechime Drive, approximately two miles south of Moffett Park; Columbia Middle School located at 739 Morse Avenue, approximately two miles south of Moffett Park; and Fremont High School located at 575 West Fremont Avenue, approximately four miles south of Moffett Park. King's Academy, a private high school located approximately 1.5 miles south of Moffett Park, operates on property owned by FUHSD under a 25-year lease that expires in 2035.¹⁴⁸

Within the SCUSD boundaries, Moffett Park is within the enrollment boundaries of George Mayne Elementary School located at 5030 North First Street, approximately 4.5 miles northeast of Moffett Park; Dolores Huerta Middle School located at 3556 Zanker Road, approximately 5.5 miles east of Moffett Park; and Kathleen MacDonald High School located at 3588 Zanker Road, approximately 5.5 miles east of Moffett Park.

The above described schools are shown on Figure 3.15-2. The existing capacity and enrollment for the local schools are provided in Table 3.15-1 below. As shown in Table 3.15-1, Fremont High School currently has enrollment that exceeds its capacity. As noted in the table, the capacity of Fremont High School reflects a temporarily reduced capacity due to construction that will be completed in 2024. The existing enrollment at Fremont High School is currently accommodated in existing buildings and portable classrooms. All other schools have adequate capacity for their existing enrollment.

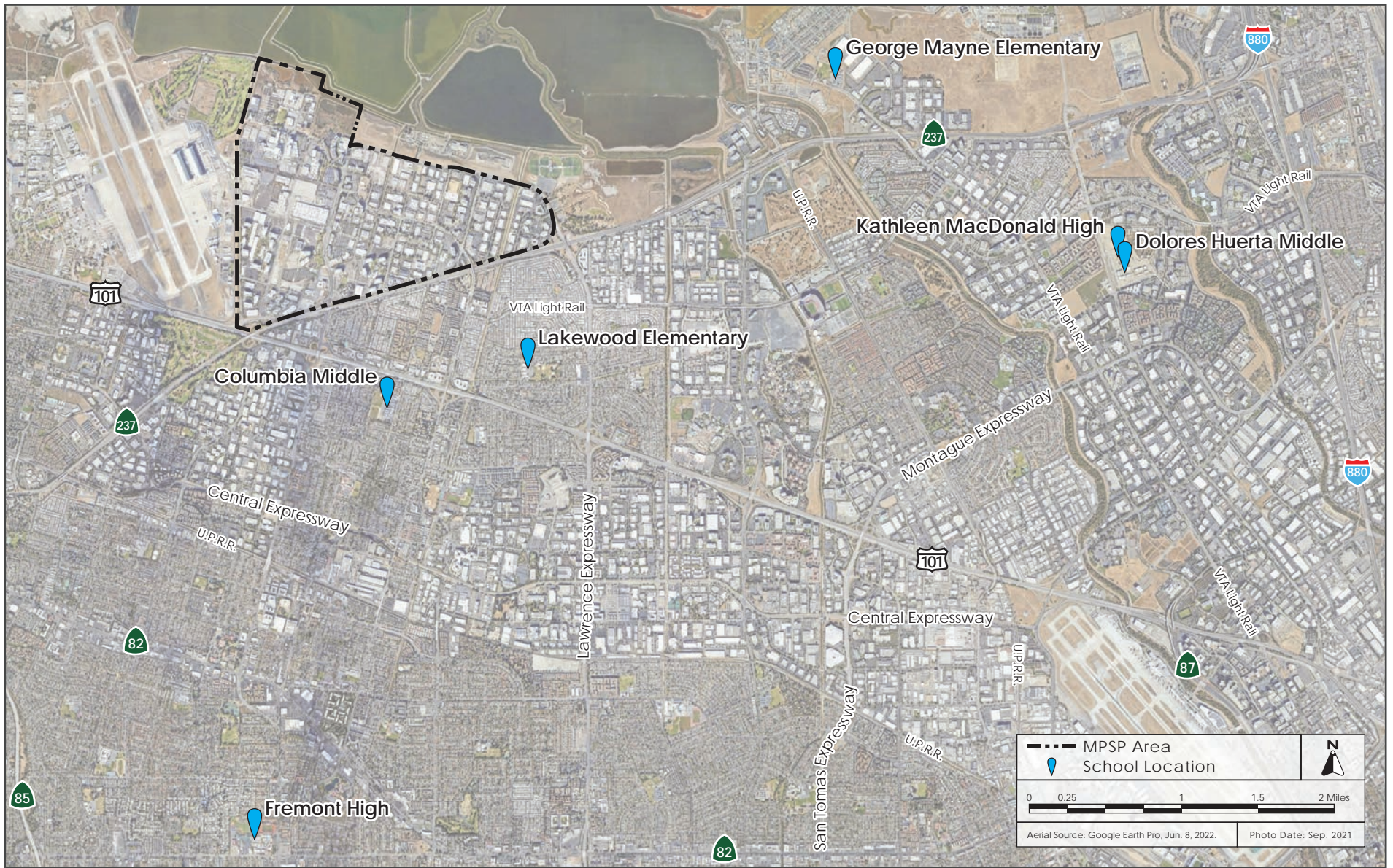
¹⁴⁸ The King's Academy. "The King's Academy and Fremont Union High School District Sign 25 Year Lease." January 13, 2010. https://www.tka.org/uploaded/About_Us/Documents/25_Year_Lease.pdf



Source: City of Sunnyvale, September 2021.

SCHOOL DISTRICT BOUNDARIES WITHIN MOFFETT PARK

FIGURE 3.15-1



LOCAL SCHOOLS

FIGURE 3.15-2

Table 3.15-1: School Enrollment and Capacity		
School	Capacity	Enrollment
Sunnyvale School District¹		
Lakewood Elementary School	410	338
Columbia Middle School	608	585
Fremont Union High School District		
Fremont High School	2,100 ²	2,177
Santa Clara Unified School District		
George Mayne Elementary School	480	464
Dolores Huerta Middle School	1,000	197 ³
Kathleen MacDonald High School ⁴	1,500	225
<p>¹ SSD capacity data is based on 2025 projections included in the SSD’s Facility Master Plan. Source: Burns, Brandt. Director of Facilities and Operations, Sunnyvale School District. Personal Communication. June 9, 2022.</p> <p>² Capacity of Fremont High School is temporarily reduced as the school is undergoing construction to modernize the school. A new capacity study would be completed once construction is complete in 2024. Source: Manolache, Anilisa. Executive Assistant to the CBO, Fremont Union High School District. Personal Communication. November 16, 2021.</p> <p>³ Dolores Huerta Middle School opened in August 2021. Enrollment numbers are based on sixth grade students only. Seventh and eighth grade classes will become available in 2023 and 2024, respectively. Source: Healy, Michal. Director of Facility Development and Planning, Santa Clara Unified School District. Personal Communication. May 24, 2022.</p> <p>⁴ Kathleen MacDonald High School opened in August 2022. Enrollment numbers are based on ninth grade students only. Tenth, eleventh, and twelfth grade classes will become available in 2023, 2024, and 2025. Source: Healy, Michal. Director of Facility Development and Planning, Santa Clara Unified School District. Personal Communication. August 1, 2022.</p>		

Parks and Open Space

Parks and open space in the City are managed by the Department of Public Works Parks Division. The City currently has approximately 765 acres of parkland¹⁴⁹, including approximately 177 acres of park, 264 acres of special use facilities, 87 acres of school open space, three acres of public grounds (including orchards and open space surrounding the Community Center and Civic Center campuses), and 48 acres of greenbelts and trails. The City’s parkland total includes other recreational facilities such as the John W. Christian Greenbelt, a senior center, tennis courts, and a skate park.

Currently, there are no designated public parks or open spaces within Moffett Park. The nearest park to Moffett Park is Baylands Park located directly east of Moffett Park. Baylands Park is owned by the County, and the City has a long-term operating agreement with the County.

¹⁴⁹ The City’s available parkland is estimated to increase to 778 in 2023.

Libraries

The Sunnyvale Public Library is located at 665 West Olive Avenue, approximately 4.5 miles south of Moffett Park. The Sunnyvale Public Library is a 60,800 square foot facility and includes more than 1.4 million print materials, eBooks, DVDs, Blu-ray discs, books on CD, music CDs, and streaming audio and video.¹⁵⁰ The library also offers a variety of programs and events for the community.

In 2007, the City of Sunnyvale developed a service ratio goal of one square foot per capita of building space for libraries.¹⁵¹ Based on the current population (156,234 persons) and current library size (60,800 square feet), the City of Sunnyvale is providing 0.39 square feet per capita and is not meeting its goals.

In September 2018, the City approved the Civic Center Modernization Project Master Plan. The Master Plan consists of three phases. The first phase is to replace City Hall and construct a new Emergency Operations Center. This phase is estimated for completion in 2023. The second phase will be focused on the main library and will consider expanding or replacing the existing 60,800 square foot library with up to a 120,000 square foot library. The intent of the larger library is to serve existing and future growth in the City. The impacts of the new/larger library were analyzed in the certified Civic Center Modernization Master Plan EIR.¹⁵² Phase 3 is to relocate the DPS building from the corner of El Camino Real/Pastoria to the corner of Charles/Olive. Construction of the Civic Center Modernization Project phase 1 began in December 2020; full buildout of phase 3 is expected to be completed by 2040.¹⁵³ The City is currently preparing a feasibility study for Phase 2 of the Civic Center Modernization Master Plan (main library).

The City is currently in the process of finishing design for a new branch library located at Lakewood Park. This library will be 20,000 square feet of library and learning center. It is scheduled to open end of 2024 or early 2025.

3.15.2 Impact Discussion

For the purpose of determining the significance of the project's impact on public services, would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- 1) Fire protection?
- 2) Police protection?
- 3) Schools?

¹⁵⁰ Sloan, Steve. City of Sunnyvale Library. Personal Communication. June 7, 2022.

¹⁵¹ City of Sunnyvale. *Council Report: Sunnyvale Library of the Future Study and Strategy: Facility Scenarios*. April 24, 2022. Page 2.

¹⁵² City of Sunnyvale. *Civic Center Modernization Master Plan Draft Program Environmental Impact Report*. SCH #2017092075. April 2018. Certified September 2018.

¹⁵³ City of Sunnyvale. *Civic Center Modernization Phase 1 – Notice of Construction*. December 2020. Accessed May 20, 2022. <https://sunnyvale.ca.gov/civicax/filebank/blobdload.aspx?t=45260.03&BlobID=27432>

- 4) Parks?
- 5) Other public facilities?

3.15.2.1 *Project Impacts*

Impact PS-1: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for fire protection services. **(Less than Significant Impact)**

Compared to existing conditions, the Specific Plan would result in a net increase of approximately 42,000 residents and 60,414 employees (refer to Table 3.14-1) in Moffett Park. The increase in development and population in Moffett Park would result in an increase in demand for fire protection services. It is likely that this growth would have an impact on the existing fire services and facilities. The impact could include but is not limited to increases in traffic, medical calls, and alarm responses.¹⁵⁴ The future Specific Plan development would pay an in-lieu public facilities fee that could be used for necessary upgrades to existing fire stations and associated services such as fire trucks. DPS continually evaluates its service levels and works with the City Council during the annual budget process to balance resources. DPS and City Council use planning tools (including the City's General Plan and implemented Specific Plans) to plan for future needs within a 20-year horizon.

In the event a new or expanded fire station is needed within Moffett Park, separate environmental review would be required to assess its impact. The development of a future fire station in Moffett Park would comply with existing regulations and applicable policies, including the Specific Plan policies identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources, that would reduce environmental impacts associated with construction to a less than significant level. The LUTE EIR concluded that any new or expanded facilities that may be required would be constructed on previously disturbed sites within the existing urban area of the City and are not expected to result in significant unavoidable environmental impacts.¹⁵⁵

In addition, future development projects would be subject to the City's development review process, which includes review of site plans by DPS to ensure adequate design and infrastructure for fire protection. Future development would also comply with Building and Fire Code standards that ensure building design and fire protection features (such as sprinkler systems) are incorporated.

Based on the above discussion, implementation of the Specific Plan would not result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities. **(Less than Significant Impact)**

¹⁵⁴ Hunter, Jeff. Public Safety Department Deputy Chief, City of Sunnyvale. Personal Communication. May 20, 2022.

¹⁵⁵ City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. SCH #2012032003. August 2016. Pages 4.0-5 and 4.0-6.

Impact PS-2: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for police protection services. **(Less than Significant Impact)**

Implementation of the Specific Plan would result in an increase in demand for police protection services compared to existing conditions. It is likely that this growth would have an impact on the existing police services and could necessitate additional facilities. The impact could include but is not limited to increases in traffic, medical calls, and patrol responses. Future Specific Plan development would pay an in-lieu public facilities fee that could be used for necessary upgrades to existing police stations and associated services. As discussed above under Impact PS-1, DPS continually evaluates its service levels and works with the City Council during the budget process to balance resources and plan for additional resources as needed.

In the event a new police station or substation is needed within Moffett Park, separate environmental review would be required to assess its impact. The development of future police facilities in Moffett Park would be in compliance with existing regulations and applicable policies, including the Specific Plan policies identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources, that would reduce environmental impacts associated with construction to a less than significant level. The LUTE EIR concluded that any new or expanded facilities that may be required would be constructed on previously disturbed sites within the existing urban area of the City and are not expected to result in significant and unavoidable environmental impacts.¹⁵⁶ **(Less than Significant Impact)**

Impact PS-3: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for schools. **(Less than Significant Impact)**

Of the 20,000 residential units that would be allowed by the Specific Plan, approximately 17,200 units would be within the SSD and FUHSD boundaries and the remaining 2,800 units would be within the SCUSD boundaries. Table 3.15-2 below shows the estimated number of students generated within each school district.

¹⁵⁶ City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. SCH #2012032003. August 2016. Pages 4.0-5 and 4.0-6.

Table 3.15-2: Student Generation Rates				
School	Number of Residential Units Proposed Within District	Student Generation Rate	Students Generated	Available Capacity¹
Sunnyvale School District²				
Lakewood Elementary School	17,200	0.07	1,204	72
Columbia Middle School	17,200	0.07	1,204	23
Fremont Union High School District²				
Fremont High School	17,200	0.03	516	-77
Santa Clara Unified School District³				
George Mayne Elementary School	2,800	0.03 market-rate 0.56 BMR	306	16
Dolores Huerta Middle School	2,800	0.03 market-rate 0.56 BMR	306	803
Kathleen MacDonald High School	2,800	0.03 market-rate 0.56 BMR	306	1,275
¹ Available capacity is existing capacity subtracted by enrollment (provided in Table 3.15-1). ² Sunnyvale School District and Fremont Union High School District do not have different student generation rates for affordable units. ³ Student generation calculations for the SCUSD are based on an expectation that 15 percent of the proposed residential units will be affordable or below-market rate (BMR) units. 2,800 du x 0.15 = 420 du x 0.56 students/du = 235 students from BMR units. 2,380 du x 0.03 students/du = 71 students from multi-family units.				

As shown in Table 3.15-2, buildout of the Specific Plan would generate students above the existing capacities at Lakewood Elementary School, Columbia Middle School, Fremont High School, and George Mayne Elementary School, respectively. The estimated number of students generated by the Specific Plan shown in Table 3.15-2 would materialize over time. The Specific Plan is a 20-year plan, and its full impacts (including the estimated total number of students) would be realized at buildout (approximately year 2040). School facilities, capacities, and enrollment numbers change will change over the next 20 years. Based on the data in Table 3.15-2 and communications with the school districts, it is possible new or expanded school facilities may be required to serve the students in Moffett Park. In addition, as mentioned in Section 3.15.1.2 Existing Conditions, the FUHSD has an existing high school campus that is currently under lease to King’s Academy until 2035 that could be used in the future as a public high school to accommodate students generated by the Specific Plan.

No school is proposed as part of the project at this time. In the event a new school is proposed, separate environmental review is required. In general, construction of a new public, local-serving school within Moffett Park would not result in significant impacts in compliance with existing regulations and measures such as those identified for future development in Sections 3.3 Air Quality,

3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources. Any future school projects would comply with Section 21151.8 of the Public Resources Code and Section 17251(b) of the California Department of Education Code, as described under Section 3.15.1.1 Regulatory Framework.

Per Government Code Section 65995 (discussed under Section 3.15.1.1 Regulatory Framework), payment of established school impact fees is considered adequate mitigation of impacts associated with increased demands on school facilities resulting from the development. Consistent with Government Code Section 65995, future Specific Plan development would be required to pay school impact fees as established by the appropriate school district.

Based on the above discussion, implementation of the Specific Plan would not result in significant impacts to schools. **(Less than Significant Impact)**

Impact PS-4: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for parks. **(Less than Significant Impact)**

Currently, there are no designated parks within Moffett Park. The closest park to Moffett Park is Baylands Park located to the east. As described in Section 2.3 Project Description, the Specific Plan includes over 200 acres of new open space (shown in Table 2.3-5). New open space would include natural areas, greenways, community parks, neighborhood parks, and mini parks/plazas.

SMC Chapter 19.74 establishes a standard of five acres of park for every 1,000 residents and requires new housing projects to either provide the appropriate amount of park space or pay in-lieu fees. The Specific Plan would generate approximately 42,000 residents; thus, pursuant to SMC Chapter 19.74, 210 acres of new park space would be required. The proposed 215 to 240 acres of park and open space (which could be developed in the MP-AC and MP-MU land use designations), therefore, would be adequate to serve the increased demand from future residents of the Specific Plan. Future development projects would comply with the following Specific Plan policies pertaining to open space.

Proposed Specific Plan Policies:

- **OSE-2.1:** Provide a minimum of one tot lot for ages two to five within each residential neighborhood or one per 7,000 residents.
- **OSE-2.2:** Provide a minimum of one inclusive, all-abilities and ages play space within each residential neighborhood or one per 7,000 residents.
- **OSE-2.4:** Provide a minimum of four dog parks or dog walking areas located within 10-minute walk of residential buildings or one per 10,500 residents.

- **OSE-2.5:** Provide a minimum of one multi-use/flexible field area, 50 by 100 yards minimum or equivalent to a high school soccer field as defined by the US Youth Soccer Association.
- **OSE-2.6:** Provide a minimum of three open field/flexible recreation areas, 35 by 65 yards minimum or equivalent to a U10 soccer field as defined by the US Youth Soccer Association. Fields may be synthetic or natural turf with grading and drainage to allow for regular use for informal/drop-in, youth sports, and community events.
- **OSE-2.7:** When and where possible, increase the quantity of multi-use flex fields to include more opportunities for informal and youth athletics.
- **OSE-2.8:** Co-locate a community or neighborhood park with potential school site(s).

Future development would comply with SMC Chapter 19.74 to ensure the development of park and recreational facilities in Moffett Park adequately serve future residents in Moffett Park and throughout the City.

The environmental impacts associated with development of the proposed park and open space are discussed throughout this EIR as part of the project. The physical impacts of constructing the park and open space would be reduced to less than significant levels through compliance with existing regulations including General Plan and Specific Plan policies identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources. **(Less than Significant Impact)**

Impact PS-5: The project would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for other public facilities. **(Less than Significant Impact)**

The new residents from the Specific Plan would increase the demand on library services compared to existing conditions. As discussed under Section 3.15.1.2 Existing Conditions, the Civic Center Modernization project will study a new or renovated 120,000 square foot library facility to serve the City of Sunnyvale by 2040.¹⁵⁷ The Specific Plan would result in a net increase of 42,000 residents that could be patrons of the library. With implementation of the Specific Plan and the City’s library Modernization project, the City’s library service ratio would be increased from 0.39 to 0.60 square feet of space per capita.¹⁵⁸ Additionally, the Specific Plan would pay an in-lieu public services fee that could be used for necessary upgrades to libraries.

If future library facilities are constructed in Moffett Park, they would be in compliance with existing regulations and applicable policies, including the Specific Plan policies identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8

¹⁵⁷ City of Sunnyvale. *Civic Center Addendum to Program Environmental Impact Report*. April 2020. Page 26.

¹⁵⁸ The modernization project would result in a 120,000 square foot library facility and the Specific Plan would result in a total citywide population of 198,243. $120,000 \text{ sf} / 198,243 \text{ persons} = 0.60 \text{ sf} / \text{capita}$ of library space provided.

Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources to reduce environmental impacts from its construction to a less than significant level. **(Less than Significant Impact)**

Independent of the Specific Plan, the City is pursuing implementation of other library projects. The Lakewood Branch Library and Learning Center Project, which is currently undergoing environmental review, is anticipated to open at the end of 2024.¹⁵⁹ The project funds construction of an approximately 20,000 square foot branch library facility in the Lakewood Village neighborhood of Sunnyvale. More than a stand-alone branch library, the facility is a partnership between the City of Sunnyvale, the Sunnyvale School District, and the Fremont Unified High School District. The center would serve as a primary resource for literacy, learning and wellness activities for residents of north Sunnyvale. If the project is approved and becomes operational, this facility would be the closest library to Moffett Park; however, the size of the facility and plan of service did not contemplate potential impact from the Specific Plan.

3.15.2.2 Cumulative Impacts

Impact PS-C:	The project would not result in a cumulatively considerable contribution to a cumulatively significant public services impact. (Less than Significant Cumulative Impact)
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Fire and Police Protection

The geographic area for cumulative fire and police protection services is the City boundaries. As discussed under Impact PS-1 and Impact PS-2, DPS continually evaluates its service levels and works with the City Council during the budget process to balance resources and plan for future needs. In the event new or expanded fire facilities are required within Moffett Park, its construction would comply with existing regulations and applicable policies, including the Specific Plan policies identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources, to reduce environmental impact to a less than significant level. In addition, the LUTE EIR concluded that any new or expanded facilities that may be required would be constructed on previously disturbed sites within the existing urban area of the City and are not expected to result in significant unavoidable environmental impacts.¹⁶⁰ **(Less than Significant Cumulative Impact)**

Schools

The geographic area for cumulative school impacts are the attendance boundaries of the schools that students generated from the Specific Plan would attend (i.e., Lakewood Elementary School, George Mayne Elementary School, Columbia Middle School, Dolores Huerta Middle School, Fremont High School, and Kathleen MacDonald High School).

¹⁵⁹ City of Sunnyvale. "Lakewood Branch Library." Accessed December 13, 2022.

<https://www.sunnyvale.ca.gov/business-and-development/projects-in-sunnyvale/infrastructure-projects/lakewood-branch-library>

¹⁶⁰ City of Sunnyvale. *Land Use and Transportation Element Draft Environmental Impact Report*. SCH #2012032003. August 2016. Pages 4.0-5 and 4.0-6.

The SCUSD has stated that the implementation of cumulative projects (including Tasman East Specific Plan, Great America Specific Plan, Patrick Henry Specific Plan, City Place, and the Greystar General Plan Amendment/Freedom Circle Area Plan) would lead to the requirement of two new elementary schools in the City of Santa Clara.¹⁶¹ The FUHSD has stated that the district would need 10 to 75 acres of land to accommodate a new school facility, depending on the total number of students generated.¹⁶² FUHSD and SSD have stated that some of this land could be shared as joint use space. As required by Government Code 65996, cumulative projects (including future development allowed under the Specific Plan) would be required to pay the school impact fees to impacted school districts in order to offset the increased demands on school facilities caused by development. Therefore, the cumulative projects would not result in significant cumulative impacts to schools. In the event a new school is proposed, separate environmental review is required and state school siting requirement standards would be met. In general, construction of a new public, local-serving school within Moffett Park would not result in significant impacts in compliance with existing regulations and measures such as those identified for future development in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources. **(Less than Significant Cumulative Impact)**

Parks

The geographic area for cumulative park impacts is the City boundaries. All cumulative projects (including future Specific Plan development) are required to comply with SMC Chapter 19.74. Compliance with SMC Chapter 19.74 ensures the demand for park and recreational facilities by new residents is adequately met. Development of park and recreational facilities is subject to the City's development review process, existing regulations (including General Plan policies), and the Specific Plan policies (if applicable) identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources to reduce any potential environmental impacts associated with their construction to less than significant levels. **(Less than Significant Cumulative Impact)**

Library

The geographic area for cumulative library impacts is the City boundaries. As discussed under Impact PS-5, the City is in the process of completing a feasibility study to determine whether additional library facilities would be needed to serve future growth in the City (including the Specific Plan residents). If future library facilities are constructed in Moffett Park, they would be in compliance with existing regulations and applicable policies, including the Specific Plan policies identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources to reduce environmental impacts from its construction to a less than significant level. Therefore, cumulative projects would

¹⁶¹ Healy, Michael. Director of Facility Development and Planning. Santa Clara Unified School District. Personal Communication. May 21, 2020.

¹⁶² Mallery, Christine. Chief Business Officer. Fremont Union High School District. Personal Communication. June 30, 2020.

not result in a significant impact from the construction of new or expanded library facilities. (**Less than Significant Cumulative Impact**)

3.16 RECREATION
3.16.1 Environmental Setting
3.16.1.1 *Regulatory Framework*

State

Government Code Section 66477

The Quimby Act (included within Government Code Section 66477) requires local governments to set aside parkland and open space for recreational purposes. It provides provisions for the dedication of parkland and/or payment of fees in lieu of parkland dedication to help mitigate the impacts from new residential developments. The Quimby Act authorizes local governments to establish ordinances requiring developers of new residential subdivisions to dedicate parks, pay a fee in lieu of parkland dedication, or perform a combination of the two.

Regional and Local

Countywide Trails Master Plan

The Santa Clara County’s Countywide Trails Master Plan (CWTMP) Update is a regional trails plan approved by the Santa Clara County Board of Supervisors. It provides a framework for implementing the County’s vision of providing a contiguous trail network that connects cities to one another, cities to the county’s regional open space resources, County parks to other County parks, and the northern and southern urbanized regions of the County. The plan identifies regional trail routes, sub-regional trail routes, connector trail routes, and historic trails. The San Francisco Bay Trail, located north of Moffett Park, is a CWTMP trail.¹⁶³

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to the General Plan recreation policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-3.26	Support the proliferation of multiuse trails within Sunnyvale and their connection to regional trails in order to provide enhanced access to open space, promote alternative transportation options, and increase recreational opportunities while balancing those needs with the preservation of natural habitat, public safety, and quality of life in residential neighborhoods.

¹⁶³ Santa Clara County Parks Department. “Santa Clara County Existing and Proposed Regional Trail Connections.” Accessed June 5, 2022.
<https://sccparks.maps.arcgis.com/apps/PanelsLegend/index.html?appid=12160dc4b49348c395c46fa1ad20d795>

Policy	Description
LT-9.1	Ensure that the planned availability of open space in both the City and the region is adequate.
LT-14.8	Ensure that development projects provide appropriate improvements or resources to meet the City’s future infrastructure and facility needs, and provide development incentives that result in community benefits and enhance the quality of life for residents and workers.

Sunnyvale Municipal Code

SMC Chapter 19.74 (Parks Dedication for Rental Housing Projects) defines the park in-lieu fees or land dedication required for multi-family rental housing projects within Sunnyvale. In accordance with the open space and recreation sub-element of the General Plan, development projects must dedicate 5.34 acres of land to public park and recreational facilities, per each one thousand persons. New rental housing developments must pay a fee equivalent to the cost of purchasing parkland or to compensate for the anticipated increased usage of existing parklands. Alternatively, a new project may develop or dedicate land for future use.

3.16.1.2 Existing Conditions

As described in Section 3.15 Public Services, parks and open space in the City are managed by the Parks Division within the Department of Public Works. The City currently has approximately 773 acres of parkland, including 185 acres of parks, 264 acres of special use facilities (including the Sunnyvale Golf Course and Baylands Park), 87 acres of school open space, three acres of public grounds (including orchards and open space surrounding the Community Center and Civic Center campuses), and 48 acres of greenbelts and trails. The City’s parkland total includes other recreational facilities such as the John W. Christian Greenbelt, a senior center, tennis courts, and a skate park.

The nearest public parks and recreational facilities to Moffett Park are Baylands Park, located directly east of Moffett Park; Bay trail located north of Moffett Park; and the Sunnyvale Municipal Golf Course, located directly southwest of Moffett Park. The Golf Club at Moffett Field, located directly northwest of Moffett Park, is privately owned, not operated or maintained by the City.

3.16.2 Impact Discussion

For the purpose of determining the significance of the project’s impact on recreation:

- 1) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
- 2) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

3.16.2.1 *Project Impacts*

Impact REC-1: The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated. **(Less than Significant Impact)**

The implementation of the Specific Plan would result in a net increase of approximately 42,000 residents. Future residents (as well as employees) in Moffett Park would increase the use and demand on existing park and recreational facilities. As discussed in Section 2.3 Project Description, the Specific Plan proposes over 200 acres of park and open space that would offset the project's demand on nearby park and recreational facilities. Future development projects would comply with SMC Chapter 19.74 which requires future residential developments to provide 5.34 acres of parkland/open space per 1,000 residents. Compliance with the SMC and implementation of Specific Plan policies OSE-2.1 through OSE-2.8 requiring recreational amenities (described under Impact PS-4 in Section 3.15 Public Services) would ensure the development of park and recreational facilities adequately serve residents. **(Less than Significant Impact)**

Impact REC-2: The project would not include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment. **(Less than Significant Impact)**

As discussed under Impact REC-1, the Specific Plan would provide adequate parks and recreational facilities to serve the future residents in Moffett Park. The environmental impacts associated with development of the proposed park and open space are discussed throughout this EIR as part of the project. The physical impacts of constructing the park and open space would be reduced to less than significant levels through compliance with existing regulations including General Plan and Specific Plan policies identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources. **(Less than Significant Impact)**

3.16.2.2 *Cumulative Impacts*

Impact REC-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant recreation impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative recreational impacts is the City boundaries. All cumulative projects (including future Specific Plan development) would comply with SMC Chapter 19.74. Compliance with SMC Chapter 19.74 ensures the demand for park and recreational facilities by new residents is adequately met. Development of park and recreational facilities is subject to the City's development review process, existing regulations (including General Plan policies), and the Specific Plan policies (if applicable) identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.6 Energy, 3.7 Geology and Soils, 3.8 Greenhouse Gas Emissions, 3.9 Hazards

and Hazardous Materials, 3.10 Hydrology and Water Quality, 3.13 Noise, 3.18 Tribal Cultural Resources to reduce any potential environmental impacts associated with their construction to less than significant levels. **(Less than Significant Cumulative Impact)**

3.17 TRANSPORTATION

The following discussion is based, in part, on the Vehicle Miles Traveled (VMT) Analysis Memorandum dated April 29, 2022, a CEQA Transportation Analysis dated June 29, 2022, and a Transportation Impact Analysis (TIA) dated October 31, 2022, all prepared by Hexagon Transportation Consultants, Inc. These reports are included as Appendix I to this EIR.

3.17.1 Environmental Setting

3.17.1.1 *Regulatory Framework*

State

Regional Transportation Plan

The MTC is the transportation planning, coordinating, and financing agency for the nine-county San Francisco Bay Area, including Santa Clara County. MTC is charged with regularly updating the Regional Transportation Plan, a comprehensive blueprint for the development of mass transit, highway, airport, seaport, railroad, bicycle, and pedestrian facilities in the region. MTC and ABAG adopted Plan Bay Area 2050 in October 2021, which includes a Regional Transportation Plan to guide regional transportation investment for revenues from federal, state, regional and local sources through 2050.

Senate Bill 743

SB 743 establishes criteria for determining the significance of transportation impacts using a VMT metric intended to promote the reduction of GHG emissions, the development of multimodal transportation networks, and a diversity of land uses. Specifically, SB 743 requires analysis of VMT in determining the significance of transportation impacts. Local jurisdictions were required by OPR to implement a VMT policy by July 1, 2020.

SB 743 did not authorize OPR to set specific VMT impact thresholds, but it did direct OPR to develop guidelines for jurisdictions to utilize. CEQA Guidelines Section 15064.3(b)(1) describes factors that might indicate whether a development project's VMT may be significant. Notably, projects located within 0.50 mile of transit should be considered to have a less than significant transportation impact based on OPR guidance.

California Department of Education School Site Selection Criteria

Pursuant to Section 17251(b) of the Education Code, the CDE developed the School Site Selection and Approval Guide to assist school districts in (1) selecting appropriate sites in compliance with regulations and CDE policies and (2) gaining state approval for the selected sites. The guide refers to the standards for school site selection as outlined in CEQA, California Education Code, Title 5 of the CCR, and other state codes. The guide includes site selection criteria based on a variety of factors such as location, size, and cost; however, it focuses on safety as the most important criteria to be considered during site selection.

According to the guide, the following safety factors shall be considered when evaluating a potential school site: (1) proximity to airports; (2) proximity to high-voltage power transmission lines; (3)

presence of toxic and hazardous substances; (4) hazardous air emissions and facilities within a quarter mile; (5) other health hazards; (6) proximity to railroads; (7) proximity to high-pressure natural gas lines, gasoline lines, pressurized sewer lines, or high-pressure water pipelines; (8) proximity to propane tanks; (9) proximity to major roadways; (10) noise; (11) results of geological studies and soils analyses; (12) condition of traffic and school bus safety; (13) safe routes to school; and (14) safety issues for joint-use projects.

Regional and Local

Congestion Management Program

VTA oversees the Congestion Management Program (CMP), which is aimed at reducing regional traffic congestion. The relevant state legislation requires that urbanized counties in California prepare a CMP in order to obtain each county’s share of gas tax revenues. State legislation requires that each CMP define traffic LOS standards, transit service standards, a trip reduction and transportation demand management plan, a land use impact analysis program, and a capital improvement element. VTA has review responsibility for proposed development projects that are expected to affect CMP-designated intersections.

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to the General Plan transportation policies including the ones listed below.

Policy	Description
<i>Land Use and Transportation Element</i>	
LT-3.1	Use land use planning, including mixed and higher-intensity uses, to support alternatives to the single-occupant automobile such as walking and bicycling and to attract and support high investment transit such as light rail, buses, and commuter rail.
LT-3.2	Refine land use patterns and the transportation network so they work together to protect sensitive uses and provide convenient transportation options throughout the planning area.
LT-3.3	Establish appropriately scaled car-free and pedestrian-only zones in higher-density locations and high pedestrian demand locations.
LT-3.4	Require large employers to develop and maintain transportation demand management programs to reduce the number of vehicle trips generated by their employees.
LT-3.5	Follow California Environmental Quality Act requirements, congestion management program requirements, and additional city requirements when analyzing the transportation impacts of proposed projects and assessing the need for offsetting transportation system improvements or limiting transportation demand.
LT-3.7	Provide parking and lane priority to environmentally friendly motorized vehicles (e.g., carpools, low emission, zero emission).

Policy	Description
LT-3.11	As they become available, use multimodal measures of effectiveness to assess the transportation system in order to minimize the adverse effect of congestion. Continue to use level of service (LOS) to describe congestion levels. Use vehicle miles traveled (VMT) analysis to describe potential environmental effects and impacts to the regional transportation system.
LT-3.14	Require roadway and signal improvements for development projects to improve multimodal transportation system efficiency.
LT-3.15	Prioritize transportation subsidies and project financing over time to the most environmentally friendly modes and services. Support bicycling through planning, engineering, education, encouragement, and enforcement.
LT-3.21	Implement best practices, innovative facilities, and technology to enhance complete streets.
LT-3.22	Provide safe access to city streets for all modes of transportation. Safety considerations of all transport modes shall take priority over capacity considerations of any one transport mode.
LT-3.23	Ensure that the movement of cars, trucks and transit vehicles, bicycles, and pedestrians of all ages and abilities does not divide the community. City streets are public spaces and an integral part of the community fabric.
LT-3.27	Require appropriate roadway design practice for private development consistent with city standards and the intended use of the roadway.
<i>Housing Element</i>	
HE-6.3	Continue a high quality of maintenance for public streets, rights-of-way, and recreational areas, and provide safe pedestrian, bike, and transit linkages (accessibility) between jobs, residences, transportation hubs, and goods and services.
<i>Safety and Noise Element</i>	
SN-3.5	Facilitate the safe movement of pedestrians, bicyclists, and vehicles.

City Council Policy 1.2.8 (Transportation Analysis Policy)

Following the adoption of SB 743 and updates to CEQA requirements for transportation analysis, the City adopted Council Policy 1.2.8 (Transportation Analysis Policy) on June 30, 2020. The Transportation Analysis Policy requires all projects to evaluate and disclose transportation-related environmental impacts by measuring VMT as required by CEQA. The policy also establishes LOS as an operational measurement of intersection efficiency, which is not defined as transportation environmental impact per CEQA. Per the policy, for residential and employment projects, projects will use the Countywide Average VMT as the baseline with a VMT reduction threshold set at 15 percent below the baseline to identify potential transportation impacts and propose mitigations.

City of Sunnyvale Transportation Analysis Guidelines for Vehicle Miles Traveled and Local Transportation Analysis

Adopted in October 2021, the City of Sunnyvale’s Transportation Analysis Guidelines for VMT and Local Transportation Analysis (LTA) lays out the updated methodology established by the City’s Transportation Analysis Policy for VMT and LOS. The guidelines require that a mixed-use development analyze each proposed land use’s VMT impact independently.

Active Transportation Plan 2020

The City’s Active Transportation Plan 2020 was adopted on August 25, 2020 with the goal of creating a safe, connected bicycling and walking network. The plan addresses three main areas: bicycle facilities, pedestrian facilities, and safe routes to school. The plan includes recommendations for potential improvements throughout the city, such as curb extensions, additional signage, bicycle lane and crosswalk expansions, secure bike parking facilities, and comprehensive pedestrian improvements to improve travel routes to schools.

Vision Zero Plan

Adopted on July 30, 2019, the City’s Vision Zero Plan establishes a phased approach to reduce roadway fatalities and serious injuries by 50 percent by 2029, with an ultimate goal of zero percent by 2039. The plan established a High Injury Network that identifies traffic corridors with the highest concentrations of fatal and serious injury collisions. The plan includes the following safety strategies to reach its established goals.

Strategy	Description
<i>Vision Zero Program Initiation</i>	
A.6	Incorporate Vision Zero safety principles into future City plans and design documents
<i>Street Design and Operation</i>	
B.5	Update signal timing plans to improve safety for all modes (e.g., all red time, pedestrian crossing times)
B.9	When identifying safety improvements, consider all road users and how countermeasures follow the City’s Complete Streets Policy.
D.1	Continue building and improving the bicycle network consistent with the Sunnyvale Bicycle Plan and Santa Clara Countywide Bike Plan.
D.2	Install pedestrian countdown timers at every signalized crossing location.
D.4	Complete projects that improve bicycle and pedestrian safety related to turning vehicles at intersections.

Roadway Safety Plan

Adopted on September 29, 2020, the City’s Roadway Safety Plan builds upon the groundwork and goals set forth by the Vision Zero Plan. The Roadway Safety Plan identifies locations where traffic collisions are most likely to occur and includes a list of recommended safety measures for

development projects proposed in Sunnyvale. Through the collision analysis process, the Roadway Safety Plan identified 20 sites as locations of interest (including eight signalized intersections, six unsignalized intersections, and six roadway segments) that are recommended for future improvement. The Caribbean Drive and Moffett Park Drive signalized intersection, located within Moffett Park, was identified as a location of interest. Recommendations for improvement include modification of the SR 237 interchange, bicycle lane and sidewalk extension, additional left-turn signals, and on-ramp realignment.¹⁶⁴

City of Sunnyvale Development Review Process

The City's standard development review process includes review of proposed site plans by the DPS and completion of project-specific LTAs, as warranted. Site plans and project-specific LTAs are reviewed by the Department of Public Works to ensure specific projects are consistent with the City's site design standards.

3.17.1.2 Existing Conditions

Roadway Network

Regional and local access to Moffett Park is described below and shown on Figure 3.17-1.

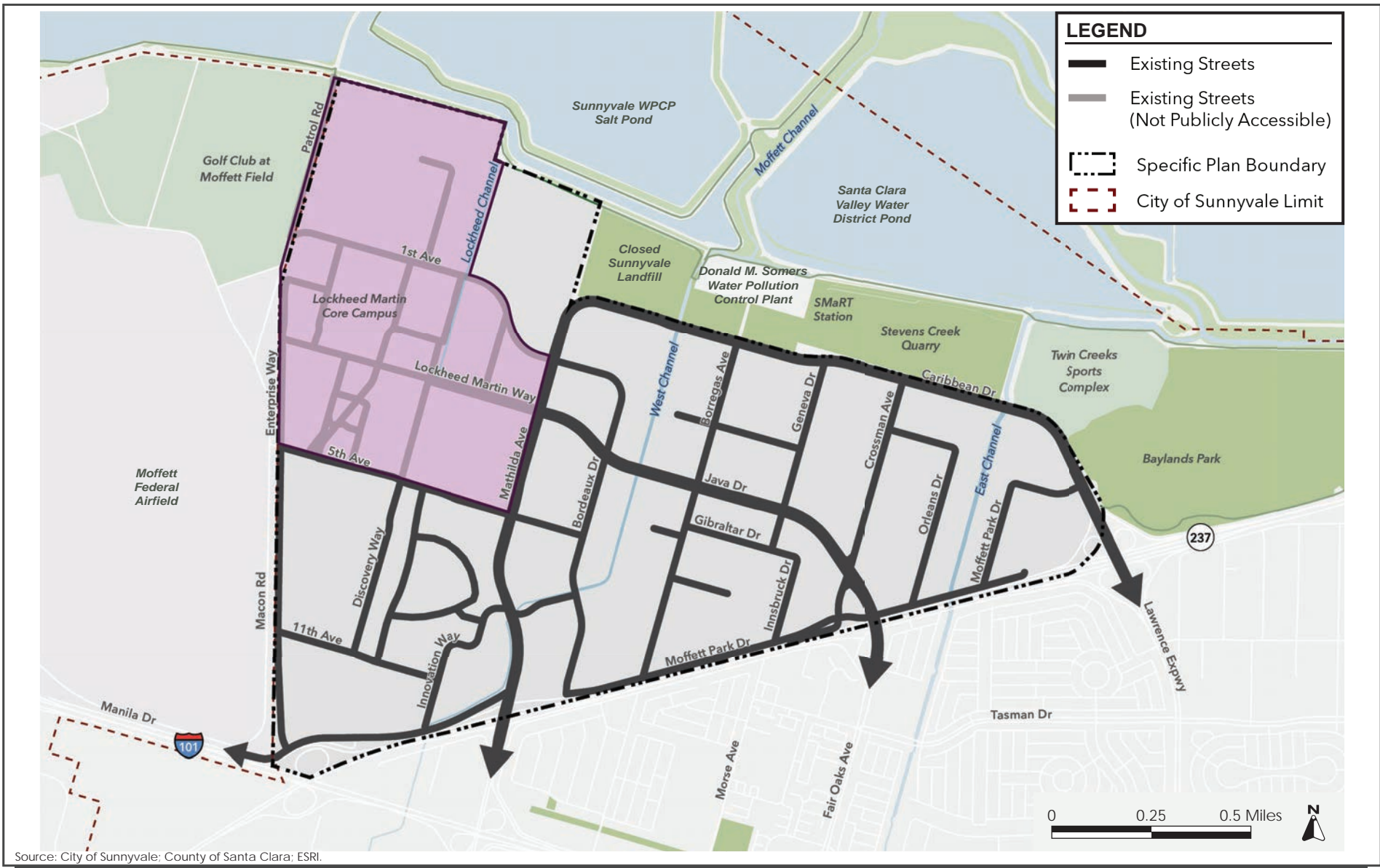
Regional Access

US 101 is an eight-lane freeway (consisting of three mixed-flow lanes and one high occupancy vehicle [HOV] lane in each direction) within the vicinity of Sunnyvale. Moffett Park access to and from *US 101* is provided via its interchanges at Ellis Street, SR 237, Moffett Park Drive, Mathilda Avenue, Fair Oaks Avenue, and Lawrence Expressway.

SR 85 is a six-lane freeway (consisting of two mixed-flow lanes and one HOV lane in each direction) that begins at the *US 101* interchange east of Shoreline Boulevard, extends south towards San José, and terminates at the *US 101* interchange south of Silicon Valley Boulevard/Bernal Road. Moffett Park access to and from *SR 85* is provided via interchanges with *SR 237* and *US 101*.

SR 237 is a four- to six-lane freeway within the vicinity of Sunnyvale that extends west to El Camino Real and east to I-880 in Milpitas. East of Mathilda Avenue, *SR 237* has two mixed-flow lanes and one HOV lane in each direction. West of Mathilda Avenue, *SR 237* has two mixed-flow lanes in each direction. Moffett Park access to and from *SR 237* is provided via its interchanges at Mathilda Avenue, Fair Oaks Avenue, and Lawrence Expressway.

¹⁶⁴ City of Sunnyvale. *Roadway Safety Plan*. September 29, 2020. Page 47.



EXISTING ROADWAY NETWORK

FIGURE 3.17-1

Local Access

Lawrence Expressway is a north-south, eight-lane expressway. It begins at Saratoga Avenue in the south, crosses through Sunnyvale, and extends northward where it transitions into Caribbean Drive at SR 237. Caribbean Drive is a six-lane roadway. HOV lanes are present on Lawrence Expressway between Stevens Creek Boulevard and Arques Avenue. Lawrence Expressway connects with US 101 and SR 237 via full-access freeway interchanges. Lawrence Expressway/Caribbean Drive provides regional access to Moffett Park via its interchanges with SR 237, US 101, and Central Expressway.

Central Expressway is an east-west, four- to six-lane expressway. It begins at Trimble Road in the east, crosses Sunnyvale, extends westward, and transitions into Alma Street. In Moffett Park, Central Expressway has two eastbound lanes and two westbound lanes. Central Expressway is mostly grade-separated within Sunnyvale except at Mary Avenue. Central Expressway has intersections at Mary Avenue and Oakmead Parkway, and interchanges at Mathilda Avenue, Fair Oaks Avenue, Wolfe Road, and Lawrence Expressway.

Mathilda Avenue is a north-south, six-lane roadway. It extends from East Caribbean Drive south past El Camino Real, where it transitions to Sunnyvale-Saratoga Road and extends south into Cupertino and Saratoga. Mathilda Avenue provides regional access to Moffett Park via its interchanges with SR 237, US 101, and Central Expressway.

Fair Oaks Avenue is a north-south, four- to six-lane roadway. It begins at Remington Drive in the south and extends northward where it transitions into Java Drive at SR 237. Java Drive is a four-lane roadway with a raised median containing the VTA light rail tracks. Fair Oaks Avenue provides regional access to Moffett Park via its interchanges with SR 237, US 101, and Central Expressway.

Tasman Drive is an east-west, two- to four-lane roadway. Tasman Drive begins at Morse Avenue in the west and extends east past I-880 and transitions into Great Mall Parkway. The VTA light rail tracks are present in the middle of Tasman Drive east of Fair Oaks Avenue. Tasman Drive provides regional access to Moffett Park via its intersections with Fair Oaks Avenue and Lawrence Expressway.

Moffett Park Drive is an east-west, two- to four-lane roadway. Moffett Park Drive begins at Manila Avenue in the west and extends east until Baylands Park. Moffett Park Drive provides regional access to Moffett Park via its intersections with Mathilda Avenue and Caribbean Drive.

Bordeaux Drive is a two-lane roadway. Bordeaux Drive begins at Moffett Park Drive in the south and extends north until it transitions into 1st Avenue. Moffett Park Drive provides regional access to Moffett Park via its intersections with Mathilda Avenue/Caribbean Drive and Moffett Park Drive.

Borregas Avenue is a two-lane roadway. Borregas Avenue begins at Moffett Park Drive in the south and extends north until it transitions into Carl Drive. Borregas Avenue provides regional access to Moffett Park via its intersections with Java Drive and Moffett Park Drive.

Existing Bicycle, Pedestrian, and Transit Facilities

Bicycle Facilities

Bicycle facilities in Moffett Park include bike lanes and bike routes, shown on Figure 3.17-2. Bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes are streets that accommodate bicycles with pavement markings and signage but are not separate from travel lanes.

Bike lanes are available on the following roadways:

- Enterprise Way between Moffett Park Drive and 5th Avenue
- 5th Avenue between Enterprise Way and C Street
- 11th Avenue between Enterprise Way and Innovation Way
- Discovery Way between 11th Avenue and 5th Avenue
- E Street between 5th Avenue and Lockheed Martin Way
- Innovation Way between 11th Avenue and Bordeaux Drive
- Moffett Park Drive between Enterprise Way and Innovation Way and between Borregas Avenue and Caribbean Drive
- 1st Avenue between E Street and Mathilda Avenue
- Caribbean Drive between 1st Avenue/Bordeaux Drive and Moffett Park Drive/Baylands Park
- Bordeaux Drive between Moffett Park Drive and Mathilda Avenue
- Borregas Avenue between Moffett Park Drive and Caribbean Drive

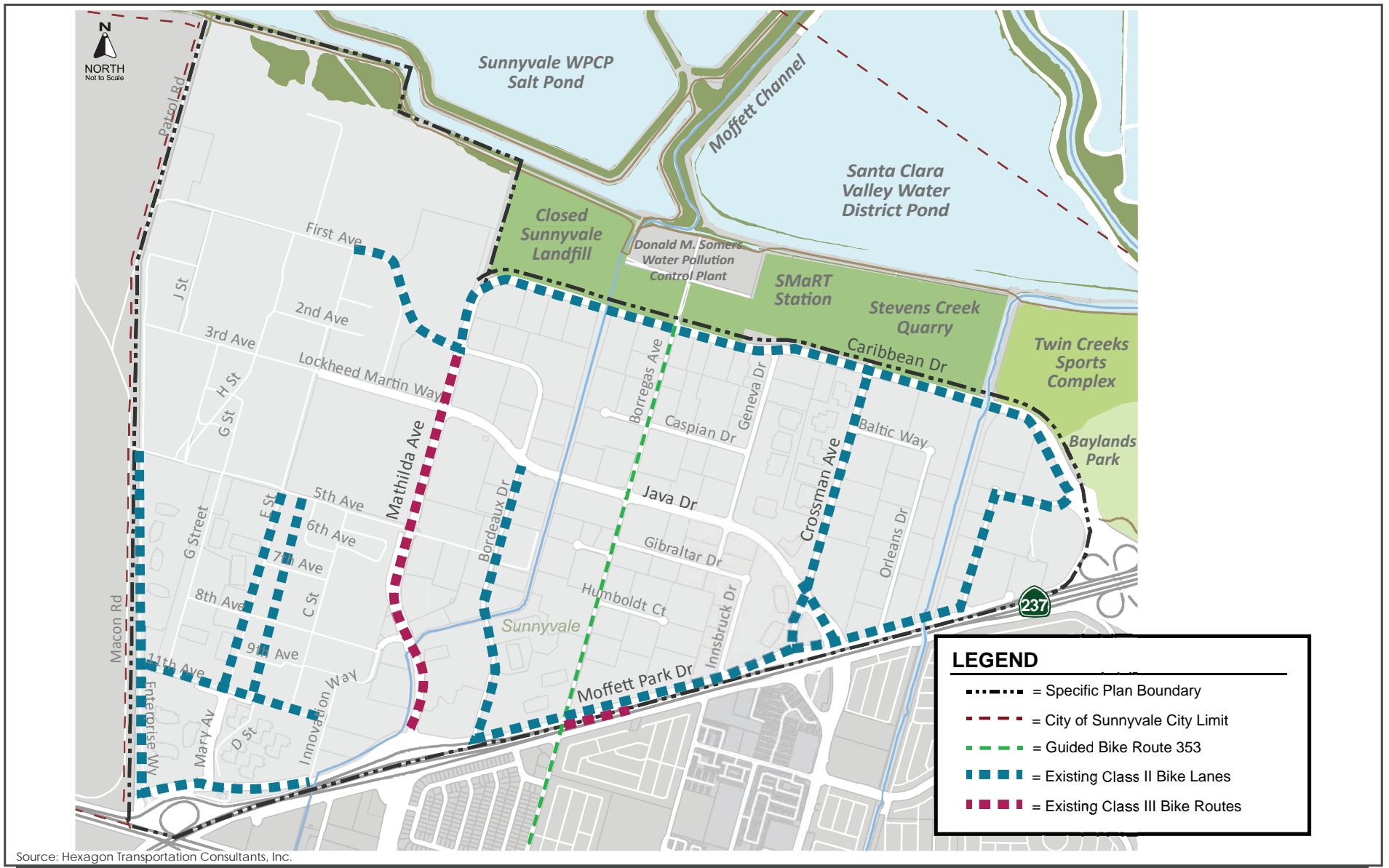
Bike routes are present along Mathilda Avenue between Moffett Park Drive and 1st Avenue/Bordeaux Drive and on the eastbound lane of Moffett Park Drive east of Borregas Avenue for approximately 500 feet until the bike lane begins. There are three guided bike routes within the City, one of which is located within Moffett Park (Bike Route 353). A guided bike route has signage posted along the bike route to direct bicyclists.

- *Bike Route 353* is a generally north-south guided bike route that extends north from the southern City limits into Moffett Park. South of Evelyn Avenue, this route transitions into Bike Route 352. North of Evelyn Avenue, this route travels mostly along Morse Avenue south of US 101 and along Borregas Avenue north of US 101. Bike Route 353 provides access to Bishop Elementary School and Columbia Middle School.¹⁶⁵

Pedestrian Facilities

Within Moffett Park, sidewalks and crosswalks are present along most sections of roadways. Sidewalks are missing on both sides of the street for most of Orleans Drive, Baltic Way, Caspian Drive, Humboldt Court, and on portions of Caribbean Drive, Lockheed Martin Way, E Street, Moffett Park Drive, and Geneva Drive. The remaining road segments in Moffett Park have a sidewalk on at least one side of the street.

¹⁶⁵ City of Sunnyvale. *Bike Map, 2018 Edition*.



LEGEND

- = Specific Plan Boundary
- = City of Sunnyvale City Limit
- = Guided Bike Route 353
- = Existing Class II Bike Lanes
- = Existing Class III Bike Routes

Source: Hexagon Transportation Consultants, Inc.

EXISTING BICYCLE FACILITIES

FIGURE 3.17-2

Crosswalks are missing on some legs of signalized intersections, including Mathilda Avenue and 1st Avenue/Bordeaux Drive and Caribbean Drive and Moffett Park Drive. Crosswalks are also missing at some unsignalized intersections along 1st Avenue, J Street, Lockheed Martin Way, 5th Avenue, Moffett Park Drive, Bordeaux Drive, Borregas Avenue, Geneva Drive, Gibraltar Drive, Humboldt Court, Innsbruck Drive, Orleans Drive, Caspian Court, and Baltic Way.

Pedestrian facilities are shown on Figure 3.17-3.¹⁶⁶

Transit Facilities

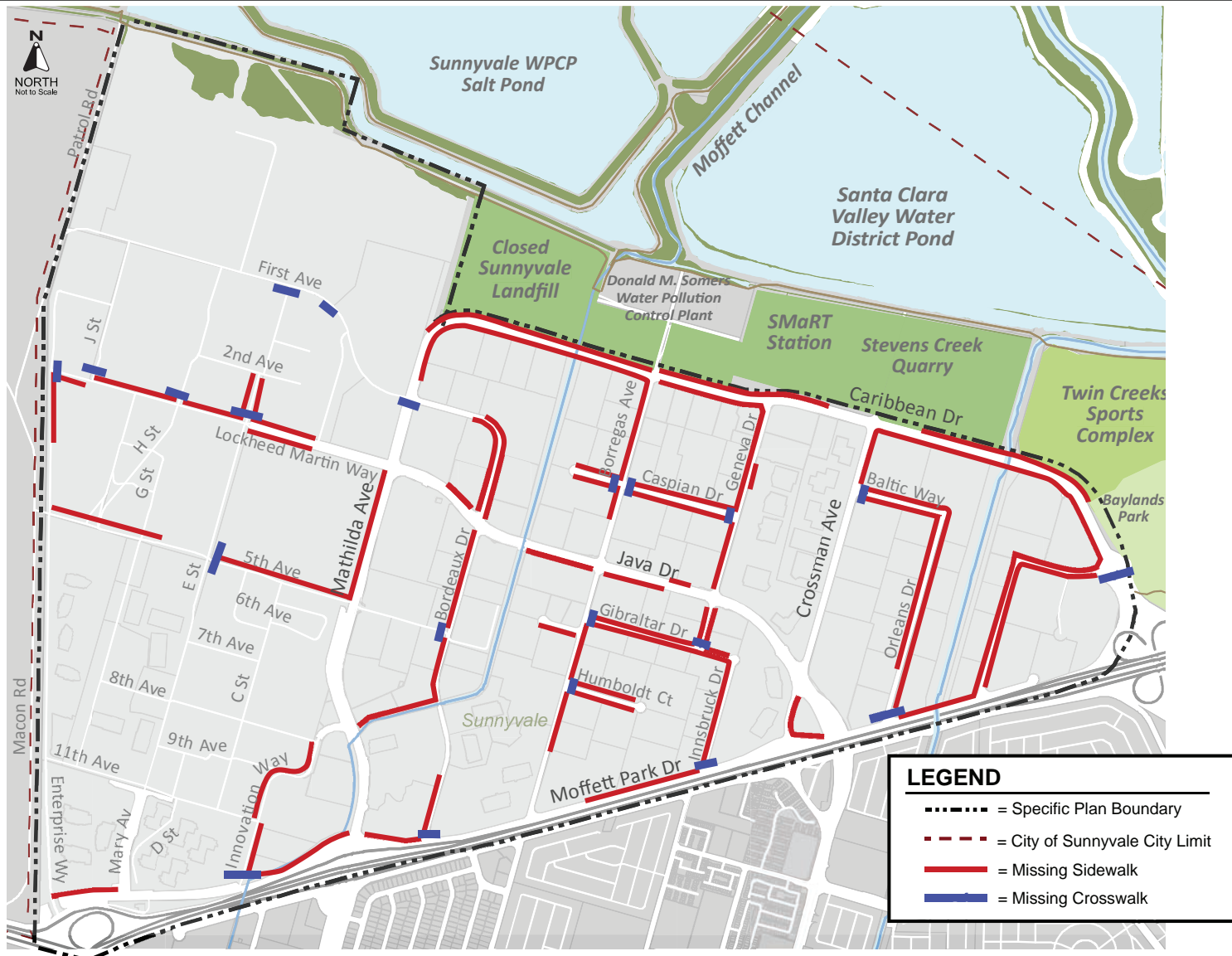
Existing transit services in Moffett Park are provided by VTA (public), Altamont Corridor Express (ACE) (public), and Google Shuttles (private).

VTA provides commuter light rail service between the cities of Sunnyvale, San José, and Mountain View. Moffett Park is served by the VTA orange line, which runs from Mountain View to Alum Rock in San José, with four stops in Moffett Park along Moffett Park Drive, Mathilda Avenue, and Java Drive. Light rail service is provided with approximately 20-minute headways during weekdays from 5:30 AM to 12:46 AM the next day. Weekend service is provided with approximately 30-minute headways from 5:58 AM to 12:46 AM. The orange line, VTA bus routes 56 and 523, and ACE red shuttle all stop at the Lockheed Martin Transit Center, located at Mathilda Avenue and 5th Avenue.

Public bus routes serving Moffett Park are summarized in Table 3.17-1 and shown on Figure 3.17-4.

¹⁶⁶ Note that Gibraltar Avenue has newly constructed sidewalks along the south side (not shown on the figure).

Table 3.17-1: Existing Transit Services				
Bus Route	Description	Nearest Bus Stops	Weekday Hours of Operation	Headway
Local Bus 56	Lockheed Martin Transit Center to Tamien Station	Lockheed Martin Transit Center and stops along Java Drive at Mathilda Avenue, Bordeaux Drive, Borregas Avenue, Geneva Drive, and Crossman Avenue	5:22 AM to 10:40 PM	30 to 35 minutes
Express Route 121	Gilroy / Morgan Hill to Lockheed Martin	Lockheed Martin Transit Center	4:30 to 9:06 AM 2:52 PM to 6:56 PM	58 to 138 minutes
Rapid Bus 523	San José State University to Lockheed Martin via De Anza College	Lockheed Martin Transit Center and Mathilda Avenue & Innovation Way	6:13 AM to 10:38 PM	15 to 20 minutes
ACE Red Line	Great America ACE Station to North Sunnyvale	Lockheed Martin Transit Center, 1 st Street and C Street, Crossman Avenue and Java Drive, Caribbean Drive and Moffett Park Drive	6:06 AM to 9:52 AM 3:15 PM to 6:40 PM	50 to 85 minutes
Source: Hexagon Transportation Consultants. <i>Moffett Park Specific Plan Update Transportation Impact Analysis</i> . October 31, 2022. Page 13.				



Source: Hexagon Transportation Consultants, Inc.

EXISTING PEDESTRIAN FACILITIES

FIGURE 3.17-3



EXISTING TRANSIT FACILITIES

FIGURE 3.17-4

3.17.2 Impact Discussion

For the purpose of determining the significance of the project's impact on transportation, would the project:

- 1) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?
- 2) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?
- 3) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
- 4) Result in inadequate emergency access?

3.17.2.1 *Project Impacts*

Impact TRN-1: The project would not conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities. **(Less than Significant Impact)**

The Specific Plan would be built out over the span of approximately 20 years. At buildout, the Specific Plan is estimated to generate approximately 587,222 average daily trips. To understand the different types of project trips, the project trips are first categorized as either internal or external to Moffett Park, then broken down into either driving or non-driving (i.e., transit, bicycle, walking, and shuttle) trips, as described in greater detail below and summarized in Table 3.17-2.

At buildout, approximately 37 percent of trips generated by the Specific Plan would be non-driving trips. Approximately half of these non-driving trips would be internal to Moffett Park, and the other half would be external to Moffett Park (with one trip-end outside of Moffett Park).

The non-driving internal trips would be short trips, assumed to use modes such as walking, biking, or scooters to move around within Moffett Park. These non-driving trips would generate minimal transit demand. Out of 99,828 non-driving external trips, 11 percent (or 10,981, of non-driving trips) would be transit trips. The non-driving external trips would include the use private shuttles (which would be 27 percent of non-driving trips)¹⁶⁷ and public transit (11 percent of non-driving trips).

Under full buildout conditions, the Specific Plan would implement a district parking strategy, where parking is mostly centralized in a series of shared parking garages. With district parking, people coming into Moffett Park would park once and use other modes of transport (e.g., walking or biking) to complete their activities within Moffett Park. For this reason, it is assumed that travel within Moffett Park would be achieved via non-driving modes of transportation (see internal trips in Table 3.17-2).

¹⁶⁷ Source: Hexagon Transportation Consultants. *Moffett Park Specific Plan CEQA Transportation Analysis*. June 29, 2022. Page 9.

Table 3.17-2: Project Trips and Mode Split at Buildout		
Trip Type	Percentage of Total Trips¹	Estimated Average Daily Number of Trips²
Internal (trips within Moffett Park)		
<ul style="list-style-type: none"> • Driving³ • Non-driving <ul style="list-style-type: none"> ○ <i>Bike/walk is 100 percent of non-driving (117,444 trips)</i> 	0	0
	20	117,444
External (entering or leaving Moffett Park)		
<ul style="list-style-type: none"> • Driving • Non-driving <ul style="list-style-type: none"> ○ <i>Bike/walk is 62 percent of non-driving (61,893 trips)</i> ○ <i>Transit is 11 percent of non-driving (10,981 trips)</i> ○ <i>Shuttle is 27 percent of non-driving⁴ (26,954 trips)</i> 	63	369,950
	17	99,828
Total Trips	100	587,222
¹ Source: Hexagon Transportation Consultants. <i>Moffett Park Specific Plan CEQA Transportation Analysis</i> . June 29, 2022. Page 9. ² Ibid. ³ With district parking, people coming into Moffett Park would need to park once and use other modes of transport (e.g., walking or biking) to complete their activities within Moffett Park; therefore, it is assumed travel within Moffett Park would be achieved via non-driving modes of transportation. ⁴ The 27 percent of non-driving shuttle trips was calculated using existing data about shuttle services provided by existing companies within Moffett Park. There is currently no TDM requirement in place for provision of shuttle services. However, future proposed development projects would implement TDM measures including shuttle-accessibility to the extent practical.		

Transit Facilities

The City’s Transportation Analysis Guidelines require an evaluation of transit facilities; however, there are no established impact criteria by either the City or VTA. For the purposes of this EIR analysis, implementation of the Specific Plan is considered to result in a significant impact to transit facilities if (1) the project would generate increased transit demand beyond the capacity of existing transit services, or (2) the project would reduce transit availability or access to transit facilities.

The addition of almost 11,000 transit trips (see Table 3.17-1) from implementation of the project would not occur instantaneously. This number of additional transit riders would occur over time and would be expected at buildout. The City and future development projects would comply with the following Specific Plan mobility policies to support public transit:

Proposed Specific Plan Policies:

- **M-3.1:** Work with the Santa Clara Valley Transportation Authority (VTA) to maintain high frequency, high-capacity transit services.
- **M-3.2:** Prioritize public transit networks within the complete streets typology as illustrated on the attached Street Typology and Modal Networks maps.
- **M-3.3:** Work towards obtaining and providing right-of-way for public transit and priority lanes.
- **M-3.4:** Make public transit a convenient and reliable option for daily trip making.
- **M-3.5:** Prioritize investments that reduce first/last-mile barriers to transit stops.
- **M-4.1:** Prioritize and implement transportation investments and strategies that reduce vehicle miles traveled (VMT) per capita and per employee.
- **M-4.2:** Strategically and opportunistically increase person capacity at the district gateways.

The implementation of the above Specific Plan policies would improve public transit serving Moffett Park by improving transit convenience, connectivity, and capacity. Additionally, the City would coordinate with the VTA and Moffett Park's Transportation Management Association to develop the necessary transit capacity to accommodate a citywide increase in transit demand. Furthermore, implementation of the Specific Plan is consistent with and builds upon City of Sunnyvale General Plan policies that support multimodal options and encourage a refined transportation network. Specifically, Specific Plan policies M-3.1 and M-4.2 and General Plan policies LT-3.11 would ensure adequate transit capacity; and Specific Plan policies M-2.3 through M-4.1 and General Plan policies LT-3.2, LT-3.15, LT-3.22, HE-6.3, and SN-3.5 would improve transit availability and access to transit facilities. Therefore, the Specific Plan would not conflict with a program, plan, ordinance, or policy addressing transit facilities. **(Less than Significant Impact)**

Roadway Network

Plan Bay Area 2050

Chapter 4 of Plan Bay Area 2050 describes the long-range vision for transportation in the Bay Area and focuses on three strategies: 1) maintain and optimize the existing transportation system, 2) create healthy and safe streets, and 3) build a next-generation transit network. The proposed Specific Plan is consistent with the transportation strategies in Plan Bay Area 2050 by building a complete streets network that prioritizes pedestrians and bicyclists. **(Less than Significant Impact)**

Sunnyvale General Plan Policies

The Specific Plan is consistent with the General Plan policies identified in Section 3.17.1.1 pertaining to the roadway network by:

- Providing convenient transportation options by maintaining light rail and bus route connections and improving bikeability and walkability,
- Requiring new development implement TDM plans to limit single-vehicle occupancy trips,
- Completing a TIA to assess the need for offsetting transportation system improvements,
- Providing lane priority for bicyclists and vehicles,

- Using VMT to assess environmental effects pursuant to CEQA and SB 743 (see discussion under Impact TRN-2),
- Requiring roadway and signal improvements as described below under Pedestrian and Bicycle Facilities,
- Supporting bicycling by establishing connected bicycle routes and providing bicycle parking,
- Requiring new streets be designed as complete streets with balanced mobility options, and
- Facilitating safe movement of pedestrians, bicyclists, and vehicles as described below under Pedestrian and Bicycle Facilities.

Therefore, the Specific Plan would not conflict with a program, plan, ordinance, or policy addressing roadway networks. **(Less than Significant Impact)**

City Council Policy 1.2.8 and Transportation Analysis Guidelines, Congestion Management Program

As discussed under Impact TRN-2, the Specific Plan is consistent with the City’s VMT Policy.

The City Council Policy 1.2.8 and the City’s Transportation Analysis Guidelines state that the acceptable LOS standard for intersection operations is LOS D or better for Sunnyvale intersections and LOS E for locally designated intersections, along regionally significant roadways and regional transportation facilities as defined by CMP. An operational deficiency at a Sunnyvale intersection would be identified when a project’s added vehicle traffic causes the intersection to degrade from LOS D to LOS E, or for intersections operating at LOS E or LOS F, the addition of one percent to the critical vehicle/capacity ratio (V/C) and an increase in critical delay of four seconds or more. A CMP intersection would be out of conformance with the CMP standards when a project’s vehicle traffic causes the intersection to degrade from LOS E to LOS F, or for intersections operating at LOS F, the addition of one percent to the critical V/C ratio and an increase in critical delay of four seconds or more.

A TIA was completed for the Specific Plan pursuant to the City and CMP guidelines and is included in Appendix I of this EIR. The results of the TIA showed that the buildout of the Specific Plan would result in LOS operational deficiencies at a total of 16 study intersections under background plus project and/or cumulative plus project conditions. Background plus project conditions represent traffic from existing and approved but not yet constructed projects, and a portion of the proposed Specific Plan development. Cumulative plus project conditions represent traffic in year 2040 from the buildout of the General Plan and buildout of the Specific Plan. As noted above, LOS operational deficiencies are not considered an environmental impact under CEQA.

No feasible improvements were identified at five of the 16 deficient intersections (#7, #9, #16, #25, #29, #39) due to right of way constraints. Table 3.17-3 summarizes the LOS of affected intersections under existing, background, background plus project, cumulative, and cumulative plus project conditions.

Table 3.17-3: Intersection Level of Service Summary

Affected Intersection	Peak Hour	Existing Conditions		Background Conditions		Background Plus Project Conditions		Cumulative Conditions		Cumulative Plus Project Conditions	
		Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS
1) Ellis Street and Manila Avenue	AM	30.9	D	44.8	E	>120	F	42.7	E	78.1	F
	PM	17.8	C	22.0	C	38.6	E	23.2	C	26.8	D
4) Ellis Street and Fairchild Drive	AM	14.6	B	16.8	B	16.4	B	21.1	C+	19.7	B-
	PM	16.1	B	50.6	D	64.8	E	92.4	F	93.2	F
7) Enterprise Way and Manila Way/Moffett Park Drive	AM	19.7	B	24.9	C	85.3	F	21.3	C+	23.8	C
	PM	10.4	B+	12.1	B	28.4	C	11.7	B+	13.7	B
8) North Mary Avenue and Central Expressway	AM	53.9	D-	102.0	F	105.9	F	>120	F	>120	F
	PM	60.1	E	63.2	E	65.9	E	68.8	E	72.4	E
9) US 101 Northbound On Ramp and West Moffett Park Drive	AM	4.7	A	4.1	A	5.0	A	4.2	A	5.0	A
	PM	10.9	B+	17.6	B	76.4	E-	17.5	B	22.2	C+
10) Innovation Way and 11 th Avenue	AM	20.0	C+	23.7	C	23.7	C	24.2	C	36.3	D+
	PM	17.4	B	21.2	C+	24.1	C	21.5	C+	21.6	C+
16) North Mathilda Avenue and West Moffett Drive/Southbound 237 Westbound Off-Ramp	AM	38.2	D+	68.5	E	>120	F	60.2	E	>120	F
	PM	67.3	E	52.3	D-	87.9	F	67.1	E	64.4	E
25) Borregas Avenue and Java Drive	AM	23.1	C	34.0	C-	61.1	E	33.6	C-	51.1	D-
	PM	21.4	C+	27.2	C	38.5	D+	29.2	C	29.8	C
29) Crossman Avenue and East Java Drive	AM	20.6	C+	19.7	B-	22.4	C+	20.2	C+	21.5	C+
	PM	37.8	D+	41.5	D	58.7	E+	43.3	D	50.6	D

Table 3.17-3: Intersection Level of Service Summary

Affected Intersection	Peak Hour	Existing Conditions		Background Conditions		Background Plus Project Conditions		Cumulative Conditions		Cumulative Plus Project Conditions	
		Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS	Average Delay	LOS
30) Crossman Avenue and Moffett Park Drive	AM	14.1	B	16.6	B	28.5	C	16.2	B	16.2	B
	PM	18.7	B-	19.8	B-	60.5	E	20.9	C+	31.7	C
39) Lawrence Expressway and Persian Drive/Elko Drive	AM	59.3	E+	60.3	E	68.3	E	64.1	E	62.2	E
	PM	54.7	D-	71.2	E	88.9	F	76.1	E-	77.6	E-
40) Lawrence Expressway and Tasman Drive	AM	50.9	D	79.4	E-	94.4	F	93.5	F	91.0	F
	PM	57.0	E+	116.6	F	>120	F	114.1	F	96.0	F
41) Lawrence Expressway and Lakehaven Drive/Sandia Avenue	AM	95.7	F	>120	F	>120	F	>120	F	>120	F
	PM	73.8	E	>120	F	>120	F	>120	F	>120	F
44) Lawrence Expressway and East Duane Avenue/Oakmead Parkway Intersection	AM	38.5	D+	82.1	F	91.8	F	>120	F	>120	F
	PM	48.3	D	84.5	F	83.4	F	90.0	F	88.6	F
45) Lawrence Expressway and East Arques Avenue	AM	55.3	E+	>120	F	>120	F	>120	F	>120	F
	PM	71.6	E+	115.0	F	114.2	F	>120	F	>120	F
46) Oakmead Parkway/Corvin Drive and Central Expressway	AM	49.7	D	88.0	F	85.0	F	77.9	E-	81.5	F
	PM	46.9	D	89.2	F	91.0	F	116.3	F	>120	F

Notes:

The shaded cells with **bold** text indicate LOS deficiency due to the project.

Source: Hexagon Transportation Consultants, Inc. *Moffett Park Specific Plan Update Transportation Impact Analysis*. October 31, 2022.

In accordance with City Council Policy 1.2.8, feasible physical improvements to roadways and/or multi-modal improvements to promote alternatives to single occupancy vehicle trips should be implemented to reduce the intersections' deficiencies. The City has discretion whether to implement improvements to address the LOS deficiencies, and the relevant question under CEQA is whether those improvements would result in adverse physical changes to the environment (not whether LOS has degraded below the condition considered acceptable).

No feasible improvements were identified at seven of the 16 deficient intersections (#7, #9, #16, #25, #29, #39) due to right of way constraints. Table 3.17-4 below summarizes feasible improvements for the other 11 intersections.

Table 3.17-4: Proposed Improvements for Deficient Intersections		
Intersection (signalized or unsignalized)	Jurisdiction	Description of Improvement
1) Ellis Street and Manila Avenue (unsignalized)	City of Mountain View	Installation of a traffic signal and other lane geometry improvements as identified as part of the signalization improvement. Implementation would address the deficiency and improve the intersection to LOS B+ during the AM and PM peak hours under background plus project and LOS A during the AM and PM peak hours under cumulative plus project conditions.
4) Ellis Street and Fairchild Avenue (signalized)	City of Mountain View	Widening of southbound Ellis Street to include two through lanes. Implementation would address the deficiency and bring the intersection to LOS B during the PM peak hour under background plus project conditions.
8) North Mary Avenue and Central Expressway (signalized)	County of Santa Clara	The City of Sunnyvale Traffic Impact Fee (TIF) Update Study, dated September 7, 2017, identified an improvement to widen westbound Central Expressway to include a third left-turn lane and intersection signal timing optimization. Implementation would not improve operations from LOS F but would improve intersection operations to better than background conditions.
10) Innovation Way and 11 th Avenue (unsignalized)	City of Sunnyvale	Signalization and re-striping of the eastbound approach to include one left-turn, one through, and one right-turn lane. Implementation would improve operations to an acceptable LOS C.
30) Crossman Avenue and Moffett Park Drive (signalized)	City of Sunnyvale	Widening the southbound approach to include one left-turn, one through, and one right-turn lane. Right of way acquisitions may be necessary. Implementation would improve operations to LOS D during the PM peak hour under cumulative plus project conditions.
40) Lawrence Expressway and Tasman Drive (signalized)	County of Santa Clara	The City of Sunnyvale TIF Update Study identified a potential improvement to depress the light rail tracks under the intersection; however, there were no finalized plans for this improvement at the time the TIA or this EIR were prepared. It is assumed that the

Table 3.17-4: Proposed Improvements for Deficient Intersections		
Intersection (signalized or unsignalized)	Jurisdiction	Description of Improvement
		finalized reconfiguration plan would improve intersection LOS operations.
41) Lawrence Expressway and Lakehaven Drive/Sandia Avenue (signalized)	County of Santa Clara	The City of Sunnyvale TIF Update Study identified an improvement to convert the Lawrence Expressway and Bridgewood Way intersection into a signalized four-way intersection. It is assumed that the signal at Bridgewood Way would improve the intersection operations at the Lakehaven Drive intersection.
44) Lawrence Expressway and East Duane Avenue/Oakmead Parkway (signalized)	County of Santa Clara	The City of Sunnyvale TIF Update Study identified an improvement to grade separate this intersection; however, there were no finalized plans for this improvement at the time the TIA or this EIR were prepared. It is assumed that the finalized reconfiguration plan would restore intersection operations to an acceptable level of service.
45) Lawrence Expressway and East Arques Avenue (signalized)	County of Santa Clara	The City of Sunnyvale TIF Update Study identified an improvement to grade separate this intersection; however, there were no finalized plans for this improvement at the time the TIA or this EIR were prepared. It is assumed that the finalized reconfiguration plan would restore intersection operations to an acceptable level of service.
46) Oakmead Parkway/Corvin Drive and Central Expressway Intersection (signalized)	County of Santa Clara	The Lawrence Station Area Plan Update TIA identified an improvement to widen westbound Central Expressway to include two left-turn lanes. Implementation would restore intersection operations to acceptable LOS E during the AM peak hour.
Source: Hexagon Transportation Consultants, Inc. <i>Moffett Park Specific Plan Update Transportation Impact Analysis</i> . October 31, 2022.		

The improvements identified to the above local and county intersections would be included in a citywide nexus study, which is expected to be finalized in early 2023. Future projects under the Specific Plan shall make fair share contributions towards these identified improvements via the nexus study. Separate environmental review would be required for these improvements when designed and proposed. Based on preliminary review of the improvements described in Table 3.17-4, conformance with existing regulations and General Plan policies (including those pertaining to biological resources, water quality, and the discovery of unknown cultural resources) would likely reduce construction-related impacts to less than significant levels.

Furthermore, the Specific Plan includes the following Specific Plan policies to facilitate and promote multi-modal transportation:

Proposed Specific Plan Policies:

- **LU-4.2:** Prioritize walking and biking by breaking up large blocks into a finer-grained network and through complete streets improvements.
- **M-1.3:** Plan for and provide a transportation system that is flexible and appropriately accommodates all modes of traffic.
- **M-2.1:** Prioritize implementing improved bicycle and pedestrian access within the complete streets typology as illustrated on the Street Typology and Modal Networks maps.
- **M-2.2:** Designate street space for people who walk and bike.
- **M-2.3:** Prioritize mobility and safety for non-motorized modes when considering intersection capacity increases.
- **M-2.4:** Keep the street network dense with short blocks to support connections for people who walk and bike.
- **M-2.5:** Minimize pedestrian crossing distances and maximize pedestrian connections.
- **TDMP-1.3:** Promote biking by establishing standards for bicycle parking facilities and infrastructure.
- **TDMP-1.6:** Promote and support flexible approaches to parking supply and management by coordinating parking infrastructure and prioritizing shared facilities.
- **OSE-1.1:** Establish a network of greenbelt, parks, and trails that are an integral part of the active non-vehicular transportation network and promote safe pedestrian and bicycle use throughout the district.
- **OSE-1.3:** Provide open spaces that are well distributed and located adjacent to transit, and activity and community centers.
- **OSE-1.5:** Locate open spaces to provide a universally accessible route from all residential buildings to a neighborhood-serving park within a half-mile or 10-minute average walking distance.

The results of TIA also showed that buildout of the Specific Plan would result in an adverse effect to operations at the following 30 freeway segments:

- US 101, northbound Blossom Hill Road to SR 92 (AM peak hour)
- US 101, southbound from SR 92 to Embarcadero Road (AM peak hour)
- SR 85, northbound from I-280 to El Camino Real (AM peak hour)
- SR 237, eastbound from SR 85 to Sylvan Avenue and from US 101 to Mathilda Avenue (AM peak hour)
- SR 237, westbound from I-880 to US 101 (AM peak hour)
- SR 87, northbound from SR 85 to Taylor Street and from Skyport Drive to US 101 (AM peak hour)
- I-880, southbound from SR 92 to Mowry Avenue and from SR 262 to SR 237 (AM peak hour)
- I-680, southbound from Stoneridge Drive to Mission Boulevard (AM peak hour)
- I-880, northbound from I-280 to Gish Road (AM peak hour)

- I-880, southbound from SR 237 to Montague Expressway and from Brokaw Road to North 1st Street (AM peak hour)
- US 101, northbound from Hellyer Avenue to Tully Road, from Story Road to McKee Road, from Mabury Road to Oakland Road, from Old Bayshore Road to Lawrence Expressway, and from Oregon Expressway to Whipple Avenue (AM peak hour)
- US 101, southbound from Whipple Avenue to Oregon Expressway (AM peak hour)
- SR 85, northbound from Fremont Avenue to El Camino Real (AM peak hour)
- SR 237, westbound from McCarthy Boulevard to Lafayette Street (AM peak hour)
- SR 87, northbound from Capitol Expressway to I-280 and from Skyport Drive to US 101 (AM peak hour)
- I-880, southbound from SR 92 to SR 237 (AM peak hour)
- I-680, from SR 84 to Scott Creek Boulevard (AM peak hour)
- I-680, southbound from Scott Creek Road to Jacklin Road (AM peak hour)
- US 101, northbound from SR 237 to SR 94 (PM peak hour)
- US 101, southbound from SR 94 to Santa Clara Street (PM peak hour)
- SR 85, southbound from SR 237 to Homestead Road (PM peak hour)
- SR 237, eastbound from US 101 to I-880 (PM peak hour)
- SR 237, westbound from Lafayette Street to SR 85 (PM peak hour)
- SR 87, northbound from Almaden Expressway to I-280 (PM peak hour)
- SR 87, southbound from US 101 to Almaden Expressway (PM peak hour)
- I-880, northbound from SR 237 to Fremont Boulevard and from Stevenson Boulevard to SR 94 (PM peak hour)
- I-680, northbound from SR 262 to Sunol Boulevard (PM peak hour)
- I-880, northbound from Stevens Creek Boulevard to Gish Road (PM peak hour)
- I-880, southbound from SR 237 to I-280 (PM peak hour)
- I-680, northbound Jacklin Road to SR 262 (PM peak hour)
- SR 85, southbound from US 101 to SR 237 (PM peak hour)
- US 101, northbound from San Antonio Road to Whipple Avenue (PM peak hour)
- US 101, southbound from Whipple Avenue to Oregon Expressway, from Rengstorff Avenue to Shoreline Boulevard, and from Mathilda Avenue to Mabury Road (PM peak hour)
- SR 85, southbound from SR 237 to Homestead Road (PM peak hour)
- SR 237, eastbound from Caribbean Drive to I-880 (PM peak hour)
- I-880, northbound from SR 237 to SR 94 (PM peak hour)
- I-680, northbound from Scott Creek Road to SR 262 (PM peak hour)
- I-880, southbound from Montague Expressway to US 101 (PM peak hour)
- I-680, northbound from Calaveras Boulevard to Scott Creek Road (PM peak hour)

To improve operations, the affected freeway segment could be widened. VTA's Valley Transportation Plan 2040 includes freeway express lane projects along SR 85, SR 87, SR 237, US

101, I-280/I-680, and I-880 in the project vicinity and two express lanes along SR 85, between I-280 and SR 87, and along US 101 between Cochrane Road and Santa Clara/San Mateo County limits. The additional express lane along US 101 and SR 85 would provide additional capacity on the freeway. Express lane projects would not resolve congestion and LOS F on the affected freeway segments; however, they would improve freeway traffic flow. These express lane projects would be included in the citywide nexus study. Future development under the Specific Plan would participate in VTA's Voluntary Freeway Contribution Program and contribute their fair share towards the identified express lane projects via the nexus study. Additionally, VTA is studying options to improve traffic operations along US 101 and SR 237 in the vicinity of Moffett Park. If improvements are identified that would improve freeway operations, future projects within Moffett Park may be required to contribute their fair share towards the identified improvements.

The TIA performed a freeway ramp capacity analysis and determined that buildout of the Specific Plan would result in an adverse effect at the following ramp:

- SR 237 Eastbound On-Ramp from Southbound Caribbean Drive (PM peak hour)

VTA is currently studying potential improvements to the SR 237 interchanges, which include potential improvements at the Caribbean/SR 237 interchange. Future projects shall make a fair share contribution towards any identified improvements.

Extensive details about the non-CEQA LOS analysis, including methodology, trip generation, trip distribution, trip assignment, and existing, near-term, and cumulative plus project LOS conditions are included in Appendix I.

Based on the above discussion, the Specific Plan is consistent with City Council Policy 1.2.8, City Transportation Analysis Guidelines, and CMP Guidelines. **(Less than Significant Impact)**

Pedestrian and Bicycle Facilities

The City's Transportation Analysis Guidelines require an evaluation of bicycle and pedestrian facilities; however, there is no impact criteria for these facilities established by either the City or VTA. For the purposes of this EIR, implementation of the Specific Plan is considered to create a significant impact to pedestrian and bicycle facilities if: (1) the project would reduce or eliminate existing or planned pedestrian or bicycle facilities, or (2) the project would create a substantial unmet demand for additional pedestrian or bicycle facilities.

The existing facilities are described in Section 3.1.1.2 Existing Conditions and shown on Figure 3.17-3. The Specific Plan would not eliminate existing or planned pedestrian or bicycle facilities.

As discussed under Transit Facilities and shown in Table 3.17-2 above, at buildout, 100 percent of internal trips (117,444 trips) would be non-driving. Furthermore, it is estimated that approximately 62 percent of external non-driving trips (61,893 trips) would be bicycle and pedestrian trips.

Chapter 7 of the Specific Plan includes design standards for streets within Moffett Park that include requirements for pedestrian zones and bicycle facilities, such as landscape buffers between vehicle

lanes, sidewalks, and bike lanes. Further, the proposed Specific Plan incorporates specific design standards and guidelines for bicycle and pedestrian networks, including but not limited to bi-directional bicycle lanes, phased signals for cyclists and vehicles, pavement treatments to highlight bicycle facilities, wide and/or raised crosswalks for pedestrian safety, and inclusion of pedestrian amenities along multi-use paths (e.g., hydration stations).

The bicycle network and pedestrian facilities proposed by the Specific Plan would improve the bikeway network within Moffett Park by requiring enhancements, such as proposed bridges at key crossings, implementation of bikeways, and landscape buffers between vehicle and bike lanes, to improve access for people biking and walking within Moffett Park.

In addition to complying with applicable design standards and guidelines, future development projects would comply with the following Specific Plan mobility policies LU-4.2, M-1.2, M-2.1 through M-2.5, and TDMP-1.3 and TDMP 1.6 pertaining to promotion of multi-modal transportation (including pedestrian and bicycle facilities).

Given the Specific Plan design standards that promote and facilitate bicycle and pedestrian travel, and the above mobility policies, it is estimated the existing and future bicycle and pedestrian infrastructure would adequately facilitate and accommodate the estimated bicycle and pedestrian trips shown in Table 3.17-2. Implementation of the Specific Plan is consistent with and builds upon the existing available facilities and the City's General Plan policies requiring high quality design of city streets to promote safety and connectivity; the City's Active Transportation Plan to prioritize bicycle permeability and convenience; and the City's Vision Zero Plan and Roadway Safety Plan to incorporate pedestrian and bicyclist safety improvements. Based on the discussion above, implementation of the Specific Plan would have a less than significant impact on pedestrian and bicycle facilities and would not conflict with a program, plan, ordinance, or policy addressing these facilities. **(Less than Significant Impact)**

Impact TRN-2: The project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b). **(Less than Significant Impact)**

Pursuant to Council Policy 1.2.8 and the City's Transportation Analysis Guidelines for VMT and LTA, a mixed-use development (such as the Specific Plan) must analyze each land use's VMT impact independently. The City's adopted thresholds of significance VMT impact by land use are as follows:

- **Residential Land Uses** – Project impacts from residential uses are considered significant when the estimated project-generated VMT exceeds the existing countywide average residential VMT capita minus 15 percent. The existing countywide average residential VMT per capita is approximately 12.98. The residential VMT threshold of significance, calculated at 15 percent below the countywide average, is 11.03.
- **Employment Land Uses** – Project impacts from employment land uses are considered significant when the estimated project-generated VMT exceeds the existing countywide average employment VMT per employee, minus 15 percent. The existing countywide

average employment VMT per employee is approximately 18.49. The employment VMT threshold of significance, calculated at 15 percent below the countywide average, is 15.72.

The results of the VMT analysis for the proposed residential and employment (office only) land uses are summarized in Table 3.17-5 below and detailed in Appendix I.

Table 3.17-5: Existing Countywide VMT and Estimated Specific Plan VMT						
Scenario	Residential			Employment (Office)		
	VMT¹	Population	VMT Per Capita²	VMT³	Jobs	VMT per Employee⁴
Year 2020 Existing Countywide VMT	25,380,474	1,955,426	12.98	20,068,560	1,085,370	18.49
<i>VMT Impact Threshold⁵</i>	--	--	<i>11.03</i>	--	--	<i>15.72</i>
Buildout of Specific Plan (2040 Cumulative Plus Project Conditions)	397,593	42,000	9.47	1,353,390	95,683	14.14
VMT Impact?	--	--	No	--	--	No
¹ Residential VMT = home-based trip productions x distance ² Residential VMT per capita = residential VMT / population ³ Employment VMT = home-based work trip attractions x distance ⁴ Employment VMT per employee = employment VMT / jobs ⁵ The City of Sunnyvale recommends the project VMT impact threshold to be 15% less than the year 2020 existing countywide VMT average. Source: Hexagon Transportation Consultants. <i>Moffett Park Specific Plan VMT Analysis</i> . April 29, 2022. Page 7.						

As shown in Table 3.17-5, the Specific Plan residential land uses would result in 9.47 VMT per capita under 2040 cumulative projects conditions, which is below the residential VMT impact threshold of 11.03 VMT per capita. The Specific Plan employment (office) land uses would result in 14.14 VMT per employee under 2040 cumulative project conditions, which is below the employment VMT impact threshold of 15.72 VMT per employee.

While the VMT impact for the Specific Plan’s residential and office land uses are evaluated quantitatively, pursuant to the City’s Transportation Analysis Guidelines for VMT and LTA, hotel, retail, and institutional land uses considered local-serving are assumed to reduce total VMT, and are thus screened out from further quantitative VMT analysis. An explanation of how the proposed hotel, retail, and institutional land uses are local serving is provided below.

The Specific Plan would result in a net increase of approximately 150,000 square feet of hotel land use. The proposed hotels would reduce overall VMT because the hotels would serve the immediate office uses within Moffett Park, thereby reducing the need for hotel patrons to travel further away from the offices within Moffett Park. Additionally, hotel employees were also included in the VMT

analysis for employment land use. Thus, the Specific Plan's proposed hotel land use would result in a less than significant VMT impact.

Per Council Policy 1.2.8 and the City's VMT guidelines, retail projects with less than 100,000 square feet are considered local-serving and are exempt from completing a VMT analysis. The Specific Plan would result in a net increase of approximately 500,000 square feet of commercial land uses, which are expected to be spread out across Moffett Park, including local-serving general retail stores, grocery stores, and restaurants. These land uses would primarily be serving Moffett Park and are, therefore, considered to be local serving. Local-serving retail would reduce travel distances for patrons, thereby reducing VMT generated by retail land uses in Moffett Park. Thus, the Specific Plan's proposed retail land use would result in a less than significant VMT impact.

The Specific Plan includes approximately 326,000 square feet of institutional land use, which includes the existing Foothill College Center. As discussed in Section 3.15 Public Services, it is possible new or expanded school facilities may be required to serve students that would be generated in Moffett Park. In the event new public schools are proposed within Moffett Park, these schools would be local serving. This would reduce the overall VMT for institutional land uses. Thus, the Specific Plan's proposed institutional land use would result in a less than significant VMT impact.

Based on the discussion above for the proposed hotel, retail, and institutional uses and as shown in Table 3.17-3 above for the residential and office uses, buildout of the Specific Plan would not result in significant VMT impacts. Furthermore, future Specific Plan development would undergo supplemental environmental evaluation and be reviewed on a project-by-project basis to ensure consistency with local and state regulatory policies related to VMT. For these reasons, the Specific Plan's VMT impact is less than significant. **(Less than Significant Impact)**

Impact TRN-3: The project would not substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). **(Less than Significant Impact)**

The proposed street network (see Figure 2.3-4) would result in greater mobility and connectivity throughout Moffett Park. All future transportation network improvements would be designed to City standards to prevent sharp curves or dangerous intersections. No incompatible land uses (such as farm equipment) are proposed. In addition, future Specific Plan development would be subject to the City's development review process to ensure the design does not result in a safety hazard. **(Less than Significant Impact)**

Impact TRN-4: The project would not result in inadequate emergency access. **(Less than Significant Impact)**

The proposed street network and future Specific Plan development would increase mobility and access compared to existing conditions and be designed to meet current City Building and Fire code standards and subject to the City's development review process, which would ensure adequate access and design for emergency vehicles. **(Less than Significant Impact)**

3.17.2.2 *Cumulative Impacts*

Impact TRN-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant transportation impact. **(Less than Significant Cumulative Impact)**

Consistency with Circulation System Programs, Plans, Ordinances, or Policies

The geographic area for consistency with local programs, plans, ordinances, or policies is citywide. As discussed under Impact TRN-1, implementation of the proposed Specific Plan would be consistent with and build upon the City's General Plan policies, Active Transportation Plan, Vision Zero Plan, and Roadway Safety Plan by supporting multimodal options and encouraging street designs that promote safety, connectivity, and bicycle/pedestrian permeability. Thus, buildout of the proposed Specific Plan would comply with existing plans and policies. **(Less than Significant Cumulative Impact)**

VMT

The geographic area for cumulative VMT is Santa Clara County. The project-level VMT analysis discussion under Impact TRN-2 is also a cumulative analysis since implementation of the proposed Specific Plan is a long-range project, and it is anticipated that the long-range regional land use growth is needed to support the proposed level of development. The long-range forecast year used in the VMT analysis is 2040, which assumes the buildout of the City's General Plan, Downtown Specific Plan, Lawrence Station Area Plan update, the El Camino Real Specific Plan, the Fortinet Precise Plan, and regional growth projected by ABAG (i.e., cumulative conditions). As discussed under Impact TRN-2, the project and, therefore, cumulative VMT impact for buildout of the proposed Specific Plan is less than significant. **(Less than Significant Cumulative Impact)**

Design Hazards, Incompatible Uses, and Emergency Access

The geographic area for cumulative design hazards, incompatible uses, and emergency access is the general vicinity near Moffett Park. Future development projects (inside or outside the Moffett Park boundary) would be subject to the City's standard development review process to ensure design standards are met and there are no design hazards, no incompatible uses, and adequate emergency access. The lands located west of Moffett Park, that fall under the jurisdiction of the City of Mountain View, would be subject to a similar development review process to prevent design hazards, incompatible uses, and provide adequate emergency access. Thus, cumulative projects (including the Specific Plan) would not result in a significant cumulative impact due to design hazards, incompatible uses, or emergency access. **(Less than Significant Cumulative Impact)**

3.17.3 Non-CEQA Effects

Effects on Potential Schools in Moffett Park

Educational facilities, such as a new public school, is permitted in the MP-R and I land use designations (refer to Figure 2.3-1). No school is currently proposed as part of the Specific Plan. As discussed in Section 3.17.1.1 Regulatory Framework, in accordance with the CDE School Site Selection and Approval Guide pursuant to Section 17251(b) of the Education Code, the condition of

traffic, school bus safety, and safe routes to a potential school site would need to be evaluated and considered when siting a future school. If a school is proposed within Moffett Park, it would be subject to separate environmental review and would be required to comply with existing regulations, including the California Education Code and Title 5 of the CCR.

3.18 TRIBAL CULTURAL RESOURCES

3.18.1 Environmental Setting

3.18.1.1 *Regulatory Framework*

State

Assembly Bill 52

AB 52, effective July 2015, established a new category of resources for consideration by public agencies called Tribal Cultural Resources (TCRs). AB 52 requires lead agencies to provide notice of projects to tribes that are traditionally and culturally affiliated with the geographic area if they have requested to be notified. Where a project may have a significant impact on a TCR, consultation is required until the parties agree to measures to mitigate or avoid a significant effect on a TCR or until it is concluded that mutual agreement cannot be reached.

Under AB 52, TCRs are defined as follows:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are also either:
 - Included or determined to be eligible for inclusion in the California Register of Historic Resources, or
 - Included in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).
- A resource determined by the lead agency to be a TCR.

Local

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to the General Plan TCR policies including the ones listed below.

Policy	Description
<i>Community Character Element</i>	
CC-5.5	Archeological resources should be preserved.

3.18.1.2 *Existing Conditions*

As discussed in Section 3.5 Cultural Resources, there are six known archaeological resources within Moffett Park. All of Moffett Park has a moderate to high potential for additional, buried Native American and archaeological resources.

Tamien Nation requested formal notice and information on all proposed projects within the City of Sunnyvale on June 14, 2021. On September 8, 2021, the City requested a Sacred Lands File Search for any evidence of cultural resources or traditional properties of potential concern that might be known on lands within or adjacent to Moffett Park by the NAHC. The search results were negative; no cultural resources or traditional properties of concern were identified within the area.¹⁶⁸ The NAHC also provided contacts for 11 Native American individuals/organizations who may know of cultural resources in this area or have specific concerns about the project. The City sent letters to all of the tribes identified by the NAHC on October 26, 2021 and did not receive response letters or requests for consultation under AB 52 or SB 18. The City sent letters to Tamien Nation tribe representatives on October 26, 2021 and November 6, 2021, and did not receive response letters.

3.18.2 Impact Discussion

For the purpose of determining the significance of the project's impact on tribal cultural resources, would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- 1) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?
- 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

3.18.2.1 *Project Impacts*

Impact TCR-1: The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). **(Less than Significant Impact)**

As discussed in Section 3.18.1.2 Existing Conditions, no TCRs are located within Moffett Park. Future development under the Specific Plan would comply with existing regulations, including AB

¹⁶⁸ Sanchez, Katy. Associate Environmental Planner. Native American Heritage Commission. Personal Communication. October 15, 2021.

52 (as applicable), and Specific Plan Project Requirements 10.3.2-3 through 10.3.2-5 (described in section 3.5 Cultural Resources) to protect TCRs.

Future Specific Plan development in conformance with the Specific Plan Project Requirements 10.3.2-3 through 10.3.2-5 would not result in significant impacts to TCRs by researching, exploration, and monitoring for potential unknown resources, halting construction if a resource is encountered, and treating the find appropriately to reduce impacts to a less than significant level. **(Less than Significant Impact)**

Impact TCR-2: The project would not cause a substantial adverse change in the significance of a tribal cultural resource that is determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. **(Less than Significant Impact)**

As discussed under Impact TCR-1, no TCRs are identified within Moffett Park and future development would comply with existing regulations and the Specific Plan policies to protect TCRs that may be discovered during future construction activities. **(Less than Significant Impact)**

3.18.2.2 *Cumulative Impacts*

Impact TCR-C: The project would not result in a cumulatively considerable contribution to a cumulatively significant tribal cultural resources impact. **(Less than Significant Cumulative Impact)**

The geographic area for cumulative TCR impacts is Moffett Park and the adjacent areas, as it is assumed development in the area would affect similar resources. Future development projects that would occur during the 20-year timeframe for buildout of the Specific Plan (inside or outside the Moffett Park boundary) would comply with all applicable regulations, including AB 52 and General Plan policy CC-5.5 and the Specific Plan policies under Impact TCR-1 (if applicable) to protect unrecorded TCRs. For these reasons, cumulative projects (including the Specific Plan), would not result in a significant cumulative TCR impact. **(Less than Significant Cumulative Impact)**

3.19 UTILITIES AND SERVICE SYSTEMS

The following discussion is based, in part, on a Water Supply Assessment (WSA) completed by Schaaf & Wheeler dated September 26, 2022, a Water Master Plan Report completed by BKF dated October 27, 2022, a Wastewater Master Plan Report completed by BKF dated October 27, 2022, and a Water Storage Memorandum completed by Schaaf & Wheeler dated December 6, 2022. These reports are included as Appendices J, K, L, and M to this EIR, respectively.

3.19.1 Environmental Setting

3.19.1.1 *Regulatory Framework*

State

Federal Clean Water Act and California Porter-Cologne Water Quality Control Act

The federal Clean Water Act and California's Porter-Cologne Water Quality Control Act are the primary laws related to water quality in California. Regulations set forth by the EPA and the SWRCB have been developed to fulfill the requirements of this legislation. EPA regulations include the NPDES permit program, which controls sources that discharge pollutants into the waters of the United States (e.g., streams, lakes, bays, etc.). NPDES permits establish discharge limits on what can be discharged to the waters of the United States, and contains monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health. These regulations are implemented at the regional level by RWQCBs, specifically by the San Francisco Bay RWQCB and for the San Francisco Bay Area region.

State Water Code

Pursuant to the State Water Code, water suppliers providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet (approximately 980 million gallons) of water annually must prepare and adopt an urban water management plan (UWMP) and update it every five years. As part of a UWMP, water agencies are required to evaluate and describe their water resource supplies and projected needs over a 20-year planning horizon, water conservation, water service reliability, water recycling, opportunities for water transfers, and contingency plans for drought events. The City of Sunnyvale adopted its most recent UWMP in June 2021.

Assembly Bill 939

The California Integrated Waste Management Act of 1989, or AB 939, established the Integrated Waste Management Board, required the implementation of integrated waste management plans, and mandated that local jurisdictions divert at least 50 percent of solid waste generated (from 1990 levels), beginning January 1, 2000, and divert at least 75 percent by 2010. Projects that would have an adverse effect on waste diversion goals are required to include waste diversion mitigation measures.

Assembly Bill 341

AB 341 sets forth the requirements of the statewide mandatory commercial recycling program. Businesses that generate four or more cubic yards of garbage per week and multi-family dwellings

with five or more units in California are required to recycle. AB 341 sets a statewide goal for 75 percent disposal reduction by the year 2020.

Senate Bill 1383

SB 1383 establishes targets to achieve a 50 percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020 and a 75 percent reduction by 2025. The bill grants CalRecycle the regulatory authority required to achieve the organic waste disposal reduction targets and establishes an additional target that at least 20 percent of currently disposed edible food is recovered for human consumption by 2025.

Senate Bill 610

SB 610 amended state law, effective January 1, 2002, to improve the link between information on water supply availability and certain land use decisions made by cities and counties. SB 610 requires preparation of a WSA containing detailed information regarding water quality to be provided to the decision-makers prior to approval of a specific large development projects that also requires a General Plan Amendment. This WSA must be included in the administrative record that serves as the evidentiary basis for an approval action by the city or county on such projects. Under SB 610, WSAs must be furnished to local governments for inclusion in any environmental documentation for certain projects subject to CEQA. Pursuant to the California Water Code (Section 10912[a]), projects that require a WSA include the following:

- A proposed residential development of more than 500 dwelling units;
- A proposed shopping center or business establishment employing more than 1,000 persons for having more than 500,000 square feet of floor space;
- A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space;
- A proposed hotel or motel, or both, having more than 500 rooms;
- A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area;
- A mixed-use project that includes one or more of the projects identified in this list; or
- A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500 dwelling unit project.

California Green Building Standards Code

In January 2010, the State of California adopted CALGreen, establishing mandatory green building standards for all buildings in California. The code covers five categories: planning and design, energy efficiency, water efficiency and conservation, material conservation and resources efficiency, and indoor environmental quality. These standards include the following mandatory set of measures, as well as more rigorous voluntary guidelines, for new construction projects to achieve specific green building performance levels:

- Reducing indoor water use by 20 percent;
- Reducing wastewater by 20 percent;

- Recycling and/or salvaging 50 percent of nonhazardous construction and demolition debris; and
- Providing readily accessible areas for recycling by occupants.

Local

Sunnyvale General Plan

The General Plan, adopted July 2011 and amended in 2022, includes policies for the purpose of avoiding or mitigating impacts resulting from planned development projects in the City. Future development projects implementing the Specific Plan would be subject to the General Plan utilities and service systems policies including the ones listed below.

Policy	Description
<i>Environmental Management Element</i>	
EM-2.1	Lower overall water demand through the effective use of water conservation programs in the residential, commercial, industrial, and landscaping arenas.
EM-5.2	Ensure that wastes discharged to the wastewater collection system can be treated by existing treatment processes of the Water Pollution Control Plant.
EM-7.2	Coordinate operating procedures with the City energy policy to optimize an alternative energy program so that minimum use and reliance are placed on outside energy sources.
EM-7.4	Produce quality recycled water and seek to maximize the use of this resource.
EM-9.1	Maintain and operate the storm drain system so that storm waters are drained from 95 percent of the streets within one hour after a storm stops.
EM-10.3	Require the incorporation of appropriate stormwater treatment and control measures for industrial and commercial facilities as identified in the stormwater Municipal Regional Permit.
EM-12.1	Provide convenient and competitively priced solid waste collections services.
EM-13.1	Provide periodic opportunities for residents to dispose of refuse at discounted or no charge.
EM-14.1	Reduce generation of solid waste by providing source reduction programs and promoting reduction behavior.
EM-14.2	Maximize diversion of solid waste from disposal by use of demand management techniques, providing and promoting recycling programs and encouraging private sector recycling.
EM-14.3	Meet or exceed all federal, state and local laws and regulations concerning solid waste diversion and implementation of recycling and source reduction programs.
EM-14.4	Increase demand for recycled materials by advocating local, state and federal legislation that will increase use of recycled content products.

Policy	Description
EM-15.2	Reduce the amount of refuse being disposed, generate recycling revenues, and minimize truck travel to the disposal site through use of the Sunnyvale Materials Recovery and Transfer (SMaRT) Station ®.

Sunnyvale Urban Water Management Plan

The 2020 UWMP was prepared in accordance with current and projected land uses included in the City’s General Plan and includes increases in commercial, institutional, industrial, and residential water demand over the implementation horizon. The UWMP estimates a current (2020) water demand of 19,906 AFY in the City. The water demand in Sunnyvale is projected to increase from approximately 19,906 AFY in 2020 to 25,618 AFY in 2040.¹⁶⁹ The water supply in Sunnyvale is projected to increase from approximately 32,111 AFY in 2025 to 35,255 AFY in 2040.¹⁷⁰

The City of Sunnyvale’s UWMP forecasts that water supplies will be available to meet the City’s projected future water demands during normal and wet years through 2040, based on General Plan growth estimates and supplier projections. During single- and multiple-dry years, the City expects reductions in available supply from the SFPUC and Valley Water. This decrease in imported water is anticipated to be made up through implementation of drought-year conservation measures, the potential increased use of recycled water, and an increase in groundwater production.

Sunnyvale Water Pollution Control Plant Master Plan

In 2016, the City adopted its WPCP Master Plan to rebuild the WPCP over a span of 20 years. Implementation of the plan will upgrade existing outdated equipment and aging infrastructure, complying with applicable federal, state, and local regulations. The update to the WPCP Master Plan is anticipated to start in early 2023.

Sunnyvale Water Utility Master Plan

The City’s Water Utility Master Plan (WUMP) was adopted in 2010 and later updated as part of the Potable Water System Comprehensive Preliminary Design Study Report (CPDS). The City’s WUMP and CPDS identify CIPs and pipeline upsizing projects to address the City’s fire flow deficiencies and fire flow in the City through 2033.¹⁷¹

2021 Groundwater Management Plan

The 2021 GWMP describes Valley Water’s comprehensive groundwater management framework, including existing and potential actions to achieve basin sustainability goals and ensure continued sustainable groundwater management. The GWMP covers the Santa Clara and Llagas subbasins, which are located entirely in Santa Clara County. Valley Water manages a diverse water supply portfolio, with sources including groundwater, local surface water, imported water, and recycled water. About half of the county’s water supply comes from local sources and the other half comes

¹⁶⁹ City of Sunnyvale. *2020 Urban Water Management Plan*. June 2021. Page 1-2.

¹⁷⁰ City of Sunnyvale. *2020 Urban Water Management Plan*. June 2021. Page 6-15.

¹⁷¹ City of Sunnyvale. *Water Utility Master Plan*. November 2010. Page 9, Table 7-2 for CIPs and Table 8-2 for pipeline upsizing.

from imported sources. Imported water includes Valley Water’s State Water Project and Central Valley contract supplies and supplies delivered by the SFPUC to cities in northern Santa Clara County. Local sources include natural groundwater recharge and surface water supplies. A small portion of the county’s water supply is recycled water.

Local groundwater resources make up the foundation of the county’s water supply, but they need to be augmented by Valley Water’s comprehensive water supply management activities to reliably meet the county’s needs. These include the managed recharge of imported and local surface water and in-lieu recharge through the provision of treated surface water, acquisition of supplemental water supplies, and water conservation and recycling.

Sunnyvale Construction and Demolition Waste Diversion

The City requires remodel or demolition projects where 50 percent or more of the exterior wall will be removed to recycle or reuse at least 65 percent of the project’s nonhazardous waste. Recycling of nonhazardous waste reduces the energy used to produce new materials from raw, non-renewable resources.

Sunnyvale Wastewater Collection System Master Plan

The City’s 2015 Wastewater Collection System Mater Plan (WWMP) evaluated the capacity and condition of the sanitary sewer and storm drain collection system in order to recommend a long-term Capital Improvement Program with improvements.¹⁷² The City’s sewer system performance criteria defines a pipe as potentially deficient when the Maximum Flow Depth/Pipe Diameter (d/D) is greater than 0.75 for 12 inch and greater diameter pipes and 0.5 for 10 inch and smaller diameter pipes.¹⁷³ Based on the findings, the 2015 WWMP identified CIPs to be implemented to ensure the sanitary sewer and storm drain systems can accommodate the existing development and projected growth in the City.

CIPs identified for Moffett Park include the following:

*Sanitary Sewer Improvements*¹⁷⁴

- CIP-1 – Upsize 12-inch diameter pipe to 15-inch diameter pipe in Mathilda and Innovation Way between Java and Moffett Park Drive.
- CIP-1 Alternative – Install new 15-inch diameter pipeline in Moffett Park Drive; close outlet to north at Manhole 529-208.

As of late 2022, the City is completing an updated study of the wastewater collection system based on more detailed and accurate information than was available in 2015. Proposed CIPs identified in the newer study will supersede those of the 2015 study. After the newer study is completed, the City will perform additional, as-needed evaluation of recommended projects and then proceed with their implementation.

¹⁷² City of Sunnyvale. *Water Utility Master Plan*. November 2010. Page 9, Table 7-2 for CIPs and Table 8-2 for pipeline upsizing.

¹⁷³ City of Sunnyvale. *Wastewater Collection System Master Plan*. December 2015. Pages 28-29.

¹⁷⁴ City of Sunnyvale. *Wastewater Collection System Master Plan*. December 2015. Table 4-7.

Improvements needed to the City's sewer system, including the WPCP, are funded through the collection of sewer connection fees. Developers are required to pay the appropriate sewer connection fee prior to redevelopment of a property.

Sunnyvale Municipal Code

SMC Section 12.16.020 (Types of charges and fees) states that the City Council from time to time shall establish by resolution fees and charges for sewage services provided by the City. Such fees and charges shall be based on cost influencing factors such as flow, pollutant loading rates, volumes, and the degree of effort required for purposes of billing, inspection, sampling, testing, and permitting.

SMC Section 12.40.010 (Allocation of Sewage Treatment Capacity) states that the entire sewage treatment capacity of the WPCP shall be allocated to four categories as follows: (A) Industrial (consisting of all zoning districts M-1, M-2, M-3, M-4, or any replacement districted intended to be primarily for manufacturing land use); (B) Commercial/Public (consisting of all zoning districts O, P-F, CD, C-H, C-1, C-2, C-3, C-4); (C) Residential (consisting of all zoning districts R-0, R-1, R-2, R-3, R-4, R-5, R-MH); which allocations shall total 96 percent of the WPCP's rated capacity. In addition, a fourth category, (D) "Reserves" shall be established totaling four percent of the WPCP's rated capacity.

SMC Section 12.40.030 (Initial baseline limits) states there shall be established for each of categories A, B, and C, an Initial Baseline Limit, which shall be defined as the initial allocations, less the percent estimated vacant land needs of 1.485 million gallons of water per day (mgd) for category A (Industrial), 0.256 mgd for category B (Commercial/Public), and 1.160 mgd for category C (Residential).

SMC Section 12.40.060 (Monitoring of Wastewater Flows) states the Director of Community Development or his or her designee shall monitor wastewater flows to the WPCP and periodically calculate, on the basis of water sales information, and any other relevant information, the amount of wastewater flow originating from the zoning districts compromising each of the wastewater capacity allocation categories.

SMC Section 12.40.070 (Declaration of need for wastewater capacity evaluation) states if the calculated amount of wastewater from any allocation category reaches the baseline limit for such category, the Director of Community Development, or designee, shall immediately issue and cause to be filed with the City Clerk a Declaration of Need for Wastewater Capacity Evaluation. The City Clerk shall within 10 days publish this Declaration in the official newspaper of the City. Thereupon for a period of 60 days, or until the Declaration is withdrawn, whichever is earlier, no new wastewater discharge permits shall be issued, and no existing permits shall be modified to permit increased flow. The Director of Community Development or his designee shall perform within such 60 days an analysis of the remaining vacant land in each wastewater capacity allocation category, and the wastewater capacity anticipated to be needed to service such vacant land when developed. For each acre of vacant land in Categories A and B, three thousand gallons per acre per day will be reserved. For each vacant acre of land within Category C, capacity needs based upon the maximum density allowed in each zoning district making up Category C, will be calculated and reserved. A

new baseline limit for each capacity allocation category shall be calculated by subtracting vacant land needs in each category from total WPCP capacity allocation in each category.

Chapter 19.37 (Landscaping, Irrigation, and Usable Open Space) promotes the conservation and efficient use of water. All new landscaping installations of 500 square feet or more or rehabilitated landscaping projects of 1,000 square feet or more are subject to water-efficiency design, planting, and irrigation requirements.

3.19.1.2 Existing Conditions

Moffett Park is located in a developed area within the City of Sunnyvale and is currently served by existing potable water, recycled water, wastewater/sanitary sewer, stormwater, and solid waste service systems. Descriptions of these systems are provided below.

Water Service

The City of Sunnyvale primarily obtains its water from the SFPUC and Valley Water. The City's water supply is supplemented with local groundwater wells. The City's relationship to SFPUC, Valley Water, groundwater, and recycled water are described in further detail below.

San Francisco Public Utilities Commission

Approximately 55 percent of the City's water comes from San Francisco's Regional Water System (RWS), which is operated by the SFPUC. The RWS produces approximately 265 mgd or 296,800 acre-feet per year (AFY). Under the "2009 Water Supply Agreement between the City and County of San Francisco and Wholesale Customers in Alameda County, San Mateo County and Santa Clara County", the SFPUC provides up to 12.58 mgd (or 14,100 AFY) to the City of Sunnyvale. In fiscal year 2021 to 2022, the City received 10,308 AF from SFPUC.¹⁷⁵

Valley Water

Approximately 43 percent of the City's water comes from Valley Water, which acts as the primary water resources agency for Santa Clara County and imports water from various state and federal water projects. Additionally, Valley Water captures and stores local surface water and recharges local groundwater basins. Valley Water has a contract for 152,000 AFY of water from the Federal Central Valley Project and 100,000 AFY from the State Water Project.

Locally, Valley Water operates 10 reservoirs with a combined storage capacity of 166,000 acre-feet. The City of Sunnyvale receives water from Valley Water through a 75 year water supply contract that was entered into in 1976. The estimated maximum available supply to Sunnyvale is 8.21 mgd or 9,200 AFY. In fiscal year 2021 to 2022, the City received 8,176 AF from Valley Water.¹⁷⁶

¹⁷⁵ City of Sunnyvale. *2020 Urban Water Management Plan*. June 2021. Page 6-14.

¹⁷⁶ City of Sunnyvale. *2020 Urban Water Management Plan*. June 2021. Page 6-14.

Groundwater

The City of Sunnyvale owns and operates six potable groundwater wells within the Santa Clara Plain Subarea of the Santa Clara Subbasin. Approximately 0.7 percent of the City’s water supply was from groundwater in fiscal year 2021 to 2022. The City owns one additional groundwater well in the Santa Clara Subarea that is left on standby for emergencies. Valley Water manages the recharge of the groundwater basin per the 2021 Groundwater Management Plan, which describes the programs in place to maintain a reliable groundwater supply.

The long-term average groundwater pumping in the Santa Clara Subbasin is 87,000 AFY. Over the past 20 years, the City of Sunnyvale extracted less than one percent of this total on average. The City’s groundwater safe yield is estimated to be 8,000 AFY. In fiscal year 2021 to 2022, the City received 135 AF of groundwater.

Recycled Water

The City of Sunnyvale WPCP provides recycled water to parks, golf courses, and the landscaping needs of diverse industries. The current City-owned recycled water program system includes the WPCP pump station, the San Lucar tank and pump station, the Sunnyvale Golf Course pump station, and approximately 18 miles of recycled water pipelines ranging in diameter from six to 36 inches. Recycled water from the City’s WPCP consists of approximately two percent of the City’s water supply for non-potable uses.

The City’s long-term goal is to reuse 100 percent of all wastewater from the WPCP. The City plans to continue expanding the recycled water system within the City boundaries with a phased approach. In 2020, the City received 386 AFY of recycled water.

Water Supply and Demand

It is estimated that the average water use within Moffett Park under current conditions is 58,075 centum cubic feet (ccf) per month, 1,428,184 gpd, and 1,600 AFY, as shown in Table 3.19-1 below.

Water Use Type	Average Monthly Water Use (ccf/month)	Average Daily Water Use (gpd)	Average Yearly Use (AFY)
Potable Water	35,913	883,173	990
Recycled Water	22,162	545,011	610
Total	58,075	1,428,184	1,600

Notes:
ccf = centum cubic feet (which represents one hundred cubic feet of water), gpd = gallons per day, and AFY = acre-feet per year
Source: Schaaf & Wheeler. *Water Supply Assessment for the Moffett Park Specific Plan Project*. September 26, 2022.

Water System and Fire Flow

Water Storage

The State Water Resources Control Board Division of Drinking Water (DDW) requires cities to store enough water to meet eight hours of Maximum Day Demand (MDD)¹⁷⁷ in addition to four hours of fire flow volume. In order to meet DDW requirements for existing development in the City, the City must have storage capacity for 18.74 million gallons (mg) of water. While the City has a maximum active storage of 25 mg, the total available storage capacity is approximately 19.70 mg due to operational constraints and seismic retrofit restrictions.

Under existing conditions, the City's eight hours of MDD plus fire flow is 13.90 mg. Under cumulative conditions (i.e., General Plan buildout), the City's eight hours of MDD plus fire flow would be approximately 16.88 mg. The City's available storage capacity of 19.70, therefore, provides sufficient storage capacity for current and future needs.

Hydraulic Conveyance and Fire Flow

The City's water system infrastructure includes supply turnouts, groundwater wells, storage tanks, and a network of water lines and trunks. The water system must meet minimum allowable pressure levels under two scenarios, MDD with Fire Flow and Peak Hour Demand (PHD). The minimum allowable pressure for the PHD scenario is 40 pounds per square inch (psi) and the minimum allowable pressure for the MDD plus fire flow scenario is 20 psi. The City's water system is divided into three pressure zones, shown on Figure 3.19-1, to maintain reasonable pressures throughout the City's varied topography. Moffett Park is located in Pressure Zone 1, which extends from El Camino Real northward to the San Francisco Bay and is primarily supplied by SFPUC.¹⁷⁸

Under existing conditions, modeling confirmed the pressure citywide (i.e., in all three pressure zones) under the PHD scenario meets the performance criteria of 40 psi.

The majority of the system's pipelines met the City's pipeline velocity standard of a maximum of seven feet per second (fps) during non-emergency operations and 15 fps under MDD plus fire flow. Under peak hour demands, the existing water system serving Moffett Park is able to maintain adequate service pressures as the system experiences average service pressures of approximately 90 to 100 psi.¹⁷⁹

Existing hydraulic conveyance deficiencies, identified in the Water Master Plan Report prepared for the Specific Plan, are shown on Figure 3.19-2.

Based on existing conditions, the fire flow rate required for Moffett Park is 2,500 gallons per minute (gpm) in areas zoned Moffett Park Transit Oriented Development, 3,500 gpm in areas zoned Moffett Park Commercial, and 4,000 gpm in areas zoned Moffett Park Industrial.¹⁸⁰ These fire flow rates are required at a minimum residual pressure of 20 psi. Several pipelines have excessive velocities at the

¹⁷⁷ The 8 hours of MDD = (Average daily demand (ADD) x a 1.93 peaking factor)/3.

¹⁷⁸ City of Sunnyvale. *2020 Urban Water Management Plan*. June 2021. Page 3-5.

¹⁷⁹ City of Sunnyvale. *Water Utility Master Plan*. November 2010. Page 28.

¹⁸⁰ City of Sunnyvale. *Water Utility Master Plan*. November 2010. Page 22.

required fire flow. These pipelines are undersized and generate significant head loss at hydrants connected to these pipelines and were identified as capacity deficient.

Wastewater Treatment/Sanitary Sewer System

Wastewater Treatment

The City owns and operates the WPCP, which treats wastewater from residential, commercial, and industrial sources in Sunnyvale, Moffett Federal Airfield, and portions of Cupertino. Treated wastewater is discharged to the southern San Francisco Bay via the Guadalupe Slough. Five major trunk networks terminate at the WPCP, referred to as the Lawrence, Borregas, Lockheed, Moffett, and Cannery trunks. Moffett Park is served by the Lawrence, Borregas, and Lockheed trunks. Sewer lines in Moffett Park range from eight to 48 inches in diameter.

The WPCP uses advanced secondary treatment consisting of the following process: primary treatment (sedimentation), secondary treatment (biological oxidation), and advanced secondary treatment (filtration and disinfection). These processes provide treatment to a level that meets or exceeds the NPDES discharge requirements. The amount and quality of this effluent is regulated by the RWQCB. The WPCP's permitted average dry weather flow (ADWF) design capacity is 29.5 mgd and the peak wet weather flow (PWWF) design capacity is 40 mgd with capability of handling instantaneous flows of 55 mgd.¹⁸¹ The amount of influent wastewater handled by the WPCP varies within the time of day and within seasonal changes in demand. In 2021, the ADWF was approximately 12.5 mgd and the peak hourly maximum was 29.5 mgd.¹⁸²

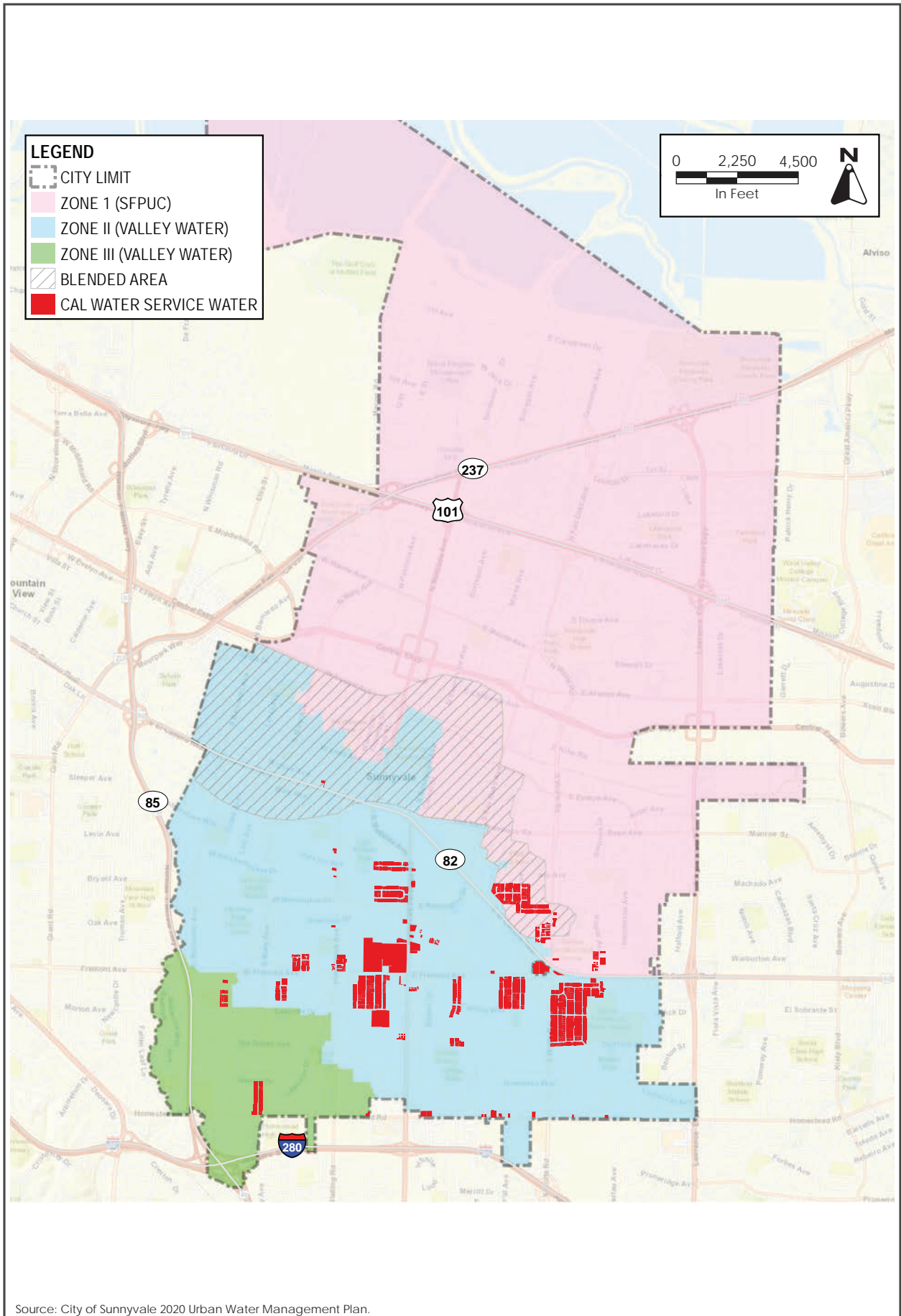
Sanitary Sewer System

The existing development within Moffett Park has sewer flow of 776,000 gpd based on the current land uses. Sewage generated at Moffett Park flows to existing sewer mains that range from 12 to 48 inches in diameter.

Under existing conditions, under PWWFs, the existing sanitary sewer system is deficient and experiences surcharging. In order to adequately accommodate existing flows (i.e., for pipes to meet the City's performance design criteria) in Moffett Park, existing sewer pipeline along Mathilda Avenue and Innovation Way, between Java Drive and Moffett Park Drive, be upsized from 12 inches in diameter to 15 inches in diameter. As discussed under Section 3.19.1.2 Existing Conditions, the City is completing an updated study of the wastewater collection system based on more detailed and accurate information than was available in 2015. Once the newer study is completed, the City will perform additional, as-needed evaluation of recommended projects (that will supersede previously identified improvements) and then proceed with their implementation.

¹⁸¹ City of Sunnyvale. *Water Pollution Control Plant 2021 Annual NPDES Report*. February 1, 2022. Page 3.

¹⁸² Ibid. Page 13.



PRESSURE ZONES AND SERVICE AREA MAP

FIGURE 3.19-1



Source: BKF Engineers, May 2022.

EXISTING HYDRAULIC CONVEYANCE DEFICIENCIES

FIGURE 3.19-2

Storm Drainage

Citywide Storm Drainage System

The City manages an extensive stormwater system with about 3,000 pipes, 100 outfalls, five watersheds, and two pump stations. As a part of the City's 2015 WWMP, the capacity of the City of Sunnyvale storm drain system was evaluated using hydrologic model and hydraulic models. Results of the evaluation were used to identify storm drain lines with capacities substantially less than the imposed flows and develop recommended improvements in the storm drain system. Twenty (20) storm drain lines were identified as having one or more sections with less than adequate capacity. Three of the 20 hydraulically deficient storm drain lines are located within Moffett Park including lines along Borregas Avenue, between Humboldt Court and Caspian Drive, along the Sunnyvale West Channel at Java Drive, and along Caribbean Drive, from Moffett Park Drive to the Sunnyvale East Channel. No recommended improvements were identified for these deficiencies given they were not related to known flooding issues. Additionally, the 2015 storm drain study was based on limited information which did not include flow measurement during storms. Results of the 2015 study are considered preliminary and subject to change pending more detailed studies.

Storm Drainage in Moffett Park

Most of Moffett Park consists of impervious surfaces (e.g., paved parking lots and buildings). Stormwater runoff from impervious surfaces within Moffett Park is collected by the City's stormwater system and by a private storm drainage system located generally west of Mathilda Avenue that does not flow to the City's system. Moffett Park is located in an area where catchments drain to hardened channels (e.g., Lockheed Martin, Sunnyvale West Channel and Sunnyvale East Channels and/or tidal areas (e.g., San Francisco Bay), as described in Section 3.10 Hydrology and Water Quality.

Moffett Park is located within Sunnyvale West Channel and Sunnyvale East Channel watershed. Together, the channels drain a watershed of approximately 15 square miles, encompassing most of Sunnyvale, as well as parts of Mountain View, Cupertino, and unincorporated Santa Clara County. The channels and their levees are designed with capacity to carry flows from the storm drain systems during a 10-year storm.

There are six drainage areas (three within Moffett Park) that collect and convey stormwater to the shoreline. Within Moffett Park there is the Lockheed Martin drainage area (managed by Lockheed Martin) that includes the eastern portion of Moffett Park to Mathilda Avenue, the Sunnyvale Drainage Area 1 that includes the area west of Mathilda Avenue to a stormwater ditch adjacent to the Sunnyvale East Channel, and the Sunnyvale Drainage Area 2 that extends from the stormwater ditch to the eastern border of Moffett Park.

In the Lockheed Martin drainage area, stormwater flows to detention ponds located at the northern edge of Moffett Park. From the detention ponds, water flows along the Lockheed Martin Channel to the Lockheed Martin pump station. The pump station conveys stormwater from the Lockheed Martin Channel into Sunnyvale West Channel, which then flows to the Guadalupe Slough and the San Francisco Bay. Pump Station No. 1, which is located at the SMaRT Station® north of Moffett Park, drains Moffett Park east of Mathilda Avenue (Drainage Areas 1 and 2) including water collected in

the stormwater ditch parallel to the East Channel. Pump Station No. 2, located 0.75 mile east of Moffett Park and adjacent to Calabazas Creek, drains the area south of SR 237 to Tasman Drive, which is outside of Moffett Park.

Solid Waste

Solid waste collected in the City is transported to the SMaRT Station®. The SMaRT Station® currently serves the cities of Mountain View, Palo Alto, and Sunnyvale. In 2020, the SMaRT Station® processed an average peak tonnage of 952 of materials, with a permitted peak capacity of 1,500 tons of material each day.¹⁸³ The SMaRT Station® receives municipal solid waste, recyclables, and yard trimmings. The SMaRT Station® diverts approximately 41 percent of the materials delivered from being landfilled. Diverted materials primarily include compostable organics, concrete, dirt, carpet, mattresses, and yard trimmings. The remaining waste is disposed of at Kirby Canyon Landfill in south San José. Kirby Canyon Landfill has a capacity of 36.4 million cubic yards and is permitted to receive 2,600 tons of waste per day.¹⁸⁴ As of January 1, 2022, the landfill has a remaining Phase 1 capacity of 14.35 million cubic yards. Based on the current remaining capacity available and projected volumes, Kirby Canyon Landfill is projected to close its Phase 1 section in 2060.¹⁸⁵ There are additional phases available that are also accepting waste, but the remaining capacity for those future phases is currently unknown.

Existing uses at Moffett Park generate approximately 2,380 tons (8,815 cubic yards) per year of solid waste.¹⁸⁶

Electric Power, Natural Gas, and Telecommunications Facilities

As discussed in Section 3.6 Energy, SVCE is the electricity provider for the City of Sunnyvale, and PG&E provides natural gas services within Santa Clara County.

3.19.2 Impact Discussion

For the purpose of determining the significance of the project's impact on utilities and service systems, would the project:

- 1) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?
- 2) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

¹⁸³ CalRecycle. "Kirby Canyon Recycle & Disposal Facility (43-AN-0008)." Accessed October 17, 2022. Available at <https://www2.calrecycle.ca.gov/SolidWaste/SiteActivity/Details/1370?siteID=3393>.

¹⁸⁴ Ibid.

¹⁸⁵ Azevedo, Becky. Technical Manager, Waste Management, Inc. Personal Communication. November 11, 2022.

¹⁸⁶ Illingworth & Rodkin, Inc. *Moffett Park Specific Plan Update Air Quality Analysis*. November 23, 2022. Attachment 2.

- 3) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?
- 4) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?
- 5) Be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?

3.19.2.1 *Project Impacts*

Impact UTL-1: The project would not require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects. **(Less than Significant Impact)**

Water System and Fire Flow

Water Storage

The impact of the Specific Plan buildout on the utility system for water storage was analyzed under cumulative conditions. As discussed above, DDW requires the City to maintain a storage capacity for 18.74 mg of water. Sunnyvale's available storage capacity is 19.70 mg, which provides sufficient storage capacity for current needs and future demands without the Specific Plan. Under cumulative plus Specific Plan buildout conditions, the citywide total for eight hours of MDD plus fire flow would increase by 3.83 mg, from 16.88 under cumulative (no project) conditions to 20.71 mg.

Given the MDD plus fire flow under cumulative conditions plus Specific Plan conditions would exceed the City's available water storage capacity, the City would not have adequate storage capacity to meet DDW criteria in the future with the buildout of the General Plan and Specific Plan. The City assesses water storage capacity every five years, as a part of the updates to the Urban Water Management Plan, to determine if and when improvements are necessary to meet DDW requirements and provide adequate storage capacity. Future improvements to increase water storage capacity could include use of groundwater wells with backup power as additional storage, construction of additional storage tanks, and structurally retrofitting existing tanks to allow full use of existing tank volumes.. At the time the design and construction details of these improvements are known, the City shall complete environmental review and require mitigation measures to reduce the environmental impacts to a less than significant level. It is anticipated that compliance with existing regulations and City policies would reduce impacts from water storage projects in infill locations to a less than significant level. **(Less than Significant Impact)**

Hydraulic Conveyance and Fire Flow

Modeling was completed to evaluate the capacity of the existing water system to serve buildout of the Specific Plan (refer to Appendix K for details about the modeling and inputs). The results showed that the existing water system serving Moffett Park experiences residual pressures ranging from 56 to

65 psi under MDD conditions. Under MDD plus fire flow, the model indicated that there are over 160 fire hydrants unable to achieve the required fire flow of 4,000 gpm at a minimum residual pressure of 20 psi. The existing pipelines in Moffett Park would not meet demands associated with buildout of the Specific Plan.

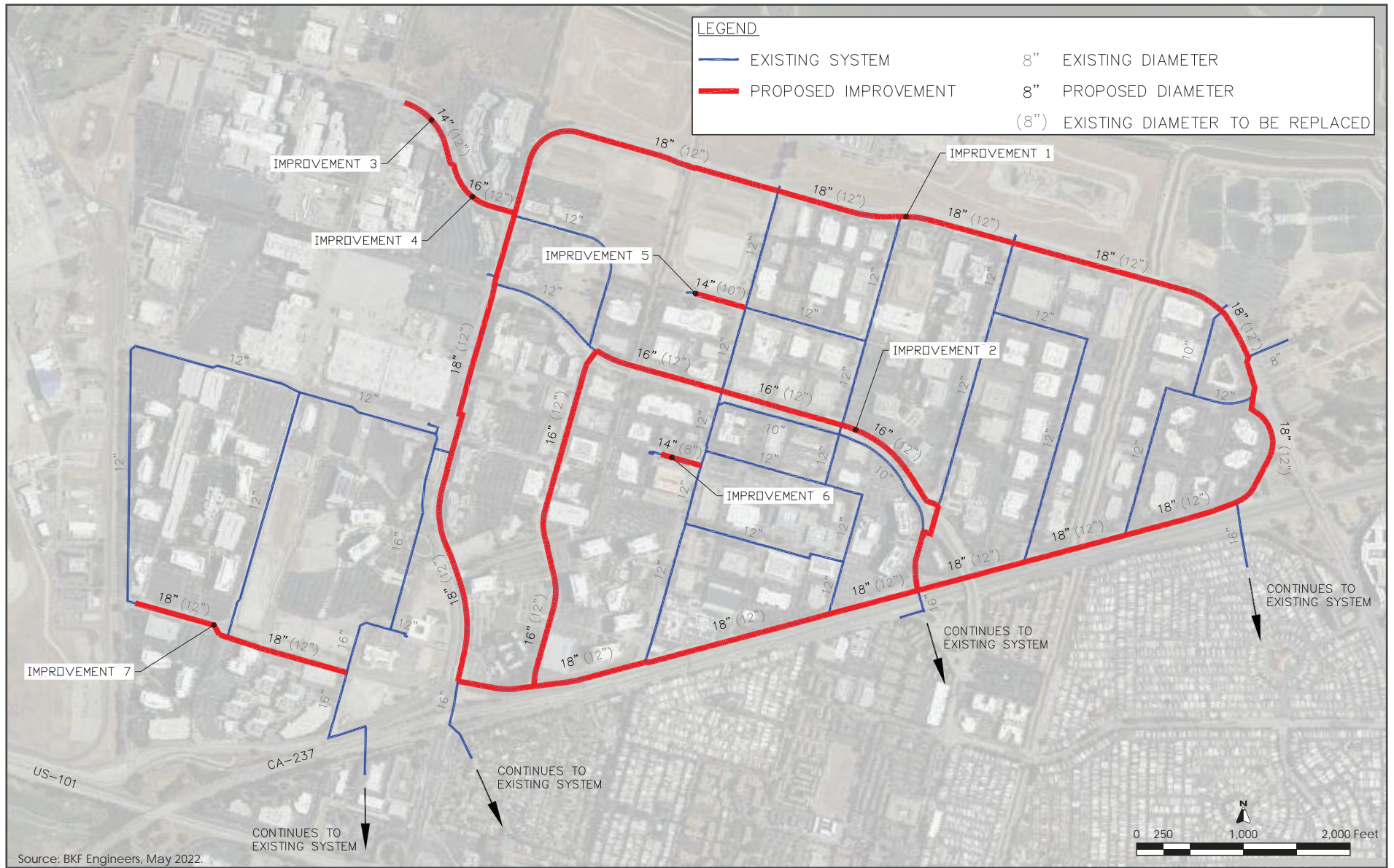
As discussed under Section 3.19.1.1 Regulatory Framework, the City’s WUMP and CPDS identify CIPs and pipeline upsizing projects to address the City’s fire flow deficiencies and provide sufficient fire flow in the City. Through these programs the City identifies deficiencies under cumulative (no project) conditions and plans for improvements accordingly. The City’s programs shall be updated to include the recommendations identified by the Water Master Plan prepared for the project. The water system CIPs are funded through the collection of water connection fees. Developers are required to pay the water connection fee prior to development or redevelopment of a property.

As described in Section 3.19.1.2 Existing Conditions, the Water Master Plan prepared for the proposed Specific Plan identified deficiencies in several pipelines that are undersized and generate significant head loss at hydrants that are connected to them. Deficiencies were identified in pipelines along Mathilda Avenue, Caribbean Drive, Moffett Park Drive, Bordeaux Drive, and Java Drive. Table 3.19-2 lists improvements that would be required to provide adequate service. These improvements are also shown on Figure 3.19-3.

Table 3.19-2: Fire Flow CIPs Required			
CIPs	Location Description	Existing Diameter (inches)	Proposed Diameter (inches)
FF MPSP-1	Caribbean Drive	12	18
FF MPSP-2	Java Drive	12	16
FF MPSP-3	1 st Avenue	12	14
FF MPSP-4	1 st Avenue to Bordeaux Drive	12	16
FF MPSP-5	Caspian Court to Borregas Avenue	10	14
FF MPSP-6	Gibraltar Court to Borregas Avenue	8	14
FF MPSP-7	11 th Avenue from Enterprise Way to Innovation Way	12	18

The water system CIPs are funded through the collection of water connection fees. Developers are required to pay the water connection fee prior to development or redevelopment of a property.

Implementation of these improvements would increase service pressures throughout Moffett Park to provide reliability under MDD plus fire flow, accommodating future demands in Moffett Park. 0At the time construction details are known, the City shall complete environmental review and future development projects shall contribute a fee toward improvements. Based on previous analyses for utility improvements located within existing rights-of-way in developed South Bay locations, the primary environmental effects associated with construction can be mitigated to less than significant levels. Thus, buildout of the Specific Plan would not result in the relocation or expansion of water facilities that would cause significant environmental effects. **(Less than Significant Impact)**



PROPOSED FIRE FLOW IMPROVEMENTS

FIGURE 3.19-3

Wastewater Collection and Sanitary Sewer System

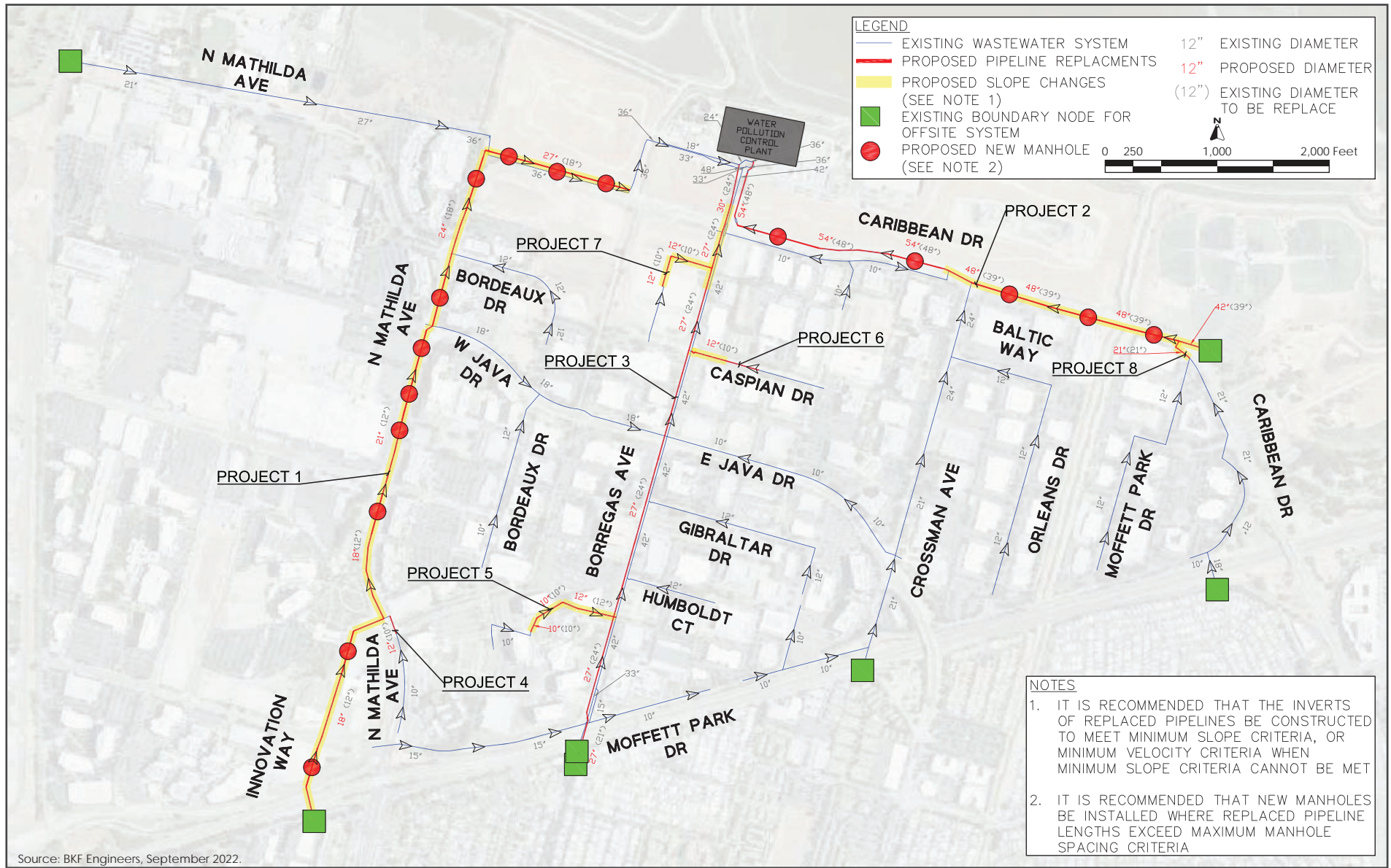
The capacity of the existing sanitary sewer system to serve Moffett Park with buildout of the Specific Plan was evaluated based on wastewater collection and sanitary sewer system pipeline design criteria developed for pipelines within Moffett Park (refer to Appendix L for extensive information regarding design criteria for pipe diameter, maximum flow depth, and minimum and maximum slopes). The model showed that under future flows from buildout of the Specific Plan, several pipelines would exceed maximum flow depth design criteria (discussed under Section 3.19.1.2 Existing Conditions) under peak wet weather flows.

The existing sewer trunks would not meet demands associated with buildout of the Specific Plan. Deficiencies were identified in sewer trunks along Innovation Way, North Mathilda Avenue, West Caribbean Avenue, Borregas Avenue, and East Caribbean Drive.

Table 3.19-3 lists CIPs that would be required to provide adequate sewer service and Figure 3.19-4 shows the proposed sanitary sewer improvements.

Table 3.19-3: Sanitary Sewer System CIPs Required			
CIPs	Location Description	Existing Diameter (inches)	Proposed Diameter (inches)
SS MPSP-1	Innovation Way to North Mathilda Avenue and West Caribbean Drive from SR 237 to Borregas Avenue	12 to 18	18 to 27
SS MPSP-2	East Caribbean Drive from Moffett Park Drive to Borregas Avenue	39 to 48	42 to 54
SS MPSP-3	Borregas Avenue from Moffett Park Drive to the WPCP	24	27 to 30
SS MPSP-4	Innovation Way to North Mathilda Avenue	10	12
SS MPSP-5	Right-of-way improvement	10 to 12	12 to 15
SS MPSP-6	Caspian Drive to Borregas Avenue	10	12
SS MPSP-7	Right-of-way without Borregas Avenue	10	12
SSP MPSP-8	East Caribbean Drive	21	21

Implementation of these improvements would increase pipeline capacity to meet design criteria under cumulative buildout peak wet weather flow conditions, accommodating future demands in Moffett Park. These improvements have not been implemented, are not fully funded, and are subject to separate project specific environmental review. At the time construction details are known, the City shall complete environmental review and future development projects shall contribute a fee



PROPOSED SANITARY SEWER SYSTEM IMPROVEMENTS

FIGURE 3.19-4

toward improvements. Based on previous analyses for utility improvements located within existing rights-of-way in developed South Bay locations, the primary environmental effects associated with construction can be mitigated to less than significant levels. Thus, buildout of the Specific Plan would not result in the relocation or expansion of wastewater and sewer system facilities that would cause significant environmental effects. **(Less than Significant Impact)**

Stormwater Drainage

As discussed in Section 3.10 Hydrology and Water Quality, the proposed Specific Plan would increase pervious surfaces around the Sunnyvale East and West Channels and would not include modifications to the primary drainage system (e.g., Lockheed Martin Channel and pump station, Sunnyvale West Channel, and Sunnyvale East Channel). The implementation of the Specific Plan would add 215 to 240 acres of park and open space areas. The Specific Plan includes standards for lot coverage that limit the amount of impervious surfaces allowable, soil improvements and drainage, landscape planting, and irrigation (refer to the guidelines and standards described in Chapter 6 of Appendix B). This increase in pervious surfaces would result in a corresponding increase in percolation of runoff within Moffett Park as a whole compared to existing conditions. This increase in pervious surfaces would not result in flooding or stormwater runoff greater than existing conditions.

As described above, according to a 2015 storm drain study, there are existing deficiencies in the City's storm drain system; however, buildout of the Specific Plan would not worsen the existing system because it would decrease impervious surfaces in Moffett Park, thereby decreasing runoff and flows to the storm drain system. Therefore, implementation of the Specific Plan would not require or result in the relocation or reconstruction of new or expanded stormwater facilities. **(Less than Significant Impact)**

Electric Power, Natural Gas, or Telecommunications Facilities

Existing natural gas, electricity, and telecommunications utility infrastructure would continue to serve future development under the Specific Plan. Future development under the Specific Plan would be subject to subsequent environmental review to confirm if all site-specific and project-specific impacts were evaluated in this EIR. In the event additional electrical or telecommunication infrastructure is identified as needed during environmental review for future development, the construction-related impacts would be less than significant in conformance with regulations, including General Plan and Specific Plan policies, identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.7 Geology and Soils, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, and 3.13 Noise and Vibration. Pursuant to the City's Reach Code, no new development would include natural gas use. Therefore, new or expanded natural gas infrastructure would not be required.

Implementation of the Specific Plan would include undergrounding of existing power lines. The construction-related impacts of undergrounding existing overhead power lines would also be less than significant in conformance with the regulations mentioned above. Thus, implementation of the Specific Plan would not result in a significant environmental effect from the construction or relocation of natural gas, electricity, or telecommunication utilities. **(Less than Significant Impact)**

Impact UTL-2: The project would have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years. **(Less than Significant Impact)**

Water Supply and Demand

Buildout of Moffett Park would result in a total water demand of approximately 16,939 AFY. Compared to the water demand of existing development in Moffett Park (discussed under Section 3.19.1.1.2 Existing Conditions), buildout of Moffett Park would result in a net increase of 15,339 AFY. Compared to the estimated demand of the adopted Specific Plan, the proposed Specific Plan would result in a net increase of 7,400 AFY, as shown in Table 3.19-4 below.

Table 3.19-4: Incremental Increase in Water Demand from Implementation of the Specific Plan	
	Estimated Water Demand (AFY)
A. Existing Uses	1,600
B. Adopted Specific Plan	9,539
C. Proposed Specific Plan	16,939
<i>Net Increase from Existing Uses to Proposed Specific Plan (C-A)</i>	<i>15,339</i>
<i>Net Increase from Adopted Specific Plan to Proposed Specific Plan (C-B)</i>	<i>7,400¹</i>
<u>Notes:</u>	
¹ It is assumed 10 percent of project water demands come from non-potable water. The increased water demand of 7,400 AFY would be 6,600 AFY of potable water and 740 AFY of non-potable water. Source: Schaaf & Wheeler. <i>Water Supply Assessment for the Moffett Park Specific Plan Project</i> . September 26, 2022.	

As discussed under Section 3.19.1.2 Existing Conditions, the City’s UWMP projects a water supply of 35,255 AFY in 2040. Buildout of the adopted Specific Plan was accounted for in the UWMP water demand and supply projections. Accordingly, the proposed Specific Plan would result in a net increase of 7,400 AFY (or a 37 percent increase) in the demand projected in the UWMP.

The City of Sunnyvale’s water service has sufficient existing water supply to adequately serve and support the project under normal years. In the single dry and multiple dry water years, the City would not have sufficient capacity to meet the anticipated demands of the Specific Plan. The City is projected to experience supply shortfalls under single dry-year conditions and multiple dry-year conditions due to anticipated water supply shortfalls from the SFPUC. However, in a single dry year, the City would implement their Stage 1 Water Shortage Contingency Plan to reduce water usage between zero and 10 percent to meet the anticipated demands in the planning period. Under multiple dry year conditions, the City would implement their Stage 2 Water Shortage Contingency Plan to

reduce water usage between 10 and 20 percent to meet the anticipated demands in the planning period. Should supply decrease, the City would implement its staged Water Shortage Contingency Plan, which includes a mix of voluntary and mandatory rationing actions and would mitigate shortfalls of up to 50 percent.

Future projects developed under the Specific Plan would comply with SMC requirements and General Plan policies related to water conservation. Additionally, future development projects would comply with the following Specific Plan policies pertaining to water conservation.

Proposed Specific Plan Policies:

- **IU-3.2:** Prioritize water conservation and the use of recycled water for all outdoor, non-drinkable uses, including in street, open spaces, and landscaped areas.
- **IU-3.3:** Encourage sustainable development practices for development projects to reduce the demands on the water supply and sanitary sewer systems, including use of recycled water indoors, installation of localized blackwater systems, regenerative and high efficiency landscape practices that reduce water and energy use, development of private district utility systems, and increased building efficiency beyond City standards.
- **IU-3.5:** Require new development to provide recycled water infrastructure in new streets, connect to the recycled water system, and use recycled water for outdoor water use at a minimum.

The WSA prepared for the project concluded that, while the Specific Plan would result in an increase in water demand within the City of Sunnyvale, the City’s water supply contract with the SFPUC and Valley Water would meet the City’s projected water demand and the project’s water demands under normal years. As described in the WSA prepared for the Specific Plan, the City’s available potable and non-potable water supplies are expected to be sufficient to meet demands of existing uses and future uses under normal conditions. Under dry and multiple-dry years, the City would likely need to impose water conservation measures, through execution of water contingency shortage plans, to reduce demand.¹⁸⁷ In addition, Specific Plan policies IU-3.2, IU-3.3, and IU-3.5 would further reduce demand and impact. Therefore, there would be sufficient water supply available to serve buildout of the Specific Plan. **(Less than Significant Impact)**

Impact UTL-3: The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project’s projected demand in addition to the provider’s existing commitments. **(Less than Significant Impact)**

The WPCP has an existing, permitted capacity of 29.5 mgd for ADWF. The ADWF is approximately 12.5 mgd; therefore, the available treatment capacity at the WPCP is 17 mgd. As discussed under Impact UTL-1, buildout of the Specific Plan is estimated to result in an increase of approximately 2.5 mgd of wastewater compared to existing conditions.¹⁸⁸ Given the existing, available treatment

¹⁸⁷ Schaaf & Wheeler. *Water Supply Assessment for the Moffett Park Specific Plan Project*. September 26, 2022.

¹⁸⁸ BKF Engineers. *Moffett Park Specific Plan Wastewater Master Plan*. October 27, 2022. Table 1 – MPSP Future Wastewater Flow Estimates. Page 19.

capacity at the WPCP (17 mgd) and the Specific Plan's net increase of 2.5 mgd in wastewater, there would be sufficient capacity at the WPCP to serve the project and existing treatment demands. **(Less than Significant Impact)**

Impact UTL-4: The project would not generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. **(Less than Significant Impact)**

Implementation of the Specific Plan is estimated to generate approximately 11,660 tons (43,185 cubic yards) of solid waste per year, which is a net increase of 9,280 tons compared to existing conditions.¹⁸⁹ In accordance with SB 1383, the City has a waste reduction goal to divert 75 percent of solid waste out of the landfills by 2025. New developments in Moffett Park would be subject to the City's applicable waste reduction program; therefore, the solid waste to be transported to the landfill would be less than the estimated generated waste. The City's contract with Waste Management, Inc. for solid waste disposal is through 2031. The contract operator of the SMaRT Station® hauls the City's solid waste to Kirby Canyon landfill. Thus, the project would not adversely affect the City's compliance with the waste diversion requirements under state law.

Given the project's estimated net increase in solid waste generation (approximately 0.043 million cubic yards per year) and Kirby Canyon Landfill's remaining capacity (14.3 million cubic yards), Kirby Canyon Landfill has sufficient capacity to accommodate the Specific Plan's solid waste disposal needs. When the City's current contract with Waste Management, Inc. terminates in 2031, the City could choose to extend its contract with Waste Management, Inc. or contract with a different hauler. There are local landfills with projected capacity, including Kirby Canyon Landfill, that could accommodate buildout of the Specific Plan post 2031. Therefore, future developments in Moffett Park would not result in a substantial increase in waste landfilled at Kirby Canyon or be served by a landfill without sufficient capacity. Compliance with the SB 1383 goals, the SMC, and General Plan policies related to solid waste would further ensure that implementation of the Specific Plan does not conflict with state and federal solid waste regulations and statutes. **(Less than Significant Impact)**

Impact UTL-5: The project would not be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste. **(Less than Significant Impact)**

As discussed under Impact UTL-4, future development under the Specific Plan would comply with state and local regulations related to solid waste reduction. Projects would comply with AB 341 by utilizing the City's garbage service, which commercially sorts recyclable material at the SMaRT Station®, and would comply with CALGreen requirements regarding the diversion of construction waste and debris by recycling or reusing a minimum of 65 percent of the non-hazardous waste. To comply with SB 1383 requirements, commercial businesses that produce two or more cubic yards of waste per week must recycle food scraps and yard trimmings. Future commercial projects proposed

¹⁸⁹ Illingworth & Rodkin, Inc. *Moffett Park Specific Plan Update Air Quality Analysis*. November 23, 2022. Attachment 2.

within Moffett Park would comply with this requirement by recycling their organic waste. Consistent with General Plan Policy EM-14.3, future development would be required to recycle waste consistent with federal, state, and local requirements. Thus, the project would comply with federal, state, and local solid waste statutes and regulations. **(Less than Significant Impact)**

3.19.2.2 *Cumulative Impacts*

Impact UTL-C: The project would result in a cumulatively considerable contribution to a significant cumulative utilities and service systems impact due to the construction-related impacts of expanding the WPCP to treat sewage from cumulative projects. **(Significant and Unavoidable Cumulative Impact)**

Water Supply and Demand

The geographic area for cumulative water supply impacts is the City's service area. As described under Impact UTL-5, the WSA concluded that the City would have sufficient water supply to serve buildout of the Specific Plan under normal years, and would have sufficient supply in single dry and multiple dry years with implementation of water shortage contingency plans as necessary. Thus, buildout of the Specific Plan would not result in a cumulatively considerable contribution to a cumulatively significant water supply impact. **(Less than Significant Cumulative Impact)**

Water System and Fire Flow

Water Storage

The geographic area for water storage capacity impacts is the City's service area. The cumulative plus project impact to water storage is discussed under Impact UTL-1 and concluded to be less than significant. **(Less than Significant Cumulative Impact)**

Hydraulic Conveyance and Fire Flow

The geographic area for cumulative hydraulic conveyance and fire flow impacts is the City's service area. As discussed under Impact UTL-1, buildout of the Specific Plan would result in insufficient ability for existing pipelines to meet demands. Implementation of the improvements described under Impact UTL-1 would increase service pressures throughout Moffett Park to provide reliability under MDD plus fire flow, accommodating future demands in Moffett Park and reducing cumulative impacts under existing plus project conditions. These improvements are subject to separate project-specific environmental review and future development projects shall contribute a fee toward improvements. Based on previous analyses for utility improvements located within existing rights-of-way in developed South Bay locations, the primary environmental effects associated with construction can be mitigated to less than significant levels.

Thus, cumulative projects (including the Specific Plan) would not result in a significant impact to the water system's hydraulic conveyance and fire flow. **(Less than Significant Cumulative Impact)**

Wastewater Treatment

The geographic area for cumulative wastewater system impacts is the City's service area. The Wastewater Master Plan Report determined the existing wastewater system serving Moffett Park is undersized for buildout of the Specific Plan and for cumulative buildout of Moffett Park and offsite areas.

The ADWF processing capacity of the WPCP would be reduced from the current 29.5 mgd to 19.5 mgd¹⁹⁰ by end of 2022.¹⁹¹ The projected wastewater flows for the WPCP in 2035, per flow data and population and growth assumptions in the 2015 WPCP Master Plan, which is based on the 2017 LUTE update buildout, is 19.5 mgd of ADWF.¹⁹² Buildout of the Specific Plan would generate an estimated net increase of 2.5 mgd of ADWF compared to existing conditions. The project would result in a net increase of 57,714 gpd (0.057 mgd) of ADWF compared to the maximum development intensity allowed by the Adopted Specific Plan (2.49 mgd).¹⁹³ The increase in wastewater generated by the project would surpass the wastewater flows projected in the 2015 WPCP Master Plan and 2017 LUTE EIR by 2.6 mgd.¹⁹⁴

In other words, there is insufficient treatment capacity at the WPCP for population and growth beyond the assumptions in the 2015 WPCP Master Plan and 2017 LUTE update. The WPCP would not have treatment capacity for projects requiring General Plan amendments resulting in substantial increases in wastewater generation compared to the assumptions for those sites in the 2015 WPCP Master Plan and 2017 LUTE update. The City's recent General Plan Amendment projects with measurable increases in wastewater generation are the Lawrence Station Area Plan Update and the Downtown Specific Plan Amendments and Specific Development projects. These projects allowed for land uses and densities that would result in a total net increase of approximately 1.13 mgd (or approximately six percent) above the WPCP's planned capacity.¹⁹⁵ These projects, combined with buildout of the Specific Plan, would result in 3.73 mgd above the WPCP's planned capacity.¹⁹⁶ The City is aware an update to the WPCP Master Plan is needed to plan for adequate wastewater treatment that includes the buildout of the approved Lawrence Station Area Plan and the Downtown

¹⁹⁰ City of Sunnyvale. *Draft Sunnyvale Water Pollution Control Plant Master Plan Program Environmental Impact Report*. February 2016.

¹⁹¹ Jennifer Ng, Assistant Director, City of Sunnyvale Department of Public Works. Personal Communication. March 22, 2022.

¹⁹² City of Sunnyvale. *Sunnyvale Water Pollution Control Plant Master Plan*. February 2016. Pages 5-5 and 5-6.

¹⁹³ 1) The Adopted Specific Plan would result in a net increase of 2.49 mgd of sewer flow. Source: City of Sunnyvale. *Moffett Park Specific Plan Environmental Impact Report*. 2002. Page 3.13-15. 2) The proposed Specific Plan is estimated to result in 2,547,714 gpd of sewer flow. Source: BKF Engineers. *Moffett Park Specific Plan Wastewater Master Plan Report*. October 2022. Table 1 – MPSP Future Wastewater Flow Estimates. Page 19. 3) Therefore, the proposed Specific Plan would result in a net increase of 57,714 gpd over the Adopted Specific Plan (2,547,714 gpd – 2,490,000 gpd = 57,714 gpd).

¹⁹⁴ 2.6 mgd was calculated by adding the total sewer flow of the proposed Specific Plan and the net increase over the Adopted Specific Plan (2,547,714 gpd + 57,714 gpd = 2,605,428 gpd or 2.6 mgd).

¹⁹⁵ 1) The Downtown Specific Plan Amendments and Specific Development Project would result in a net increase of 0.17 mgd of sewer flow. Source: City of Sunnyvale. *Downtown Specific Plan Amendments and Specific Developments Project Draft Environmental Impact Report*. SCH# 2018052020. Page 300. 2) The Lawrence Station Area Plan Update Project would result in a net increase of 0.96 mgd of sewer flow. Source: City of Sunnyvale. *Lawrence Station Area Plan Update/Intuitive Surgical Corporate Campus Project Draft Subsequent Environmental Impact Report*. May 2021. SCH# 2019012022. Page 3.15-22.

¹⁹⁶ 3.73 mgd was calculated by adding together the wastewater generations of the Lawrence Station Area Plan, Downtown Specific Plan, and proposed Moffett Park Specific Plan (0.17 mgd + 0.96 mgd + 2.6 mgd).

Specific Plan Amendments and specific development projects, as well as other future growth in the City (including Moffett Park). Subsequent environmental review for the WPCP Master Plan update will be completed by the City. The specific design and improvements needed are unknown at this time, therefore, it is speculative to evaluate the environmental impacts of these undetermined improvements. For this reason, the environmental impact from the construction of new or expanded wastewater treatment facilities to provide adequate cumulative wastewater treatment that includes these two larger projects was conservatively disclosed as significant and unavoidable in the EIRs for these projects.¹⁹⁷ The Specific Plan would have a significant contribution (2.6 mgd for ADWF) to the overall cumulative increase in wastewater generated above the WPCP's planned capacity; therefore, the project's contribution to the cumulative wastewater treatment impact is considerable.

As described above, the City's WPCP operates under the NPDES permit and is required to treat wastewater to meet applicable water quality standards prior to discharge. Compliance with the NPDES is enforced by monitoring and reporting the type and volume of pollutants discharged in an annual Discharge Monitoring Report prepared by the City. In addition, the City periodically calculates the amount of wastewater flow originating from each of the wastewater capacity allocation categories based on water sales information, and other relevant information. Through the annual monitoring reports and periodic calculations, the City actively monitors the wastewater flows to the WPCP to ensure continued capacity at the WPCP to treat existing and approved development in the City. If the flow of one of the categories reaches to its initial baseline limits, the City will issue a Declaration of Need for Wastewater Capacity Evaluation and will not issue new or modify to increase capacity of wastewater discharge permits until a new baseline limit can be established to ensure there is sufficient capacity reserved for vacant land in each category. For these reasons, existing regulations (including compliance with the NPDES permit and Municipal Code) ensure adequate sewage treatment for development in the City.

While compliance with existing regulations would ensure the WPCP has sufficient wastewater treatment capacity. However, implementation of the Specific Plan creates the need for construction of new or expanded wastewater treatment facilities that could result in environmental impacts, thereby creating a significant and unavoidable impact. Therefore, the project's contribution to a cumulative wastewater treatment impact would be cumulatively considerable. **(Significant Cumulative Impact)**

Sanitary Sewer System

The geographic area for cumulative sanitary sewer impacts is the area serviced by the same sewer lines downstream of Moffett Park. As discussed under Impact UTL-2, developer payment of the City's sewer connection fees shall fund necessary improvements to the sanitary sewer system to provide adequate capacity under cumulative plus project conditions. Additionally, CIPs are subject to environmental review. Once design and construction details of the CIPs area known, the City shall complete environmental review. Based on previous analysis for utility improvements located within existing rights-of-way in developed South Bay locations, the primary environmental effects are associated with construction and can be mitigated to a less than significant level. Construction-

¹⁹⁷ 1) City of Sunnyvale. *Downtown Specific Plan Amendments and Specific Development Project Draft Environmental Impact Report*. SCH#2018052020. November 2019. Page 300. 2) City of Sunnyvale. *Lawrence Station Area Plan Update/Intuitive Surgical Corporate Campus Project Draft Subsequent Environmental Impact Report*. May 2021. SCH# 2019012022. Page 4-22.

related impacts would be less than significant in conformance with regulations, including General Plan and Specific Plan policies identified in Sections 3.3 Air Quality, 3.4 Biological Resources, 3.5 Cultural Resources, 3.7 Geology and Soils, 3.9 Hazards and Hazardous Materials, 3.10 Hydrology and Water Quality, and 3.13 Noise and Vibration. **(Less than Significant Cumulative Impact)**

Stormwater System

The geographic area for cumulative stormwater system impacts is Moffett Park. Buildout of the Specific Plan would involve redevelopment of sites that are mostly developed and contain substantial impervious surfaces. As discussed under Impact UTL-1, the proposed Specific Plan would increase the overall amount of pervious surfaces in Moffett Park. Further, the Specific Plan includes guidelines and standards for future development projects that involve landscaping and green infrastructure requirements (refer to Chapter 6 of Appendix B). Future projects would be required to prepare site-specific utility analyses and pay nexus study impact fees for necessary infrastructure upgrades. Implementation of the Specific Plan, together with projects built out as part of the General Plan, would not result in significant cumulative stormwater system impacts. For these reasons, implementation of the project would not make a significant cumulative contribution to impacts on the stormwater drainage systems and cumulative stormwater system impacts would be less than significant. **(Less than Significant Cumulative Impact)**

Solid Waste

The geographic area for cumulative solid waste impacts is the County of Santa Clara. The LUTE EIR estimated that the City would generate approximately 245,500 cubic yards (or 0.25 million cubic yards) of solid waste per year. The proposed project is not consistent with the land use assumptions in the LUTE EIR. The City is contracted with Kirby Canyon Landfill in San José for solid waste disposal. Kirby Canyon Landfill has an estimated remaining capacity of 14.35 million cubic yards and a closing date of 2063. The approved Lawrence Station Area Plan and Downtown Sunnyvale Specific Plan and the proposed Specific Plan would result in a net increase of 0.08 million cubic yards per year and would not substantially change the City's estimated generation of 0.25 million cubic yards at buildout of the General Plan.¹⁹⁸ Given the remaining capacity at Kirby Canyon Landfill and available capacity at other local landfills, there is sufficient landfill capacity to serve the cumulative projects (including the proposed Specific Plan). Compliance with SB 1383, the SMC, and General Plan policies related to solid waste would ensure that cumulative projects including the Specific Plan does not conflict with state and federal solid waste regulations and statutes. For these reasons, the cumulative projects (including the proposed Specific Plan) would not result in a significant cumulative solid waste impact. **(Less than Significant Cumulative Impact)**

¹⁹⁸ 1) The Downtown Specific Plan Amendments and Specific Development Project would result in a net increase of 0.005 million cubic yards of solid waste. Source: City of Sunnyvale. *Downtown Specific Plan Amendments and Specific Developments Project Draft Environmental Impact Report*. SCH# 2018052020. Page 299. 2) The Lawrence Station Area Plan Update Project would result in a net increase of 0.023 million cubic yards. Source: City of Sunnyvale. *Lawrence Station Area Plan Update/Intuitive Surgical Corporate Campus Project Draft Subsequent Environmental Impact Report*. May 2021. SCH# 2019012022. Page 4-23. 3) The proposed Specific Plan would result in a net increase of 0.043 million cubic yards. Source: Illingworth & Rodkin, Inc. *Moffett Park Specific Plan Update Air Quality Analysis*. November 17, 2022. Attachment 2.

3.20 WILDFIRE

3.20.1 Environmental Setting

3.20.1.1 *Existing Conditions*

Cal Fire is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. Referred to as Fire Hazard Severity Zones (FHSZ), these maps influence how people construct buildings and protect property to reduce risk associated with wildland fires. Moffett Park is not located in or near a FHSZ or state responsibility areas.^{199,200}

3.20.2 Impact Discussion

For the purpose of determining the significance of the project's impact on wildfire, if located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:

- 1) Substantially impair an adopted emergency response plan or emergency evacuation plan?
- 2) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
- 3) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines, or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?
- 4) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

3.20.2.1 *Project Impacts*

As described above in Section 3.20.1.1, Moffett Park is located in an urbanized location and is not in or adjacent to a FHSZ or state responsibility areas. The implementation of the Specific Plan, therefore, would not result in wildfire impacts. **(No Impact)**

3.20.2.2 *Cumulative Impacts*

The implementation of the Specific Plan would not result in wildfire impacts; therefore, the project would not contribute to cumulative wildfire impacts. **(No Cumulative Impact)**

¹⁹⁹ California Office of the State Fire Marshal. "Fire Hazard Severity Zones Maps." Accessed May 20, 2022. <https://osfm.fire.ca.gov/divisions/wildfire-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>.

²⁰⁰ California Department of Forestry and Fire Protection. "State Responsibility Viewer Area Map." Accessed May 20, 2022. <https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=468717e399fa4238ad86861638765ce1>

SECTION 4.0 GROWTH-INDUCING IMPACTS

Impact GRO-1: The project would not foster or stimulate significant unplanned economic or population growth in the surrounding environment. **(Less than Significant Growth-Inducing Impact)**

The CEQA Guidelines require that an EIR identify the likelihood that a proposed project could “foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment” (Section 15126.2[d]). As stated in the CEQA Guidelines, a project is considered growth-inducing if it would:

- Directly or indirectly foster economic or population growth, or the construction of additional housing in the surrounding environment.
- Remove obstacles to population growth or tax community service facilities to the extent that the construction of new facilities would be necessary.
- Encourage or facilitate other activities that would cause significant environmental effects.

This section of the EIR is intended to evaluate the impacts of such growth in the surrounding environment. Examples of projects likely to have significant growth-inducing impacts include extensions or expansions of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped.

The Specific Plan is not intended specifically to generate new growth, but rather to allow the City of Sunnyvale to direct or provide opportunity for regionally projected population and job growth to occur in an area of the City that is for the most part already developed and served with infrastructure, including transit. The Specific Plan would result in direct economic growth because the proposed uses allowed include new employment and other land uses that generate tax revenues for public services.

Current policies (including the General Plan land use map and adopted Specific Plan) preclude residential development in Moffett Park and do not allow for the density of non-residential development (i.e., commercial, office/industrial/R&D, and institutional) proposed, which would likely result in increased growth pressure elsewhere in the City, outlying areas, or in surrounding communities. In this aspect, the Specific Plan could diminish the pressure of growth in other locations.

Compared to existing conditions, the Specific Plan would produce substantial growth. The direct impacts of this growth are discussed throughout this EIR. The Specific Plan would result in a net increase in 20,000 new housing units and 60,414 net new jobs compared to existing conditions. While the Specific Plan is intended to provide a more balanced development with jobs and housing, the Specific Plan would not have an equal amount of new housing to serve the net new jobs generated from implementation of the Specific Plan. For this reason, additional housing development would likely occur outside of Moffett Park. Opportunity sites for new housing within the City in and outside of Moffett Park are identified in the City’s 2023-2031 Draft Housing Element. Also, given

the proximity of other cities to Moffett Park, potential new workers could choose to live outside the City of Sunnyvale. Suitable or likely locations for new housing were identified in these jurisdictions based on their respective General and Specific Plan documents and are intended to reflect long-term increases in housing development already anticipated in those communities. Such other projects would undergo their own environmental review under CEQA at the time they are proposed. As discussed in Section 3.14 Population and Housing, the amount of growth that the Specific Plan would accommodate is consistent with the growth projected for the City and North Santa Clara County.

Implementation of the Specific Plan would directly induce population and employment growth in the City by designating land within Moffett Park for development that is more intense than current designations allow. Compared to the adopted Specific Plan, buildout of the Specific Plan is projected to result in 25,954 new jobs and 20,000 new households by 2040, resulting in an updated General Plan buildout of 108,640 jobs and 84,170 households. This is on par with the ABAG projections of 108,640 jobs, and less than the 2040 ABAG projections of 86,100 housing units.²⁰¹

Updated regional growth projections are provided in Plan Bay Area 2050. However, population projections and projections at the city-level are not provided in Plan Bay Area 2050. The updated Plan Bay Area 2050 projections for the North Santa Clara County area (which includes the City of Sunnyvale and portions of the cities of Santa Clara, Mountain View, Milpitas, San José, and Palo Alto) estimate a total of 320,000 households and 629,000 jobs by 2050. Of the growth projected for the North Santa Clara County area in 2050, the net growth associated with the Specific Plan represents a six percent of the projected 320,000 households and four percent of the projected 629,000 jobs. In general, growth is estimated to continue and the amount of development that would result from the Specific Plan reflects and accommodates that projected growth. The Specific Plan is consistent with Plan Bay Area 2050 by:

- Proposing mixed-use residential development in proximity to transit;
- Providing affordable housing options;
- Creating additional employment opportunities within the City and regionally;
- Conserving natural resources and contributing additional parks/open space and recreation areas within the City; and
- Increasing connectivity by improving transportation infrastructure.

The beneficial effects of directing projected growth to Moffett Park include proactively planning a more sustainable community, developing previously developed land, developing within the existing urban service area, taking advantage of existing infrastructure including transit infrastructure, improving multi-modal transportation infrastructure, and providing housing to address the City's fair-share housing allocation requirements. These beneficial effects would have co-benefits such as reducing traffic and associated air pollution and noise. The development of dense residential and mixed-use districts near transit, as proposed by the Specific Plan, is a more sustainable approach for accommodating a projected growth and reducing sprawl, resulting in beneficial effects on both local and regional levels. The Specific Plan includes infrastructure improvements to specifically serve the buildout of the Specific Plan. The Specific Plan does not include improvements that would remove

²⁰¹ Plan Bay Area. "Projections 2040." Accessed May 26, 2022. <http://projections.planbayarea.org/data>

obstacles to population growth or accommodate more development than what is proposed. For these reasons, the Specific Plan would not foster or stimulate significant, unplanned economic or population growth in the surrounding environment. **(Less than Significant Growth-Inducing Impact)**

SECTION 5.0 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

Section 15126.2(c) of the CEQA Guidelines requires a discussion of the significant irreversible changes that would result from implementation of a proposed project. Potential significant irreversible changes include the (1) irreversible use of nonrenewable resources, (2) commitment of future generations to similar use, (3) irreversible damage resulting from environmental accidents associated with the project and (4) irretrievable commitments of resources.

5.1 USE OF NONRENEWABLE RESOURCES AND IRRETRIEVABLE COMMITMENTS OF NONRENEWABLE RESOURCES

Implementation of the Specific Plan would involve construction and operational activities that require the use and consumption of nonrenewable resources, including fossil fuels and metals, that cannot be generated over time. Renewable resources, such as lumber and other wood byproducts, could also be used.

As discussed in Section 3.6 Energy, energy would be consumed during both the construction and operational phases of future Specific Plan development. The construction phases of future development would require the use of nonrenewable construction material, such as concrete, metals, plastics, and glass. Nonrenewable resources and energy would also be consumed for the manufacture and transport of building materials, preparation of sites (e.g., demolition of existing buildings and grading), and construction of the buildings, infrastructure, and other improvements. The operation of future uses would consume energy in the form of electricity and natural gas (if permitted per the City of Sunnyvale Reach Code, discussed in Section 3.6 Energy) for building heating and cooling, lighting, water heating, and operation of appliances, electronic equipment, and commercial machinery. Energy, in the form of electricity (for charging of electric vehicles) and fossil fuel, would also be consumed during each vehicle trip associated with the future uses.

Implementation of the Specific Plan would result in a substantial increase in demand for nonrenewable resources; however, the Specific Plan promotes efficient energy use given its infill location, proximity to transit, availability of existing infrastructure, high-density mix of uses, and colocation of housing and jobs. Future Specific Plan development would comply with all applicable regulations aimed to reduce energy consumption and promote energy efficiencies including CALGreen requirements (which requires construction and demolition recycling), Title 24 energy efficiency standards, City's Green Building Program requirements, Reach Code, Climate Action Playbook Plays, and Construction and Demolition Waste Diversion program. Additionally, Specific Plan policies DS-4.1, DS-4.8, DS-5.4, and IU-5.1 through IU-5.4 support sustainable energy consumption through efficiency, conservation, and renewable energy production.

5.2 COMMITMENT OF FUTURE GENERATIONS TO SIMILAR USES

The intensification of development and proposed mix of uses that would occur as a result of the Specific Plan would serve several purposes including increased use of underutilized land, greater diversity of complimentary uses in the area, increased housing in the City, improved infrastructure, and greater connectivity between Moffett Park and the surrounding communities.

Although implementation of the Specific Plan would commit future generations to more intense development in this area, these land uses at the proposed higher density would benefit the City and the region by providing a sustainably-developed and cohesively-planned community within an existing urban area.

5.3 IRREVERSIBLE DAMAGE FROM ENVIRONMENTAL ACCIDENTS

Implementation of the Specific Plan would not include any new or uniquely hazardous uses, and operation of the future uses are not expected to cause environmental accidents. As discussed in Section 3.9 Hazards and Hazardous Materials, implementation of the Specific Plan in compliance with existing regulations and policies (including General Plan policies and Specific Plan policies) would not substantially affect the public and surrounding environment. Nor would the implementation of the Specific Plan result in significant geology and soil hazards (refer to Section 3.7 Geology and Soils). For these reasons, the Specific Plan would not result in irreversible damage that may result from environmental accidents.

SECTION 6.0 SIGNIFICANT AND UNAVOIDABLE IMPACTS

The analysis in the EIR concluded that the implementation of the Specific Plan would result in significant and avoidable impacts from 1) project-level operational criteria air pollutant emissions and 2) expanding the WPCP to treat cumulative sewage generation. These impacts are identified as follows:

- **Impact AIR-2:** The project would result in a cumulatively considerable net increase of criteria pollutants for which the project region is non-attainment under an applicable federal or state ambient air quality standard. **(Significant and Unavoidable Impact)**
- **Impact AIR-C:** The project would result in a cumulatively considerable contribution to a significant cumulative air quality impact. **(Significant and Unavoidable Cumulative Impact)**
- **Impact GHG-1:** The project would generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. **(Significant and Unavoidable Impact)**
- **Impact GHG-2:** The project would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs. **(Significant and Unavoidable Impact)**
- **Impact GHG-C:** The project would result in a cumulatively considerable contribution to a significant cumulative GHG emissions impact. **(Significant and Unavoidable Cumulative Impact)**
- **Impact UTL-C:** The project would result in a cumulatively considerable contribution to a significant cumulative utilities and service systems impact due to the future expansion of the WPCP to treat sewage from cumulative projects. **(Significant and Unavoidable Cumulative Impact)**

SECTION 7.0 ALTERNATIVES

7.1 INTRODUCTION

CEQA requires that an EIR identify alternatives to a project as it is proposed. The CEQA Guidelines specify that the EIR should identify alternatives 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.” The purpose of the alternatives discussion is to determine whether there are alternatives of design, scope, or location which would substantially lessen the significant impacts, even if those alternatives “impede to some degree the attainment of the project objectives” or are more expensive (CEQA Guidelines Section 15126.6).

In order to comply with the purposes of CEQA, it is important to identify alternatives that reduce the significant impacts anticipated to occur if the project is implemented and try to meet as many of the project’s objectives as possible. The Guidelines emphasize a commonsense approach – the alternatives should be reasonable, “foster informed decision making and public participation,” and focus on alternatives that avoid or substantially lessen the significant impacts. The range of alternatives selected for analysis is governed by the “rule of reason,” which requires the EIR to discuss only those alternatives necessary to permit a reasoned choice. An EIR is not required to consider alternatives which are infeasible.

The three critical factors to consider in selecting and evaluating alternatives are, therefore, the: (1) significant impacts from the proposed project which could be reduced or avoided by an alternative, (2) project objectives, and (3) feasibility of the alternatives available. These factors are discussed below.

7.2 FACTORS IN SELECTING AND EVALUATING ALTERNATIVES

7.2.1 Significant Impacts of the Project

As explained above, the CEQA Guidelines state that the alternatives analysis in an EIR should be limited to alternatives that would avoid or substantially lessen any of the significant effects of the project and achieve most of the basic project objectives. Table 7.3-2 summarizes the impacts of the Specific Plan (and Specific Plan alternatives).

7.2.2 Project Objectives

While CEQA does not require that alternatives must be capable of meeting all of the project objectives, their ability to meet most of the basic objectives is considered relevant to their consideration. As identified in Section 2.4 Project Objectives, the City’s objectives for the project are as follows:

1. **Maintain Moffett Park as an integral part of Sunnyvale.** Moffett Park remains a natural extension of the City’s built landscape, providing residents, workers, and visitors an integrated and cohesive connection between the San Francisco Bay and the wider neighborhoods of Sunnyvale. Through enhanced multimodal mobility connections, including transit, pedestrian, and bicycle improvements, and accessible parks and open space that support underserved neighborhoods in northern Sunnyvale, Moffett Park connects and serves

all Sunnyvale residents with new amenities and destinations. Maximize new employment and housing growth to support the fiscal health of Sunnyvale through increased property, hotel, and sales tax revenues.

2. **Establish Moffett Park as a model community through its commitment to comprehensively addressing resilience, climate protection, and equity in all activities.** Moffett Park is a safeguard for the community in the face of climate change, as well as a model for equitable and sustainable development at the building, block, and neighborhood scale. New residential and neighborhood commercial uses support a sustainable land use mix in Moffett Park, improving the regional jobs-housing balance, lowering travel distances, and improving access to daily goods and services. Measures are designed to reduce greenhouse gas emissions from water and energy use and minimize air and water pollution. The City prioritizes walking, biking and public transit and requires aggressive single-occupancy vehicle trip reduction for all new developments. The City promotes the social and physical needs of all visitors, workers, and future residents.
3. **Evolve Moffett Park into a vibrant and inclusive community where all people can thrive.** Moffett Park establishes a network of active and unique neighborhoods that serve a broad range of users and cohesively integrate with the rest of Sunnyvale. Moffett Park transitions from an office and industrial area into an adaptable environment that accommodates residential, neighborhood-serving commercial, and recreational activities. Through the Specific Plan, the City establishes target numbers to guide the transition of Moffett Park into a series of complete neighborhoods. Each neighborhood has targets for neighborhood-serving commercial square footage, housing, employment square footage, and parks and open space. New park and open space types promote recreation, active transportation, and social gathering. The City targets twenty percent of the future housing in Moffett Park to be reserved for lower-income households, providing much needed housing for a diverse workforce at all income levels.
4. **Maintain and strengthen Moffett Park as a diverse economic engine that supports economic prosperity for all.** Moffett Park continues to be a hub of economic activity and technological innovation, supporting a diverse economic base to ensure the long-term fiscal health of the area and the City. This includes a mix of large, established high-tech companies, smaller spaces for start-ups, and a range of retail, services, hotels, and entertainment. The City supports a wide range of businesses, including small, local companies as well as large, multinational firms through the continued growth of Moffett Park. Policies to support the retention of existing local businesses through community benefits, and to encourage essential services, such as a grocery store help maintain economy diversity. The City promotes the training and continued education of workers, residents, and students to support economic prosperity for all.
5. **Create a connected, accessible district that prioritizes the movement of people over vehicles to reduce climate pollution and to support a healthy community.** Moffett Park uses multimodal strategies and district-wide policy to redesign the district around people rather than vehicles. Streets are designed to promote a safe and comfortable mobility network for all individuals, regardless of which mobility option they use. All streets within the Moffett Park are “Complete Streets,” balancing space for bicycles, pedestrians, transit vehicles, and other mobility options. New bicycle and pedestrian connections into and out of Moffett Park are essential to improving circulation and overall connectivity. Moffett Park supports existing operations of public transit and facilitates opportunities for expansion and

new connections like the Moffett Park Circulator. An emphasis on walking, biking, and transit use shifts travel away from single-occupant vehicles and lowers greenhouse gases.

6. **Cultivate dynamic and connected public spaces that accommodate the physical and social needs of all users.** Moffett Park cultivates a network of welcoming, connected, and accessible parks and open spaces that support recreation, social gathering, health, and urban ecology. Moffett Park provides a high level of service with ample parks and open space through the development of new Natural Areas-Ecological Patches, Greenbelt-Ecological Corridors, Community Parks, Neighborhood Parks, and Mini Parks and Plazas. The interconnected spaces maintain and expand connections to the San Francisco Bay, while enhancing ecological value and resilience. The variety of open space types ensure recreational and social opportunities support different activities, age groups, and uses throughout the day and evenings.
7. **Create a healthy, resilient, and biodiverse environment.** The open space and urban ecology plan for Moffett Park creates an interconnected system of habitat areas that are supported by surrounding green features integrated into streetscapes and new development. Habitat patches are distributed across Moffett Park and connected by corridors along the channels and streets. Continuous canopy cover along streets facilitates wildlife movement across Moffett Park while providing vital shade over multi-modal routes, reducing stormwater runoff, enhancing the character of Moffett Park, and adding to the overall resilience of the area. Additionally, new developments enhance ecosystems and support biodiversity through bird safe design, an ECD and transfer of development rights policy, and increased building setbacks along the East, West, and Lockheed Martin Channels. Infrastructure improvements and both active and passive strategies at the site and building level provide opportunities to manage stormwater and future challenges associated with climate change and sea level rise.
8. **Integrate innovative and emerging technologies in the district to support community-wide goals.** Moffett Park continues to leverage its position as an innovative hub to establish itself as a regional center for thought leadership and emerging technologies. The City accelerates Smart City design and district-scale infrastructure systems, fostering collaboration among regional agencies, community, and property owners to develop innovative, multi-benefit solutions to complex challenges facing the San Francisco Bay Area..

7.2.3 Feasibility of Alternatives

CEQA, the CEQA Guidelines, and case law interpreting CEQA and the CEQA Guidelines have found that feasibility can be based on a wide range of factors and influences. The Guidelines state that such factors can include (but are not necessarily limited to) the suitability of an alternate site, economic viability, availability of infrastructure, consistency with a general plan or with other plans or regulatory limitations, jurisdictional boundaries, and whether the project proponent can “reasonably acquire, control or otherwise have access to the alternative site (Section 15126.6[f][1]).”

The ultimate feasibility of the alternatives discussed in this EIR will be determined by the City Council as it makes a decision concerning the proposed Specific Plan, taking into account all information in the administrative record.

7.3 SELECTION OF ALTERNATIVES

7.3.1 Alternatives Considered but Rejected for Further Analysis

7.3.1.1 *Location Alternative*

The CEQA Guidelines encourage consideration of an alternative site when significant effects of the project might be avoided or substantially lessened (Section 15126.6(f)(2)(A)). Only locations that would avoid or substantially lessen any of the significant impacts of the project and meet most of the project objectives need to be considered for inclusion in the EIR.

A Location Alternative would need to be at least of comparable size as Moffett Park (approximately 1,270 acres) within the City of Sunnyvale. There are no alternative locations that are of similar size to Moffett Park within the City. In addition, given that the main objective of the project is to establish a long-term strategy to guide future development in the Moffett Park area, it would not be feasible to evaluate an alternative location in the City. The Moffett Park Specific Plan must, by its nature, guide future development located in Moffett Park. CEQA Guidelines Section 15126.6(a) allows for consideration of alternative to a project, *or its location* (emphasis added), but does not mandate include of a location alternative in an EIR. Accordingly, to evaluate another location for Moffett Park development would not be meaningful for the purposes of informing a decision about the proposed project. Therefore, a Location Alternative is not discussed further.

7.3.2 Alternatives Selected

A discussion of the alternative selected is provided below and a summary of the development assumed under the alternatives compared to the proposed Specific Plan is shown in Table 7.3-1.

Table 7.3-1: Development Summary of Project and Alternatives Selected				
	Land Use			
	Residential (units)	Commercial (square footage)	Office/Industrial/ R&D (square footage)	Institutional (square footage)
Proposed Specific Plan	20,000	1,165,303	32,000,000	326,000
Alternatives Selected				
No Project/No New Development Alternative	0	305,304	18,102,203	126,122
No Project/Adopted Specific Plan Buildout Alternative	0	305,304 ^a	24,100,000	126,122 ^b
25 Percent Reduced Development Alternative	15,000	873,977	24,000,000	244,500
<u>Notes:</u>				
^a Under the existing conditions, there is a total of 230,000 square feet of commercial uses in Moffett Park. The 2013 adopted Specific Plan assumes a total of 230,000 square feet of commercial uses. The commercial square footage is built out under existing conditions. The existing and planned commercial square footage in Moffett Park does not include 75,304 square feet of existing hotel uses. For this reason, the commercial square footage under the No Project/No New Development Alternative and No Project/Adopted Specific Plan Buildout Alternative is 305,304 square feet (i.e., 230,000 + 75,304 = 305,304).				
^b Under the existing conditions, there is a total of 126,122 square feet of institutional uses in Moffett Park. The 2013 adopted Specific Plan assumes there would be no new development institutional uses. However, these uses were either constructed prior to the adoption of the 2013 Specific Plan and/or are allowed under a special use permit. The institutional square footage under the No Project/No New Development Alternative and No Project/Adopted Specific Plan Buildout Alternative is 126,122.				

7.3.2.1 No Project Alternatives

The CEQA Guidelines specifically require consideration of a “No Project” Alternative. The purpose of including a No Project Alternative is to allow decision makers to compare the impacts of approving the project with the impacts of not approving the project. The Guidelines specifically advise that the No Project Alternative is “what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.” The Guidelines emphasize that an EIR should take a practical approach, and not “...create and analyze a set of artificial assumptions that would be required to preserve the existing physical environment (Section 15126.6[e][3][B]).”

Under the No Project Alternative, Moffett Park could remain as it is today (i.e., developed with a total of 305,304 square feet of commercial uses, 18,102,203 square feet of office/industrial/R&D uses, and 126,122 square feet of institutional uses) or the area could be buildout under the current, adopted Specific Plan. The adopted Specific Plan allows for the development of a total of 230,000 square feet of commercial uses and 24,100,000 of office/industrial/R&D square uses. A total of 75,304 square feet of existing hotel uses was not accounted for in the planned commercial square footage. For the purposes of this analysis, it is assumed the buildout of the adopted Specific Plan

includes a total of 305,304 square feet of commercial uses (i.e., 230,000 square feet + 75,304 square feet = 305,304 square feet). For these reasons, two No Project Alternatives are analyzed: (1) a No Project/No New Development Alternative and (2) a No Project/Adopted Specific Plan Buildout Alternative.

7.3.2.2 *No Project/No New Development Alternative*

The No Project/No New Development Alternative assumes Moffett Park would remain as it is today – developed with the existing 305,304 square feet of commercial uses, 18,102,203 square feet of office/industrial/R&D uses, and 126,122 square feet of institutional uses. This alternative does not, however, preclude the development of these sites that is consistent with the adopted Specific Plan (which is discussed in Section 7.3.2.3 No Project/ Adopted Specific Plan Buildout Alternative).

Comparison of Environmental Impacts

Because the No Project/No New Development Alternative would not result in changes to existing conditions, this alternative would avoid all of the environmental impacts of the project. A summary comparison of the environmental impacts of the proposed Specific Plan and the No Project/No New Development Alternative is provided in Table 7.3-2.

Relationship to Project Objectives

In regard to the project objectives, the No Project/No New Development Alternative would:

- Not meet Objective 1 as it would not add housing or include pedestrian and bicycle improvements to enhance multimodal mobility connections and improve access to transit.
- Not meet Objective 2 since it would not include housing, which would help meet housing needs and facilitate the beneficial effects of high-density mixed-use development (such as lower VMT and air pollutant emissions). Nor would this alternative include multimodal improvements or aggressive SOV reduction requirements. that would also reduce VMT and GHG emissions.
- Not meet Objective 3 as this alternative would not add new park and open space areas to promote recreation or affordable housing.
- Partially meet Objective 4 since there is an existing mix of businesses, though this alternative does not strengthen the diversity or facilitate essential services such as grocery stores within Moffett Park.
- Not meet Objective 5 since it would not include multi-modal improvements.
- Not meet Objective 6 given this alternative would not include new parks or open spaces.
- Not meet Objective 7 since most existing uses were developed prior to the City’s adoption of its bird safe design and existing development would not be required to comply with the Specific Plan’s enhanced bird safe design guidelines, ECD, or increased setback requirements along waterway channels.
- Partially meets Objective 8 given some of the existing businesses are technology companies though this alternative does not facilitate district-scale infrastructure.

Conclusion

The No Project/No New Development Alternative would avoid all of the environmental impacts of the project. The No Project/No New Development Alternative would partially meet Objectives 4 and 8, and would not meet the other six project objectives (Objectives 1, 2, 3, 5, 6, and 7).

7.3.2.3 *No Project/Adopted Specific Plan Buildout Alternative*

This alternative assumes Moffett Park would be built out consistent with the adopted Specific Plan. Under the No Project/Adopted Specific Plan Buildout Alternative, 305,304 square feet of commercial uses (which already exists), 24,100,000 square feet of office/industrial/R&D uses, and 126,122 square feet of institutional uses (which already exists) could be developed in Moffett Park. Compared to existing conditions, the No Project/Adopted Specific Plan Buildout Alternative would result in a net increase in about 6.0 million square feet of new office/industrial/R&D uses. Compared to the proposed project, the No Project/Adopted Specific Plan Buildout Alternative would have:

- 20,000 fewer residential units (i.e., no residential units),
- 935,303 less square feet of commercial space,
- 7,900,000 less square feet of office/industrial/R&D space, and
- 326,000 less square feet of institutional space.

Comparison of Environmental Impacts

A summary comparison of the environmental impacts of the proposed Specific Plan and the No Project/Adopted Specific Plan Buildout Alternative is provided in Table 7.3-2.

The No Project/Adopted Specific Plan Buildout Alternative would result in less development than the proposed Specific Plan. Lesser development equates to less overall light and glare from new development, less overall energy use, less overall construction and operational criteria air pollutant emissions, less overall GHG emissions being generated, less construction and project-generated traffic noise, less demand on public service (including recreational facilities), and less demand on utilities and service systems. In addition, this alternative does not include any housing and includes less non-residential development (e.g., less office/R&D/industrial development). For these reasons, this alternative results in lesser aesthetics, energy, GHG, noise, population and housing, public services, recreation, and utilities and service systems impacts. This alternative would not result in a cumulatively considerable contribution to the need to expand the WPCP. The Specific Plan would, however, result in better energy efficiency overall since most of Moffett Park would be redeveloped with new buildings that would be more energy efficient given compliance with the latest standards, compared to this alternative where most of the existing buildings would remain (most of which were constructed under older, less stringent energy standards).

Although the No Project/Adopted Specific Plan Buildout Alternative would result in less overall GHG emissions, similar to the proposed project, this alternative would not attain BAAQMD's threshold to reach carbon neutrality by 2045 and, therefore, would result in a significant and unavoidable GHG impact. Similarly, this alternative would result in less overall operational criteria pollutant emissions compared to the proposed Specific Plan, however, these emissions would exceed BAAQMD thresholds, which would result in a significant and unavoidable impact.

New development under the No Project/Adopted Specific Plan Buildout Alternative would result in the same impacts to biological resources, cultural resources (including TCRs), geology and soils, as the proposed Specific Plan given that these resources are part of the existing environmental conditions. Significant impacts would be reduced to a less than significant level. The redevelopment of land for six million square feet of new office/industrial/R&D would be of a smaller scale than the redevelopment of most of Moffett Park under the proposed Specific Plan. As such, while the impacts to biological resources, cultural resources, geology and soils, hazards and hazardous materials would be less than significant under this alternative and the proposed Specific Plan, the magnitude of the impact could be greater under the proposed Specific Plan as more land would be affected under the project than under this alternative.

The No Project/Adopted Specific Plan Buildout Alternative would result in similar less than significant hazards and hazardous materials, hydrology and water quality, land use, and transportation impacts as the proposed Specific Plan as new development under either would: a) implement policies that require the cleanup of contaminated sites b) comply with water quality regulations and not impact groundwater supplies/recharge, c) not physically divide an established community and comply with a land use plan/policy/regulation adopted to avoid or mitigate an environmental effect, and d) not result in a significant VMT impact. Because this alternative would result in less redevelopment, it is possible that some of the contaminated sites in Moffett Park identified in Section 3.8 Hazards and Hazardous Materials may not be redeveloped under this alternative and, therefore, may not be remediated. The Specific Plan would result in beneficial impacts to hydrology and water quality compared to this alternative by increasing the overall amount of pervious surfaces compared to existing conditions and including multi-modal transportation improvements that would not be completed under the No Project/Adopted Specific Plan Buildout Alternative.

Relationship to Project Objectives

The No Project/Adopted Specific Plan Buildout Alternative would:

- Not meet Objective 1 as it would not add housing or include pedestrian and bicycle improvements to enhance multimodal mobility connections and improve access to transit.
- Not meet Objective 2 since it would not include housing, which would help meet housing needs and facilitate the beneficial effects of high-density mixed-use development (such as lower VMT and air pollutant emissions). Nor would this alternative include multimodal improvements or aggressive SOV reduction requirements that would also reduce VMT and GHG emissions.
- Not meet Objective 3 as this alternative would not add new park and open space areas to promote recreation or affordable housing.
- Partially meet Objective 4 since existing and six million net new office/industrial/R&D uses represent mix of businesses, though this alternative does not strengthen the diversity or facilitate essential services such as grocery stores within Moffett Park.
- Not meet Objective 5 since it would not include multi-modal improvements.
- Not meet Objective 6 given this alternative would not include new parks or open spaces.

- Partially meet Objective 7 since most existing uses were developed prior to the City’s adoption of its bird safe design guidelines, and the 6.0 million square feet of net new office/industrial/R&D uses would be required to comply with the City’s bird safe design guidelines. The development under this alternative, however, would not be required to comply with the Specific Plan’s enhanced bird safe design guidelines, Ecological Overlay Zone, or increased setback requirements along waterway channels.
- Partially meets Objective 8 given some of the existing and future businesses would be technology companies, though this alternative does not facilitate district-scale infrastructure.

Conclusion

The No Project/Adopted Specific Plan Buildout Alternative would result in lesser aesthetics, air quality, energy, GHG, hazards and hazardous materials, noise, population and housing, public services, recreation, and utilities and services systems impacts. This alternative would avoid the Specific Plan’s significant and unavoidable utilities and services impact as the City’s wastewater treatment system has capacity for this alternative.

The No Project/New Development Alternative would result in the same or similar impacts to biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, and transportation.

The No Project/Adopted Specific Plan Alternative would partially meet Objectives 4, 7 and 8, and would not meet the other five objectives (Objectives 1, 2, 3, 5, or 6).

7.3.2.4 25 Percent Reduced Development Alternative

This alternative assumes an approximate 25 percent reduction in the amount of development proposed by the Specific Plan. The purpose of this alternative is to substantially reduce the project-level, significant operational criteria air pollutant emissions resulting from the buildout of the Specific Plan. The BAAQMD CEQA Air Quality Guidelines includes screening levels for projects that are assumed to result in less than significant operational criteria air pollutant emissions. For example, the project-level screening threshold for a high-rise residential development is 510 dwelling units. For an office building, the project-level screening threshold is 346,000 square feet. An alternative that would meet the screening thresholds and would result in less than significant project-level operational criteria air pollutant impacts would not meet the basic objectives of the project, therefore, the City did not consider one further. Rather, the City is evaluating this 25 Percent Reduced Development Alternative that would substantially lessen the project’s significant operational criteria air pollutant emissions. As shown in Table 7.3-1, under the Reduced Size Alternative, up to 15,000 residential units, 874,000 of commercial uses, 24.0 million square feet of office/industrial/R&D, and 244,500 square feet of institutional uses could be developed in Moffett Park. Beside the reduction in development assumed, all other aspects of the Specific Plan (e.g., enhanced bird safe design, SOV requirement, etc.) are assumed under this alternative.

Comparison of Environmental Impacts

A summary comparison of the environmental impacts of the proposed Specific Plan and the Reduce Size Alternative is provided in Table 7.3-2.

The 25 Percent Reduced Development Alternative would result in 25 percent less development than the proposed Specific Plan. Lesser development equates to less overall light and glare from new development, less construction and project-generated traffic noise, less demand on public service (including recreational facilities), and less demand on utilities and service systems. The Reduced Size Alternative would result in a 25 percent reduction in operational criteria pollutant emissions, operational energy usage, and GHG emissions reported in Sections 3.3 Air Quality, 3.6 Energy, and 3.8 Greenhouse Gas Emissions. In addition, this alternative would result in less housing and, therefore, would result in a lower increase in population and its associated demand on public services and recreational facilities. For these reasons, this alternative results in lesser aesthetics, air quality, energy, GHG, noise, population and housing, public services, recreation, and utilities and service systems impacts. The Specific Plan would, however, result in better energy efficiency overall since there would be more developments in Moffett Park with new buildings that would be more energy efficient given compliance with the latest standards, compared to this alternative.

Although the 25 Percent Reduced Development Alternative would result in a 25 percent reduction in overall GHG emissions, operational criteria air pollutant emissions, and sewage generation, similar to the proposed Specific Plan, this alternative would not attain BAAQMD's threshold to reach carbon neutrality by 2045, would exceed BAAQMD's project-level operational criteria air pollutant thresholds, and contribute to the need for the capacity of the WPCP to be expanded which could result in significant impacts.

New development under the 25 Percent Reduced Development Alternative would result in the same or similar impacts to biological resources, cultural resources (including TCRs), geology and soils, hazards and hazardous materials, hydrology and water quality, land use, and transportation as the proposed Specific Plan given that these resources are part of the existing environmental conditions and a similar amount of total area would be redeveloped under this alternative. With this alternative, however, the amount of open space would range from 159 to 172 acres compared to 212 to 230 acres under the Specific Plan. Therefore, since implementation of the Specific Plan would result in less impervious surfaces, the Specific Plan would result in less hydrology and water quality impacts than this alternative.

Relationship to Project Objectives

In regard to the project objectives, the 25 Percent Reduced Development Alternative would:

- Meet Objective 1 as it would add housing and jobs, and also include pedestrian and bicycle improvements to enhance multimodal mobility connections and improve access to transit. This alternative, however, would not maximize the amount of housing and employment uses in Moffett Park to the same extent as the proposed Specific Plan.
- Meet Objective 2 as this alternative would add housing, which would help meet housing needs and facilitate the beneficial effects of high-density mixed-use development (such as lower VMT and air pollutant emissions). This alternative would also include the same multimodal improvements and SOV requirement as the proposed Specific Plan.
- Meet Objective 3 as this alternative would include the same amount of new park and open space areas and 20 percent of the housing would be affordable for lower-income households.

- Meet Objective 4 since it would facilitate a mix of businesses (including essential services such as grocery stores) to supporting economic diversity.
- Meet Objective 5 since it would include the same multimodal improvements as the proposed Specific Plan.
- Meet Objective 6 given this alternative would include open spaces to provide recreational opportunities. This alternative, however, would not provide open space to the same extent as the Specific Plan.
- Meet Objective 7 because new development would be required to comply with the Specific Plan’s enhanced bird safe design guidelines, Ecological Overlay Zone, or increased setback requirements along waterway channels.
- Meet Objective 8 given some of the existing and future businesses added to Moffett Park would be technology companies, and this alternative would facilitate district-scale infrastructure.

Conclusion

The 25 Percent Reduced Development Alternative would result in lesser aesthetics, air quality, energy, greenhouse gas emissions, noise, population and housing, public services, recreation, and utilities and services systems impacts than the proposed Specific Plan. The Reduced Size Alternative would result in the same or similar impacts to biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use, and transportation as the proposed Specific Plan. While this alternative would meet all of the project objectives, it would not meet Objectives 1 and 6 to the same extent as the proposed Specific Plan because it would not include as much housing (including affordable housing) and open space.

7.3.3 Environmentally Superior Alternative

The CEQA Guidelines state that an EIR shall identify an environmentally superior alternative. Based on the above discussion, the environmentally superior alternative to the proposed Specific Plan is the No Project/No New Development Alternative because all of the project’s significant environmental impacts would be avoided by leaving the site in its current condition. However, Section 15126(e)(2) states that “if the environmentally superior alternative is the No Project/No New Development Alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives.

Table 7.3-2 summarizes the level of impact for the Specific Plan implementation and each project alternative. As shown in Table 7.3-2, among the alternatives that assume some development in Moffett Park, the environmentally superior alternative is the No Project/No New Development Alternative because it would avoid all of the project’s environmental impacts. CEQA Guidelines Section 15126.6(e)(2) states that “if the environmentally superior alternative is the No Project Alternative, the EIR shall identify an environmentally superior alternative among the other alternatives.” In addition to the No Project/No New Development Alternative and the No Project/Adopted Specific Plan Buildout Alternative, the 25 Percent Reduced Development Alternative would be the environmentally superior alternative to the project.

Table 7.3-2: Comparison of Impacts of the Proposed Specific Plan to Project Alternatives				
Impacts	Proposed Project	No Project/No New Development Alternative	No Project/Adopted Specific Plan Buildout Alternative	25 Percent Reduced Development Alternative
Aesthetics	LTS	NI	LTS	LTS
Agricultural and Forestry Resources	NI			
Air Quality	SU	NI	SU	SU
Biological Resources	LTS	NI	LTS	LTS
Cultural Resources	LTS	NI	LTS	LTS
Energy	LTS	NI	LTS	LTS
Geology and Soils	LTS	NI	LTS	LTS
Greenhouse Gas Emissions	SU	NI	SU	SU
Hazards and Hazardous Materials	LTS	NI	LTS	LTS
Hydrology and Water Quality	LTS	NI	LTS	LTS
Land Use	LTS	NI	LTS	LTS
Mineral Resources	NI			
Noise	LTS	NI	LTS	LTS
Population and Housing	LTS	NI	LTS	LTS
Public Services	LTS	NI	LTS	LTS
Recreation	LTS	NI	LTS	LTS
Transportation/Traffic	LTS	NI	LTS	LTS
Tribal Cultural Resources	LTS	NI	LTS	LTS
Utilities and Service Systems	SU	NI	LTS	SU
Wildfire	NI			
Meets All City's Objectives?	Yes	Partially	Partially	Yes, but not to the same extent as the proposed Specific Plan
<ul style="list-style-type: none"> Objective 1 		No	No	Yes, but not to the same extent as the proposed Specific Plan

Table 7.3-2: Comparison of Impacts of the Proposed Specific Plan to Project Alternatives

Impacts	Proposed Project	No Project/No New Development Alternative	No Project/Adopted Specific Plan Buildout Alternative	25 Percent Reduced Development Alternative
• Objective 2		No	No	Yes
• Objective 3		No	No	Yes
• Objective 4		Partially	Partially	Yes
• Objective 5		No	No	Yes
• Objective 6		No	No	Yes
• Objective 7		No	Partially	Yes
• Objective 8		Partially	Partially	Yes

Notes:

Bold text indicates being environmentally superior to the proposed Specific Plan.

NI = No impact; LTS = Less than significant impact; SU = Significant and unavoidable.

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SECTION 9.0 LEAD AGENCY AND CONSULTANTS

9.1 LEAD AGENCY

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SECTION 10.0 ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACE	Altamont Corridor Express
ACM	Asbestos-containing material
ADWF	Average dry weather flow
AIA	Airport Influence Area
ALUC	Airport Land Use Commission
APN	Assessor's Parcel Number
ASTM	American Society for Testing and Materials
BAAQMD	Bay Area Air Quality Management District
BASMAA	Bay Area Stormwater Management Agencies Association
Bay	San Francisco Bay
BERD	Built Environmental Resources Directory
bgs	Below ground surface
BMPs	Best management practices
Btu	British thermal units
CalARP	California Accidental Release Prevention
CalEPA	California Environmental Protection Agency
Cal Fire	California Department of Forestry and Fire Protection
CALGreen	California Green Building Standards Code
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CBC	California Building Code
CDE	California Department of Education
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CEQA	California Environmental Quality Act
CFC	California Fire Code
CFR	Code of Federal Regulations

CGS	California Geological Survey
CHRIS	California Historical Resources Information System
CIPs	Capital Improvement Projects
CLUP	Comprehensive Land Use Plan
CMP	Congestion Management Program
CNEL	Community Noise Level Equivalent
CO	Carbon monoxide
CO ₂	Carbon dioxide
CNDDB	California Natural Diversity Database
CPDS	Comprehensive Preliminary Design Study Report
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
CWTMP	Countywide Trails Master Plan
DDW	State Water Resources Control Board Division of Drinking Water
DPM	Diesel particulate matter
DPS	Sunnyvale Department of Public Safety
DTSC	Department of Toxic Substances Control
EA	Environmental Assessment
EIR	Environmental Impact Report
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FAR	Floor area ratio
FAR Part 77	Federal Aviation Regulations, Part 77 Objects Affecting Navigable Airspace
FBM	Fleet Ballistic Missile
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zones
FIRM	Flood Insurance Rate Map
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
FUHSD	Fremont Union High School District
GHGs	Greenhouse gases

gpm	Gallons per minute
GWh	Gigawatt hours
GWMP	Groundwater Management Plan
HOV	High-occupancy vehicle
HRI	Heritage Resource Inventory
HSP	Health and Safety Plan
HSWA	Federal Hazardous and Solid Waste Amendments
I-280	Interstate 280
IFC	International Fire Code
LBP	Lead-based paint
LEED	Leadership in Energy and Environmental Design
LID	Low impact development
LOS	Level of service
MBTA	Migratory Bird Treaty Act
MDD	Maximum Day Demand
mgd	Million gallons per day
MOA	Memorandum of Agreement
mpg	Miles per gallon
MRZ	Mineral Resource Zones
MTC	Metropolitan Transportation Commission
MVWSD	Mountain View Whisman School District
NAHC	Native American Heritage Commission
Navy	United States Department of the Navy
NCP	National Contingency Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act
NIROP	Naval Industrial Reserve Ordnance Plant
NOD	Notice of Determination
NOI	Notice of Intent
NOP	Notice of Preparation
NO _x	Nitrogen oxides
NO ₂	Nitrogen dioxide

NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
O ₃	Ground-level ozone
OHP	Office of Historic Preservation
OITC	Outdoor-Indoor Transmission Class
OPR	Office of Planning and Research
PCBs	Polychlorinated biphenyls
PCE	1,4-dioxane, dichloroethane, dichloroethane, tetrachloroethylene
PDA _s	Priority Development Areas
PHD	Peak Hour Demand
PM	Particulate matter
PPV	Peak Particle Velocity
PRM	Paleontological Resource Mitigation
PWWF	Peak wet weather flow
R&D	Research & Development
RCRA	Resource Conservation and Recovery Act
RHNA	Regional Housing Needs Allocation
ROG	Reactive organic gases
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCCDEH	Santa Clara County Department of Environmental Health
SCUSD	Santa Clara Unified School District
SFHA	Special Flood Hazard Area
SFPUC	San Francisco Public Utilities Commission
SHMA	Seismic Hazards Mapping Act
SMARA	Surface Mining and Reclamation Act
SMaRT Station®	Sunnyvale Materials Recovery and Transfer Station
SMC	Sunnyvale Municipal Code
SMGB	State Mining and Geology Board
SMP	Site Management Plan
SO _x	Sulfur oxides
SR	State Route

SSD	Sunnyvale School District
SVCE	Silicon Valley Clean Energy
SWPPP	Storm Water Pollution Prevention Plan
TACs	Toxic Air Contaminants
TCE	Trichloroethylene
TCR	Tribal cultural resource
TSCA	Toxic Substances Control Act
TPA	Transit Priority Area
UGB	Urban Growth Boundary
U.S.	United States
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
WPCP	Water Pollution Control Plant
WWMP	Wastewater Collection System Master Plan
VA	Veterans Affairs
Valley Water	Santa Clara Valley Water District
VMT	Vehicle miles traveled
VOCs	Volatile organic compounds
VTA	Valley Transportation Authority