

Initial Study/Addendum
Memorial Park Specific Plan



Prepared by



CUPERTINO

In Consultation with



January 2024

Table of Contents

Section 1.0	Introduction and Purpose	1
Section 2.0	Project Information	3
2.1	Project Title	3
2.2	Applicant/Lead Agency Contact	3
2.3	Project Location	3
2.4	Assessor’s Parcel Numbers.....	7
2.5	General Plan Designation and Zoning District	7
2.6	Project-Related Approvals, Agreements, and Permits.....	7
Section 3.0	Background Information.....	8
3.1	Overview	8
3.2	Cupertino Parks and Recreation System Master Plan	9
Section 4.0	Project Description	10
4.1	Primary Project Components	10
4.2	Hours of Operation and Park Programming	13
4.3	Site Access, Parking, and Circulation	13
4.4	Landscaping.....	14
4.5	Stormwater Treatment	15
4.6	Construction.....	15
Section 5.0	Environmental Setting, Checklist, and Impact Discussion	17
5.1	Aesthetics.....	18
5.2	Agriculture and Forestry Resources	27
5.3	Air Quality	31
5.4	Biological Resources.....	40
5.5	Cultural Resources	52
5.6	Energy	60
5.7	Geology and Soils	67
5.8	Greenhouse Gas Emissions	78
5.9	Hazards and Hazardous Materials.....	85
5.10	Hydrology and Water Quality.....	97
5.11	Land Use and Planning	109
5.12	Mineral Resources.....	113

5.13	Noise	115
5.14	Population and Housing	128
5.15	Public Services.....	130
5.16	Recreation.....	136
5.17	Transportation	140
5.18	Tribal Cultural Resources.....	149
5.19	Utilities and Service Systems.....	153
5.20	Wildfire	161
Section 6.0	References.....	163
Section 7.0	Lead Agency and Consultants	168
7.1	Lead Agency	168
7.2	Consultants	168
Section 8.0	Acronyms and Abbreviations	169

Figures

Figure 2.3-1:	Regional Map	4
Figure 2.3-2:	Vicinity Map	5
Figure 2.3-3:	Aerial Photograph and Surrounding Land Uses	6
Figure 4.1-1:	Proposed Site Plan.....	12
Figure 4.6-1:	Proposed Phasing Plan	16
Figure 5.13-1:	Noise Measurement Locations.....	121

Photos

Photos 1 & 2	21
Photos 3 & 4	22
Photos 5 & 6	23

Tables

Table 4.1-1: Summary of Existing Conditions and Proposed Changes	13
Table 5.3-1: Health Effects of Air Pollutants.....	31
Table 5.4-1: City Tree Replacement Ratios.....	43
Table 5.13-1: Groundborne Vibration Impact Criteria.....	116
Table 5.13-2: Summary of Long-Term Noise Measurement Data (dBA).....	120
Table 5.13-3: Summary of Short-Term Noise Measurement Data (dBA).....	120
Table 5.13-4: Vibration Levels for Construction Equipment.....	126

Appendices

- Appendix A: Memorial Park Specific Plan
- Appendix B: Tree Inventory Report
- Appendix C: Geotechnical Investigation
- Appendix D: Phase I Environmental Site Assessment
- Appendix E: Noise and Vibration Assessment
- Appendix F: Trip Generation Technical Memorandum

All appendices are incorporated herein by reference.

Section 1.0 Introduction and Purpose

The City of Cupertino, as the Lead Agency, has prepared this Initial Study/Addendum for the Memorial Park Specific Plan in compliance with the California Environmental Quality Act (CEQA), the CEQA Guidelines (California Code of Regulations §15000 et. seq.) and the regulations and policies of the City of Cupertino, California.

The project proposes to implement a Specific Plan for Memorial Park that outlines improvements planned for the park. This Initial Study/Addendum evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed project.

This Initial Study/Addendum tiers from the adopted October 2019 City of Cupertino Parks and Recreation System Master Plan Initial Study/Mitigated Negative Declaration (2019 IS/MND, State Clearinghouse [SCH] #2019109066). The primary purpose of the Parks and Recreation System Master Plan (Master Plan) was to align the City's park and recreation services with community expectations, identify key projects that could be added to the recreation system, and ensure the City has the resources needed to create a park system that embodies Cupertino's desires.

The CEQA Guidelines Section 15162(a) states that when an EIR has been certified or a Negative Declaration adopted for a project, no subsequent EIR or Negative Declaration shall be prepared for that project unless the Lead Agency determined, on the basis of substantial evidence in light of the whole record, one or more of the following:

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - (A) The project will have one or more significant effects not discussed in the previous EIR or Negative Declaration;
 - (B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

- (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

CEQA Guidelines Section 15164(b) states that an addendum may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162(a) (see above) calling for preparation of a subsequent EIR or Negative Declaration have occurred. Based on the analysis completed in this document, the City has determined that the project would not result in new or substantially more severe significant impacts than previously disclosed in the 2019 IS/MND. Therefore, the standard for requiring a subsequent EIR or Negative Declaration has not been met, and an Addendum has been prepared consistent with CEQA Guidelines Section 15164.

If the project is approved, the City of Cupertino 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 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 15075(g)).

Section 2.0 Project Information

2.1 Project Title

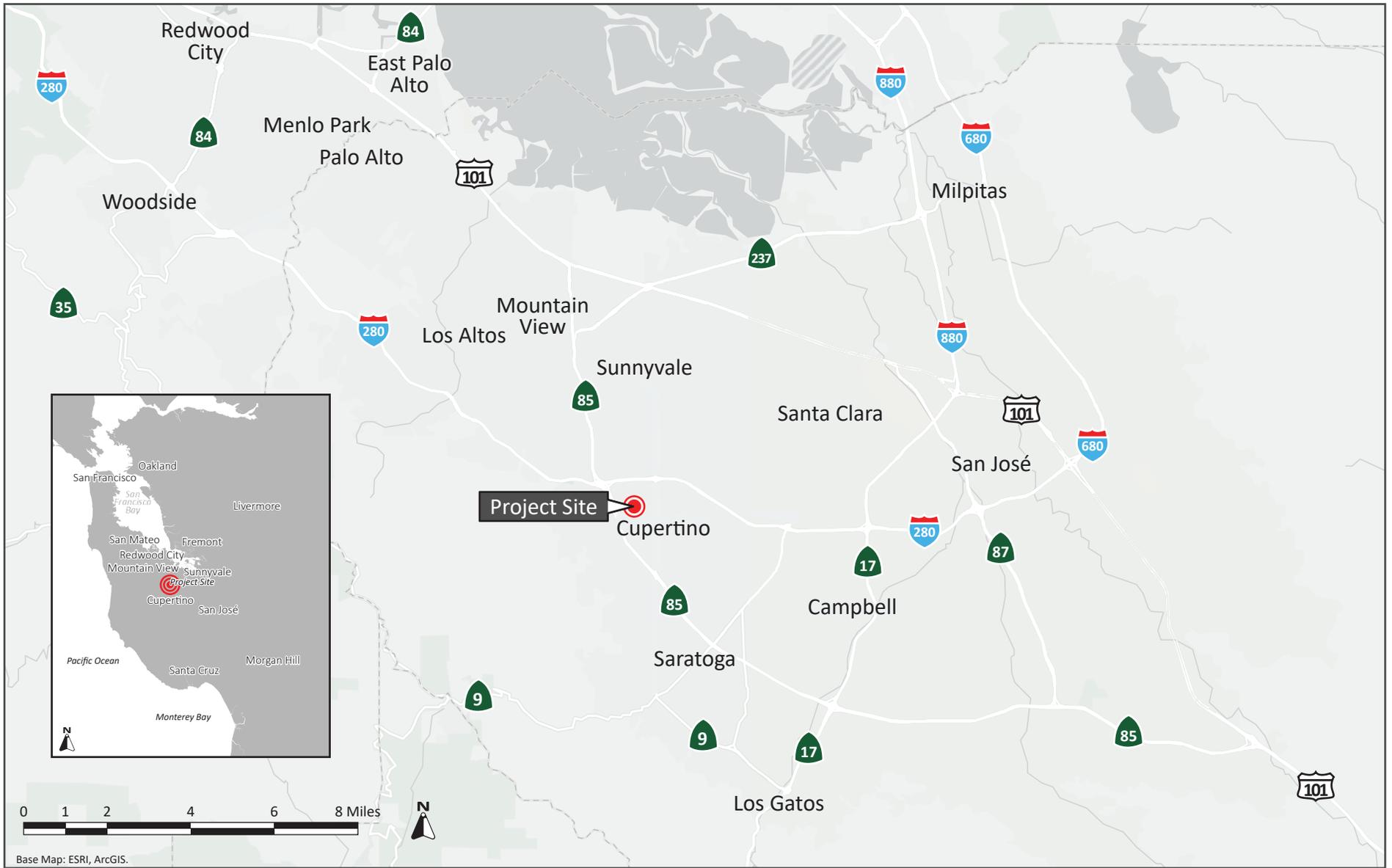
Memorial Park Specific Plan

2.2 Applicant/Lead Agency Contact

Susan Michael
City of Cupertino
Public Works Department
10300 Torre Avenue
Cupertino, CA 95014
(408) 777-1328
susanm@cupertino.gov

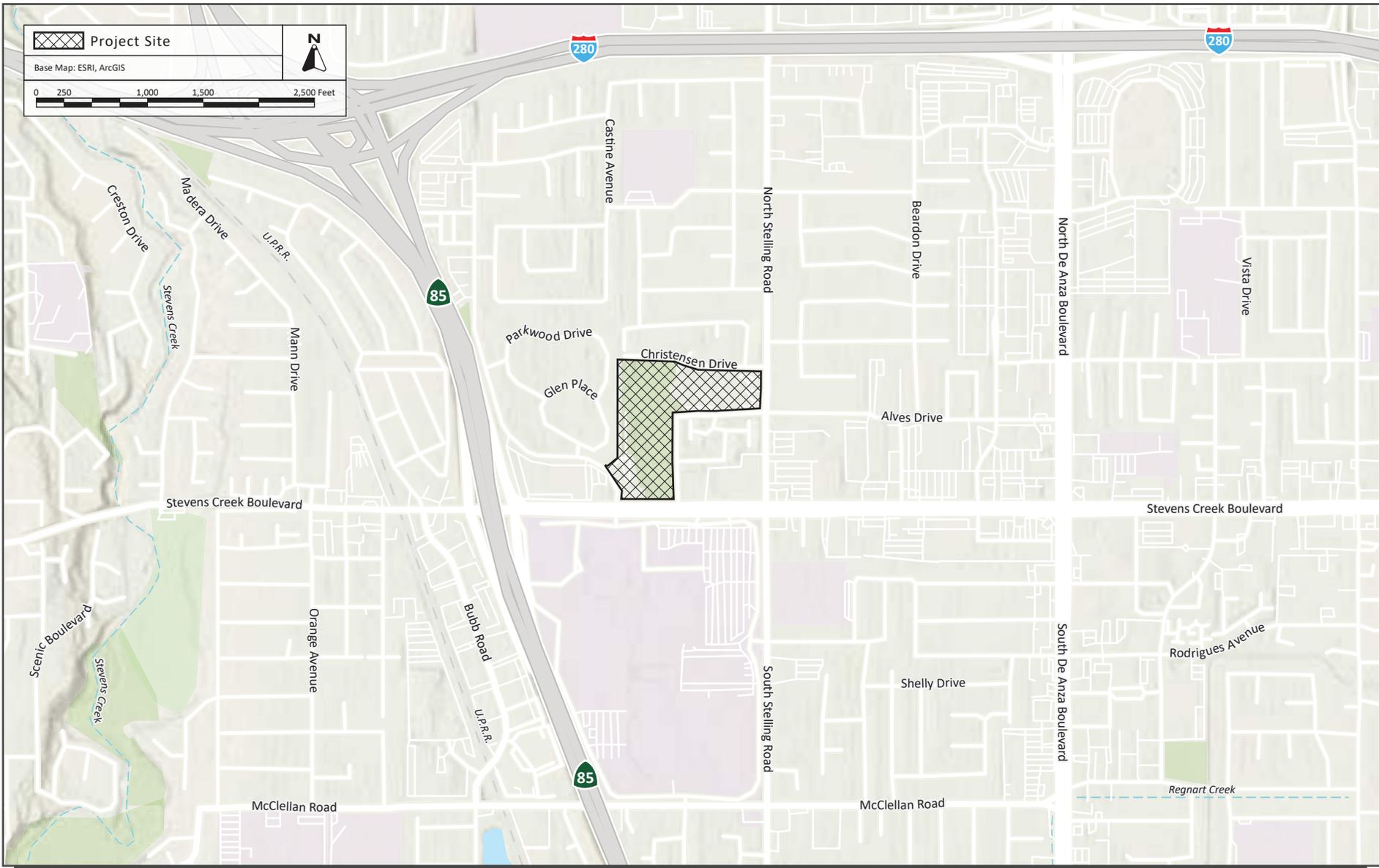
2.3 Project Location

The approximately 22.5-acre project site is located on the northeast corner of Mary Avenue and Stevens Creek Boulevard at 21121 Stevens Creek Boulevard in the City of Cupertino. The surrounding land uses include residential uses to the north and west, educational facility uses to the south, and residential and recreational uses to the east. Regional and vicinity maps are shown on Figure 2.3-1 and Figure 2.3-2 on the following pages. An aerial photograph of the project site and surrounding land uses is shown on Figure 2.3-3.



REGIONAL MAP

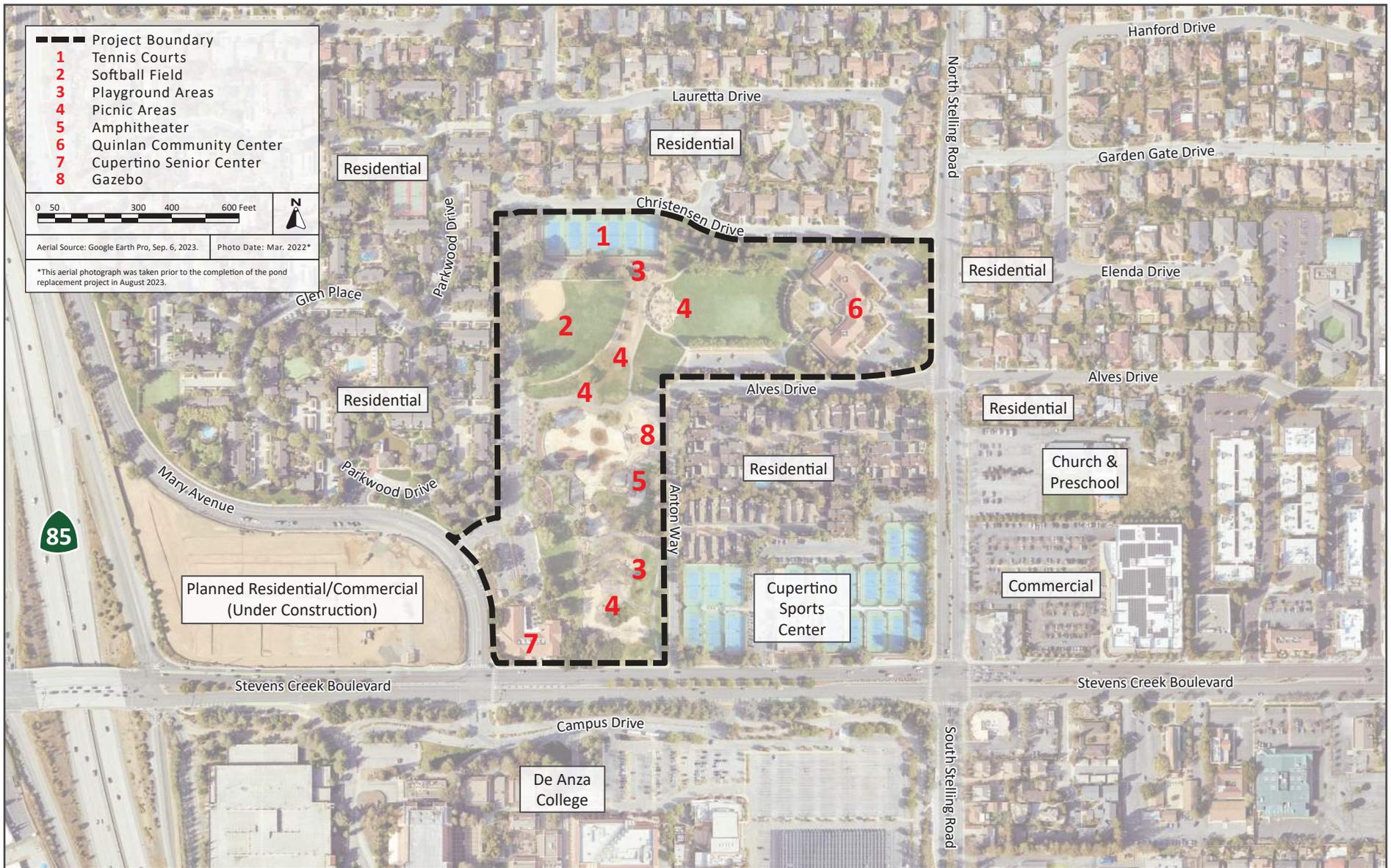
FIGURE 2.3-1



 Project Site	
Base Map: ESRI, ArcGIS	
	

VICINITY MAP

FIGURE 2.3-2



AERIAL PHOTOGRAPH AND SURROUNDING LAND USES

FIGURE 2.3-3

2.4 Assessor's Parcel Numbers

326-27-033, 326-29-006, and 326-54-041

2.5 General Plan Designation and Zoning District

The project site is within the boundaries of the Heart of the City Special Area and has General Plan designations of Transportation, Parks and Open Space, and Public Facilities. The Heart of the City Special Area is a key mixed-use, commercial corridor in Cupertino and includes five specific subareas: West Stevens Creek Boulevard, Crossroads, Central Stevens Creek Boulevard, City Center, and East Stevens Creek Boulevard. The project site is within the West Stevens Creek Boulevard subarea and Community Recreation Node, which consists of Memorial Park, the Senior Center, Sports Center, and Quinlan Community Center.

The site is within the Heart of the City Specific Plan Area zoning district, and has a zoning designation of Open Space/Public Park/Recreational Zone. The Heart of the City Specific Plan provides specific development guidance for the Stevens Creek Boulevard commercial corridor and is meant to guide the future development and redevelopment of the Stevens Creek Boulevard Corridor in a manner that creates a greater sense of place and community identity in Cupertino.

2.6 Project-Related Approvals, Agreements, and Permits

The project requires the following discretionary approvals:

- Adoption of the Specific Plan

The project would also require the following ministerial approvals:

- Encroachment permit
- Tree Removal permit
- Demolition permit
- Grading permit
- Construction permit

Section 3.0 Background Information

3.1 Overview

The approximately 22.5-acre (or 980,000 square feet) project site is generally referred to collectively as “Memorial Park” and contains Memorial Park, Quinlan Community Center, and Cupertino Senior Center. The current hours of operation are daylight hours to 10:00 PM.

Within Memorial Park, there are six tennis courts (including one court that is dual-lined to provide four pickleball courts), a softball field, an amphitheater, the Cupertino Veterans Memorial, playground areas, picnic areas, and the Memorial Park Gazebo. Until 2013, Memorial Park also contained a concrete-lined, artificial pond in the central portion of the park south of the softball field. It was drained in 2013 in response to the ongoing drought and proposed for removal under the City’s 2021-2022 Capital Improvement Program. In 2022, construction began to remove the concrete liner, backfill and grade the area, install landscaping and sodded turf, and pedestrian pathways. Since the commencement of this environmental analysis, construction of the project to replace the former pond area was completed in August 2023, and the area is currently open to the public.

Memorial Park currently hosts major events between May and November each year, including the following:

- Bhubaneswar Sister City Celebration
- Cherry Blossom Festival
- Diwali Festival
- Easter Egg Hunt
- Field Day
- Holi Celebration
- Independence Day Celebration
- Relay for Life: Silicon Valley North
- Rotary Fall Festival
- Veteran’s Day Memorial Ceremony
- YAB Summer Kick-Off

These events typically range in size from as low as 100 to 150 attendees for minor events to as high as 4,000 to 5,000 attendees for major events like the annual Cherry Blossom Festival. Spillover parking for larger events is accommodated in the surface parking areas at De Anza College, which is located across the street on the south side of Stevens Creek Boulevard.

3.2 Cupertino Parks and Recreation System Master Plan

As discussed under Section 1.1, the primary purpose of the City’s 2020 Master Plan (Master Plan) was to align the City’s park and recreation services with community expectations, identify key projects that could be added to the recreation system, and ensure the City has the resources needed to create a park system that embodies Cupertino’s desires.

The Master Plan identified enhancement opportunities for Memorial Park that were separated into immediate, short-term, and longer-term timeframes. The immediate item for Memorial Park was to develop a site master plan for the park, which is the purpose of the proposed project. In the short-term, the Master Plan identified nature integration, shade creation, improvement of ADA accessibility, pathway and seating improvements, amphitheater improvements, additional sporting opportunities (e.g., pickleball), and the re-purposing of the empty pond as priorities for the park. Throughout the Master Plan, Memorial Park was identified as a potential site for additional large-scale recreation opportunities such as an aquatic park, multi-use recreation center and gymnasium complex, and a performing and fine arts center.

Section 4.0 Project Description

The project proposes to implement a Specific Plan for Memorial Park that outlines improvements for the park. Although no improvements are proposed for the Quinlan Community Center or Cupertino Senior Center buildings, the project would upgrade the courtyards outside these two buildings with new landscaping and seating areas. A draft of the proposed Specific Plan is included in Appendix A. The primary project components of the Specific Plan (also referred to as the “project”) are described below and shown on Figure 4.1-1. The changes to existing conditions proposed by the project are summarized in Table 4.1-1.

4.1 Primary Project Components

4.1.1 Softball Field

The existing softball field would continue to be used for programmed adult softball leagues, senior softball activities, and public rentals throughout the year under the Specific Plan as well as serve as a dog off-leash area (DOLA) when the softball field is not in use. Operation of the DOLA would be limited to several hours in the afternoon during normal park operating hours.

4.1.2 Sports Courts

The six existing tennis courts on the northwest corner of the project site would remain in the same location, and the only proposed change under the Master Plan would be to remove the pickleball dual-striping on one of the tennis courts. The project would add a new basketball court with lighting adjacent to the eastern side of the softball field, and the existing landscaped berms would be utilized as seating areas around the new basketball court. The project would also add eight pickleball courts on the southeast corner of the site, adjacent to the intersection of Stevens Creek Boulevard and Anton Way. A low fence and landscape screening would be installed around the perimeter of the new pickleball courts. Additional lighting would be installed for the pickleball courts, and the courts would be open during normal park operating hours. A bocce ball court would also be installed adjacent to the Senior Center, and would be programmed for Senior Center socials, classes, and public rentals. No new lights are proposed for the bocce ball court.

4.1.3 Playground Areas

Currently, the park contains two playground areas, one south of the tennis courts and one south of the amphitheater. The project would relocate and replace these playground areas with an All-Abilities Playground area and a Nature Playground area, both of which would be centrally located within the park between the Senior Center and softball field. A passive garden walk featuring a variety of native plants would be constructed south of the Nature Playground area. A new publicly accessible restroom would be constructed adjacent to the All-Abilities Playground area.

4.1.4 Picnic Areas

The existing reservable picnic area east of the softball field would be renovated and three new, drop-in picnic areas would be added on-site. Renovation of the existing reservable picnic area would include replacing the decomposed granite surfacing with concrete surfacing, installing new shade structures, installing new landscaping and trees, and providing barbeques, sinks, and drinking fountains. The new picnic areas would be constructed adjacent to the All-Abilities Playground area, Nature Playground area, and Memorial Park Gazebo. All new picnic areas would include picnic tables and shade structures.

4.1.5 Amphitheater

The existing amphitheater has seats for approximately 140 people. Currently, the programming for the amphitheater includes concerts and theater productions that occur during the summer months (June through September). These events generally occur between 10:30 AM and 8:00 PM depending on the type of performance. The adjacent lawn areas act as additional seating areas for the attendees that cannot be accommodated by the seats. Performances at the amphitheater have drawn as many as 300 to 500 attendees.

The project would upgrade the existing amphitheater to provide additional designated seats, provide Americans with Disabilities Act (ADA) compliant improvements such as reinforced stairs and pathways, and install a shade structure. In addition, the existing stage infrastructure would be improved through the installation of a new shade structure, new surfacing, and telecommunication and fiber optic equipment. The project would not create a larger stage. The types of performances and programming held at the amphitheater would remain the same as under existing conditions.



- ① New Site Arrival
- ② New Parking Stalls
- ③ Upgraded Restroom
- ④ Passive Garden Walk
- ⑤ Pickleball Courts
- ⑥ Expanded Senior Center Deck / Plaza
- ⑦ Fitness Station
- ⑧ Bocce Court
- ⑨ Reservable Picnic Area
- ⑩ Nature Playground
- ⑪ Enhanced Pedestrian / Bicycle Access
- ⑫ Veterans Memorial
- ⑬ Upgraded Amphitheater and Stage
- ⑭ Historic Gazebo
- ⑮ Event Lawns
- ⑯ Event Plaza
- ⑰ All-Abilities Playground
- ⑱ New Restrooms
- ⑲ Basketball Court
- ⑳ Existing Softball Field / DOLA
- ㉑ Dedicated Tennis Courts
- ㉒ Upgraded Quinlan Courtyard
- ㉓ Upgraded Parking Lots

PROPOSED SITE PLAN

FIGURE 4.1-1

Table 4.1-1: Summary of Existing Conditions and Proposed Changes

	Existing Conditions	Proposed Changes
Softball Field	<ul style="list-style-type: none"> • Programmed softball leagues • Unsanctioned DOLA 	<ul style="list-style-type: none"> • Sanctioned DOLA at posted times (TBD)
Sports Courts	<ul style="list-style-type: none"> • Five dedicated tennis courts • One tennis court with dual striping to provide four pickleball courts 	<ul style="list-style-type: none"> • Restripe to provide six dedicated tennis courts • Eight dedicated pickleball courts • New full-size basketball court • New bocce ball court
Playground Areas	<ul style="list-style-type: none"> • Two playground areas 	<ul style="list-style-type: none"> • Relocate both playground areas with upgraded equipment to new locations within Memorial Park
Picnic Areas	<ul style="list-style-type: none"> • One large, reservable picnic area • Three smaller, drop-in picnic areas 	<ul style="list-style-type: none"> • Upgrade existing large, reservable picnic area • Three new drop-in picnic areas
Amphitheater	<ul style="list-style-type: none"> • Approximately 140 designated seats • Live performances throughout the year 	<ul style="list-style-type: none"> • Upgrade seating area to be ADA compliant • Additional designated seats • New shade structure over stage and amphitheater seating area • New electrical equipment for stage
Hours of Operation	<ul style="list-style-type: none"> • Daytime to 10:00 PM 	<ul style="list-style-type: none"> • None
Park Programming	<ul style="list-style-type: none"> • Events throughout the year with crowd sizes ranging from 100 to 5,000 attendees 	<ul style="list-style-type: none"> • None

4.2 Hours of Operation and Park Programming

The project would not change the hours of operation for Memorial Park, Quinlan Community Center, or Cupertino Senior Center. The project would not alter the type or scale of the current events held at the park; however, if some of the currently scheduled events are no longer held in the future, alternative equivalent events may be scheduled to take their place. In addition to the existing event lawn area located west of the Quinlan Community Center, the project would reconfigure a smaller (i.e., approximately 70,000 square feet) area comprised of lawn and hardscaping south of the softball field where the concrete-lined pond was previously located.

4.3 Site Access, Parking, and Circulation

Vehicular access to the project site for the public is currently provided by three separate driveways. There is a two-way driveway on North Sterling Road leading to the Quinlan Community Center, a two-way driveway on Alves Drive, and a two-way driveway on Mary Avenue adjacent to the Senior

Center. There are additional access points for maintenance and emergency vehicles located on Anton Way and within the Mary Avenue parking lot.

The project would reconfigure the parking lot accessed via Alves Drive. The existing two-way driveway located in the center of the parking lot would be removed and two, one-way driveways would be constructed at each end of the parking lot. These driveways would be approximately 24 feet wide. Currently, the parking lot has 50 parking stalls (two ADA accessible stalls and 48 standard stalls). For the purposes of this analysis, it is assumed that the project would maintain the same number of stalls; however, the lot would be restriped to provide additional ADA accessible stalls. In addition, the project would reconfigure the westernmost parking lot accessed via Mary Avenue to reduce the size of several planter islands to accommodate enhanced bicycle and pedestrian facilities.

The project would add approximately nine, inset parallel parking stalls along Anton Way adjacent to the new pickleball courts.

Pedestrian access to the park is currently provided by several walking paths accessed via entry points on Christensen Drive, Alves Drive, Anton Way, Stevens Creek Boulevard, and Mary Avenue. The project would maintain these pedestrian pathways; however, several would be realigned to accommodate proposed improvements. In addition, these pedestrian pathways would be resurfaced to ensure ADA compliance throughout the park and access points at the parking lots on-site would be updated with ADA compliant curb ramps.

Bicyclists currently utilize the pathways in the park; there are no official bicycle lanes on-site. The project would add Class I bicycle routes on-site that would connect Alves Drive, Mary Avenue, and Christensen Drive, allowing cyclists a designated pathway through the site. In addition, the project would install short- and long-term bicycle parking throughout the site and at key entry points.

4.4 Landscaping

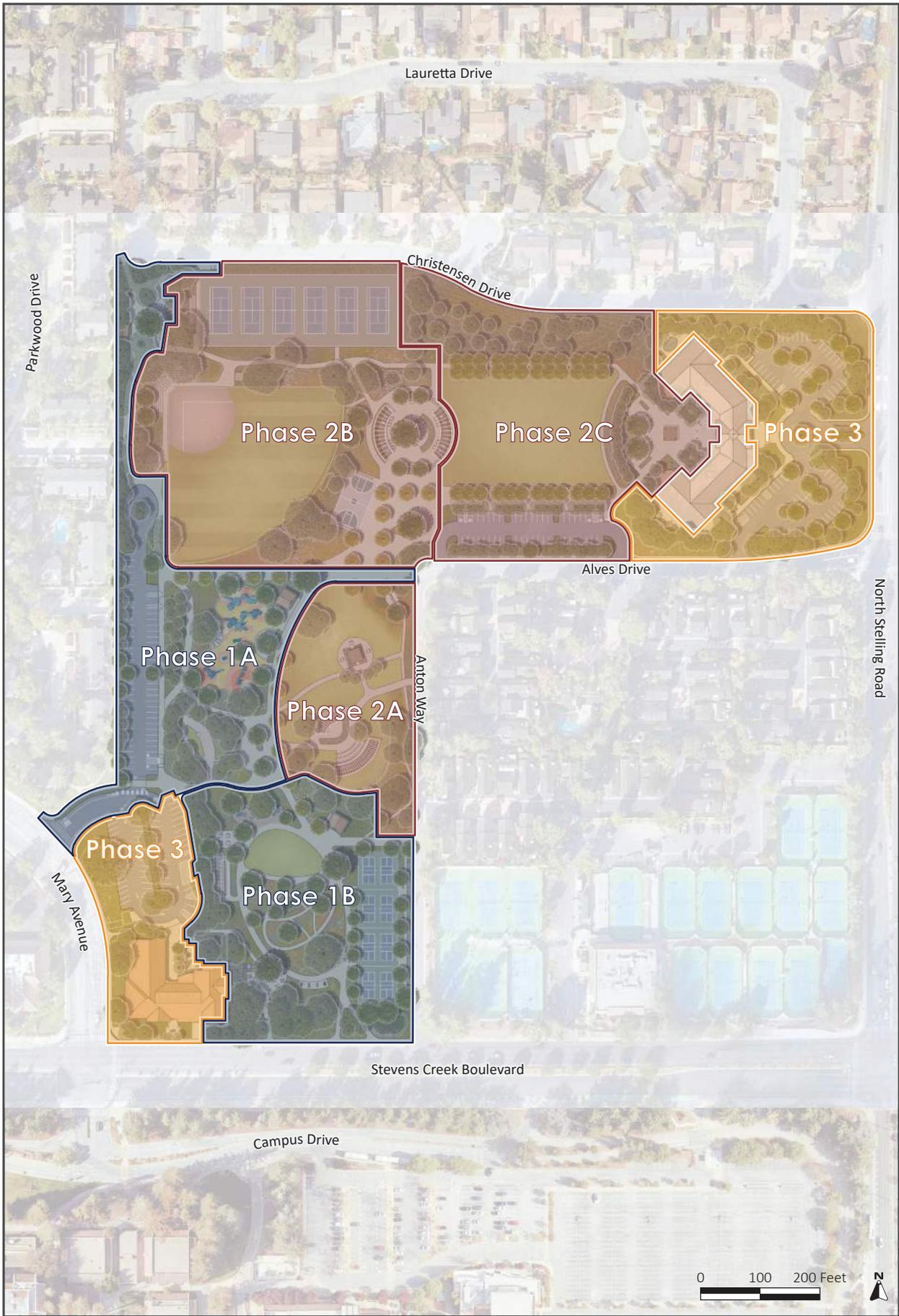
The project site currently contains approximately 500 on-site trees, all of which have a protected status as public trees (pursuant to Chapter 14.12 of the City Code). The project would remove a total of approximately 140 existing trees on-site due to the proposed improvements and/or low tree preservation suitability. The remaining trees on-site would not conflict with the proposed improvements, are in good health, and would be preserved. Over the course of project buildout, approximately 150 replacement trees would be planted throughout the park in accordance with the Tree Succession Plan prepared for the site. In addition to the replacement trees, the project would plant new landscaping, including new shrubs and groundcover, throughout the site. The new landscaping would incorporate low to moderate water use plants and California native species.

4.5 Stormwater Treatment

Currently, the project site contains approximately 350,000 square feet (or 36 percent) of impervious surfaces and 630,000 square feet (or 64 percent) of pervious surfaces. The proposed project would increase on-site impervious surfaces by approximately 72,000 square feet (or seven percent) compared to existing conditions. The increase in impervious surfaces results from the addition of new concrete pedestrian walkways, bicycle paths, and the paved asphalt surface parking stalls adjacent to the proposed pickleball courts. To manage stormwater runoff on-site, the project would construct landscaped bioretention areas and install pervious paving materials in select areas throughout the site to capture stormwater runoff and promote on-site infiltration.

4.6 Construction

For the purposes of this analysis, it is assumed that project construction would begin in 2028 and would be completed over the course of approximately 15 years as funding is made available for individual improvements. Construction activities would include demolition, site preparation, grading, site structures, paving, and landscaping. Although the timing of project implementation depends on the availability of funding, it is anticipated the first five years of construction would include improvements such as the upgrades to the existing parking lot accessed via Mary Avenue and construction of the All-Abilities Playground, Nature Playground, bocce court, pickleball courts, and new parallel parking stalls along Anton Way. The second five-year period would include improvements such as the upgrades to the existing amphitheater, renovation of the parking lot accessed via Alves Drive, construction of the basketball court, and renovation of the existing picnic area. Construction activities during the final five-year period are anticipated to consist of landscaping improvements in the parking lot areas adjacent to the Quinlan Community Center and Senior Center. For a map showing the recommended project phasing, see Figure 4.6-1.



PROPOSED PHASING PLAN

FIGURE 4.6-1

Section 5.0 Environmental Setting, Checklist, and Impact Discussion

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

5.1	Aesthetics	5.11	Land Use and Planning
5.2	Agriculture and Forestry Resources	5.12	Mineral Resources
5.3	Air Quality	5.13	Noise
5.4	Biological Resources	5.14	Population and Housing
5.5	Cultural Resources	5.15	Public Services
5.6	Energy	5.16	Recreation
5.7	Geology and Soils	5.17	Transportation
5.8	Greenhouse Gas Emissions	5.18	Tribal Cultural Resources
5.9	Hazards and Hazardous Materials	5.19	Utilities and Service Systems
5.10	Hydrology and Water Quality	5.20	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 the project site and in the surrounding area, as relevant.
- **Impact Discussion** – This subsection 1) includes the recommended checklist questions from Appendix G of the CEQA Guidelines to assess impacts and 2) 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 labeled to correspond to the checklist question being answered. For example, the discussion under checklist question a) 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.

5.1 Aesthetics

5.1.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.1.1.1 Regulatory Framework

State

Streets and Highway Code Sections 260 through 263

The California Scenic Highway Program (Streets and Highway Code, Sections 260 through 263) 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

Cupertino General Plan: Community Vision 2015-2040

Community Vision 2040 is the City’s General Plan, which describes the community’s overall philosophy regarding the character and accessibility of existing and new neighborhoods and mixed-use corridors, and contains goals, policies, and strategies for implementing the community’s vision.

The proposed project is subject to General Plan policies and strategies including, but not limited to, the policies listed below pertaining to aesthetics.

Policy/Strategy	Description
Policy LU-4.1	Ensure that the design of streets, sidewalks and pedestrian and bicycle amenities are consistent with the vision for each Planning Area and Complete Streets policies.
Policy LU-12.4	The Montebello foothills at the south and west boundary of the valley floor provide a scenic backdrop, adding to the City’s scale and variety. While it is not possible to guarantee an unobstructed view of the hills from every vantage point, an attempt should be made to preserve views of the foothills.
Policy LU-27.8	Protect residential neighborhoods from noise, traffic, light, glare, odors and visually intrusive effects from more intense development with landscape buffers, site and building design, setbacks and other appropriate measures.

Heart of the City Specific Plan

The Heart of the City Specific Plan describes the different areas and special centers within the Specific Plan area and provides development standards, design guidelines, and landscaping guidelines for sites within the Specific Plan area. These standards include tree species that should

be planted on the Stevens Creek Boulevard corridor, the preferred location for on-site parking, and paving materials that should be utilized by developments.

Cupertino 2020 Parks and Recreation System Master Plan

The City's Master Plan was adopted in February 2020, and outlines the City's comprehensive plan for parks and recreational facilities in the City through the year 2040. The Master Plan is organized around seven goals, which include conservation, connection, equitable access, enhancement, activity, quality, and sustainability. Each of the seven goals has associated objectives that reflect the City's desired outcomes and actions that provide ideas or strategies that help achieve the broader goals.

City of Cupertino Municipal Code

The City's Zoning Ordinance (Title 19 of the City's Municipal Code) sets forth the standards requiring architectural and site review and stipulating aesthetic criteria for new development. Under Chapter 19.168, the City is responsible for the review of architectural and site designs of buildings, structures, signs, lighting, and landscaping within the City to promote and ensure compliance with the goals and objectives identified in the General Plan.

Title 14 of the City's Municipal Code (Street, Sidewalks and Landscaping) contains development standards related to street improvements, encroachments, landscaping, and undergrounding of utilities.

5.1.1.2 *Existing Conditions*

Scenic Vistas

Scenic corridors are considered a defined area of landscape, viewed as a single entity that includes the total field of vision visible from a specific point, or series of points along a linear transportation route. Public view corridors are areas in which short-range, medium-range and long-range views are available from publicly accessible viewpoints, such as from city streets. However, scenic vistas are generally interpreted as long-range views of a specific scenic feature (e.g., open space lands, mountain ridges, bay, or ocean views).¹ Although the City has not designated any major roadways or any other streets/areas in Cupertino as scenic corridors or as being part of a scenic vista, the General Plan recognizes views of the foothills and Santa Cruz Mountains as important resources.²

The project site is located in a highly developed area of the City. It is located on relatively flat land which limits the amount of expansive views from the project site. Obstructed views of the Santa

¹ City of Cupertino. *Final Environmental Impact Report for the General Plan Amendment, Housing Element Update, and Associated Rezoning Project (SCH# 2014032007)*. December 4, 2014. Page 4.1-21.

² City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 48.

Cruz Mountains and foothills are provided in the project area, and a clearer view of the Santa Cruz Mountains can be seen looking west on Stevens Creek Boulevard.

There are no state-designated scenic highways in Cupertino. There is only one state-designated scenic highway in Santa Clara County: 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. The nearest officially designated scenic highway is the segment of SR 9 approximately 4.5 miles south of the project site.³ The project site is not visible from a designated state scenic highway.

Visual Character and Quality

The project site is located in a developed area of the Cupertino and currently contains Memorial Park, the Quinlan Community Center, and the Cupertino Senior Center. Memorial Park includes tennis courts, a softball field, an amphitheater, the Cupertino Veterans Memorial, playground areas, picnic areas, and the Memorial Park Gazebo. It is landscaped with large grass areas, trees, and landscaped areas with small shrubs.

The Quinlan Community Center is a single-story, u-shaped building with ceramic roof tiles. The central portion of the building over the lobby is elevated above the surrounding roofline, and the building is surrounded by landscaped areas and trees. The Cupertino Senior Center is a single-story structure with ceramic roof tiles on a gable roof, a pergola in the front courtyard area, and a wooden deck on the east side of the building. The central portion of the park was previously a concrete-lined, artificial pond that has since been drained and redeveloped to provide additional landscaped area and walking paths under a separate project.

The surrounding area in the immediate vicinity of the project site consists primarily of one- to two-story single-family and multi-family residential properties. The Cupertino Sports Center is located to the east of the project site, and consists primarily of tennis courts. De Anza College is directly south of the site, and contains a variety of classroom buildings, administrative buildings, and surface parking areas. Most of the campus is shielded from view at the project site by landscaped areas in the median of Stevens Creek Boulevard and trees between Stevens Creek Boulevard and Campus Drive.

³ Caltrans. "California State Scenic Highway System Map." Accessed August 16, 2023.
<https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aaca>.



Photo 1: View from the southeast corner of the project site looking north towards Anton Way.



Photo 2: View from the southeast corner of the project site looking east on Stevens Creek Boulevard.



Photo 3: View from the southern boundary of the project site looking west on Stevens Creek Boulevard.



Photo 4: View from the central portion of the project site looking east towards Alves Drive.



Photo 5: View from the northwest corner of the project site looking north towards Christensen Drive.



Photo 6: View from the western boundary of the project site looking west towards adjacent residential development.

5.1.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? ⁴ If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

The 2019 IS/MND determined that although views of the foothills (i.e., Montebello) and Santa Cruz Mountains are important resources, there are no designated scenic vistas within the City limits. Therefore, projects carried out under the Master Plan that could potentially block views of the foothills from within individual parks would not result in an impact on scenic vistas.⁵

The project would implement a variety of improvements throughout Memorial Park, including the construction of playground areas, sports courts, and the planting of new landscaping. These improvements are consistent with the improvements evaluated in the 2019 IS/MND and, as disclosed in the 2019 IS/MND, they could potentially further obstruct views of the foothills and Santa Cruz Mountains on-site. However, there are no scenic vistas within the City. Therefore, implementation of the proposed project would not result in impacts to any scenic vistas, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

⁴ Public views are those that are experienced from publicly accessible vantage points.

⁵ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 67.

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

The 2019 IS/MND concluded that since there are no state-designated scenic highways or locally designated scenic corridors located within the City of Cupertino, implementation of the Master Plan would not impact a state designated Scenic Highway.⁶

The circumstances under which the project is being undertaken have not changed since the adoption of the 2019 IS/MND. As discussed in Section 5.1.1.2 Existing Conditions, there are no state-designated scenic highways in Cupertino. The closest state-designated scenic highway is a segment of SR 9 which is approximately 4.5 miles south of the project site. Since the project site is not visible from a designated state scenic highway, implementation of the project would not result in any impacts to scenic resources within a state scenic highway, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- c) In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?
-

The 2019 IS/MND determined that future projects under the Master Plan would be designed, constructed, and maintained consistent with all adopted City policies and regulations, including those focused on visual quality of the urban environment. Therefore, implementation of the Master Plan would cause a less than significant impact to the visual character of the project areas and their surroundings.⁷

The project is consistent with the General Plan, Heart of the City Specific Plan, and Parks and Recreation Master Plan policies governing scenic quality by complying with applicable design guidelines in the Specific Plan, preventing light/glare from adversely affecting surrounding residential areas, and replacing trees consistent with the Municipal Code. In addition, as noted in Section 5.1.1.1 Regulatory Framework, Chapter 19.168 of the City's zoning ordinance requires that the City review the site designs of any proposed buildings, structures, signs, lighting, and/or landscaping within the City to ensure compliance with the goals and objectives identified in the General Plan regarding visual quality. For these reasons, the project would not substantially degrade the existing visual character or quality of public views of the site and its surroundings, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

⁶ Ibid. Page 67.

⁷ Ibid. Page 67.

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

The 2019 IS/MND determined that implementation of the Master Plan would result in the addition of new lighting fixtures or extended nighttime lighting in various parks in the City. In order to reduce the potential for new night lighting associated with park and recreation activities to cause light and glare impacts to adjacent sensitive land uses, the 2019 IS/MND identified Mitigation Measure AES-1 which would require that a lighting plan be prepared for projects with new exterior lighting near adjacent properties to be and that those new lights be shielded as necessary. With implementation of this mitigation measure, the impacts would be reduced to a less than significant level.⁸

In order to reduce any potential impacts, the project would implement 2019 IS/MND Mitigation Measure AES-1, which is described below.

2019 IS/MND Mitigation Measure

Mitigation Measure AES-1: New exterior lighting in proximity to adjacent property will be shielded as necessary to ensure that exterior light sources do not create a significant light or glare impact on an adjacent land use. A lighting plan that addresses potential light and glare impacts shall be prepared for projects that include new night lighting in proximity to adjacent private properties.

The project would add new light fixtures at the basketball court and pickleball courts. New exterior lighting would be designed to direct light downwards and would be shielded to avoid creating unnecessary glare at adjacent properties. In addition, consistent with the requirements of 2019 IS/MND Mitigation Measure AES-1, the project would prepare a lighting plan to evaluate and reduce any potential light and glare impacts to a less than significant level. With implementation of 2019 IS/MND Mitigation Measure AES-1, the project would not create any new or substantially more severe significant sources of light or glare that would adversely affect day or nighttime views in the area, which is consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

⁸ Ibid. Page 68.

5.2 Agriculture and Forestry Resources

5.2.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.2.1.1 *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.⁹

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.¹⁰

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.¹¹ Programs such as CAL FIRE’s Fire and Resource Assessment Program and are used to

⁹ California Department of Conservation. “Farmland Mapping and Monitoring Program.” Accessed February 17, 2023. <http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>.

¹⁰ California Department of Conservation. “Williamson Act.” Accessed February 17, 2023. <http://www.conservation.ca.gov/dlrp/lca>.

¹¹ Forest Land is land that can support 10 percent native tree cover and allows for management of forest resources (California Public Resources Code Section 12220(g)); Timberland is land not owned by the federal government or designated as experimental forest land that is available for, and capable of, growing trees to produce lumber and other products, including Christmas trees (California Public Resources Code Section 4526); and Timberland Production is land used for growing and harvesting timber and compatible uses (Government Code Section 51104(g)).

identify whether forest land, timberland, or timberland production areas that could be affected are located on or adjacent to a project site.¹²

5.2.1.2 Existing Conditions

According to the Santa Clara County Important Farmland 2018 map, the project site is designated as Urban and Built-Up Land, meaning the land is occupied by structures with a building density of at least one unit to 1.5 acres, or approximately six structures to a 10-acre parcel. Common examples include residential, industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, and water control structures.¹³ No lands adjacent to the project site are used for agricultural production, forest land, or timberland. Surrounding properties are designated, zoned, and used for urban uses. There are no Williamson Act parcels on or in the vicinity of the project site.¹⁴

The project site is within the boundaries of the Heart of the City Special Area of the General Plan and has General Plan designations of Transportation, Parks and Open Space, and Public Facilities. The site is within the Heart of the City Specific Plan Area zoning district, and has a zoning designation of Open Space/Public Park/Recreational Zone.

The project site is currently developed with a park, amphitheater, recreational facilities, the Cupertino Senior Center, and the Quinlan Community Center. The site is surrounded primarily by residential uses, with De Anza College located south of the project site south of Stevens Creek Boulevard.

5.2.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

¹² California Department of Forestry and Fire Protection. "Fire and Resource Assessment Program." Accessed February 17, 2023. <http://frap.fire.ca.gov/>.

¹³ California Department of Conservation. "California Important Farmland Finder." Accessed March 6, 2023. <https://maps.conservation.ca.gov/DLRP/CIFF/>

¹⁴ County of Santa Clara. "Williamson Act and Open Space Easement." September 17, 2018. Accessed March 6, 2023. <https://www.sccgov.org/sites/dpd/programs/wa/pages/wa.aspx>.

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in a loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the project 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?

The 2019 IS/MND determined that the City’s existing parks were not located within prime or other agricultural lands as mapped by the State, and were located within areas designated as “Urban and Built-up Land,” therefore, implementation of the Master Plan would not impact any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.¹⁵ These conditions have not changed since the adoption of the 2019 IS/MND. Therefore, implementation of the project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. **(Same Impact as Approved Project)**

b) Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The project site is not used or zoned for agricultural use, nor is the project site subject to a Williamson Act contract. For these reasons, the project would not conflict with existing zoning for

¹⁵ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 70.

agricultural use, or a Williamson Act contract. This is the same impact as disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

- c) Would the project conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production?
-

The project site is zoned Open Space/Public Park/Recreational Zone. Therefore, the project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. **(Same Impact as Approved Project)**

- d) Would the project result in a loss of forest land or conversion of forest land to non-forest use?
-

The 2019 IS/MND determined that implementation of the Master Plan would not result in projects that would convert any forest land to a non-forest use because no forest lands lie within the City boundaries.¹⁶ The lack of forest land on and adjacent to the project site has not changed since the adoption of the 2019 IS/MND. Therefore, the project would not result in a loss of forest land or conversion of forest land to non-forest use. **(Same Impact as Approved Project)**

- e) Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?
-

The 2019 IS/MND determined that implementation of the Master Plan would not result in conversion of any farmland or forest land to a non-agricultural/non-forest use because no farmland or forest lands lie within the City boundaries.¹⁷ As described in Section 5.2.1.2, these conditions have not changed, therefore, the project would not impact any farmland. **(Same Impact as Approved Project)**

¹⁶ Ibid. Page 70.

¹⁷ Ibid. Page 70.

5.3 Air Quality

5.3.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND, with the exception of BAAQMD updating their CEQA Guidelines in 2022. Key regulations and project site conditions are described below.

5.3.1.1 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.¹⁸ 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 5.3-1. The most commonly regulated criteria pollutants in the Bay Area are discussed further below.

Table 5.3-1: 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

¹⁸ 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.

Table 5.3-1: Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
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 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

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).¹⁹ Chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the California Air Resources Board (CARB).

¹⁹ California Air Resources Board. “Overview: Diesel Exhaust and Health.” Accessed August 16, 2023. <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

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.

5.3.1.2 *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 Air Act requires the EPA to set national ambient air quality standards for the six common criteria pollutants (discussed previously), including 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.

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.²⁰

CEQA Air Quality Guidelines

The 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.

The current BAAQMD Guidelines were adopted in 2022, subsequent to the adoption of the 2019 IS/MND, and included updated screening thresholds and screening criteria for construction and operational criteria air pollutants. These changes are outlined in Chapter 4 of BAAQMD’s 2022 CEQA Guidelines. The current screening size for “City Park” projects is 10 acres for construction screening and 175 acres for operational screening.

Local

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies and strategies including, but not limited to, the policies and strategies listed below pertaining to air quality.

Policy/Strategy	Description
Policy ES-4.1	Minimize the air quality impacts of new development projects and air quality impacts that affect new development.
Policy M-2.3	Promote pedestrian and bicycle improvements that improve connectivity between planning areas, neighborhoods and services, and foster a sense of community.
Strategy ES-4.1.1	Continue to review projects for potential generation of toxic air contaminants at the time of approval and confer with Bay Area Air Quality Management District on controls needed if impacts are uncertain

²⁰ BAAQMD. *Final 2017 Clean Air Plan*. April 19, 2017. <http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>.

Policy/Strategy	Description
Strategy ES-4.1.2	Continue to require water application to non-polluting dust control measures during demolition and the duration of the construction period.
Strategy LU-13.7.1	Provide active uses along the street frontage, bike lanes, sidewalks that support pedestrian-oriented activity, improved pedestrian crossings at street intersections, and attractive transit facilities (e.g., bus stops, benches, etc.).

5.3.1.3 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 nonattainment 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 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.

5.3.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Note: Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the determinations.

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

The 2019 IS/MND determined that implementation of the Master Plan would not conflict with the 2017 Clean Air Plan because the Master Plan would incorporate policies and actions consistent with

the 2017 Clean Air Plan control measures and implementation mechanisms, including mitigating urban heat island effects, decreasing energy use, implementing construction BMPs, and reducing water consumption. Because the improvements recommended in the Master Plan would not surpass the BAAQMD screening threshold size for park projects and the improvements would not significantly increase VMT, the 2019 IS/MND concluded that there would be no conflict with the 2017 Clean Air Plan.²¹

As described in Section 4.6 Construction, for the purposes of this analysis, it is assumed the project would be constructed over the course of approximately 15 years as funding is made available for individual improvements. It is assumed that these improvements would be divided between three main phases, which would be approximately five years each. Although the project site is approximately 22.5-acres, each of the three main phases of project implementation would cover less than 10-acres of the site. Therefore, each phase of the project would be below the screening level for construction and operational criteria air pollutant emissions. In addition, because the project would not involve the construction of any large structures requiring substantial earthwork, all the required construction activities from all phases would not generate any significant pollutant emissions. Also, Section 17.04.050 of the City's Municipal Code requires that all projects implement BAAQMD Basic Control Measures to control fugitive dust (i.e., particulate matter PM_{2.5} and PM₁₀) during demolition, ground disturbing activities, and/or construction. Any projects that disturb more than one acre and have a construction period longer than two months in duration, are required to implement the following measures pursuant to the Municipal Code:

- Utilize off-road diesel-powered construction equipment that is rated by the U.S. EPA as Tier 4 or higher for equipment more than 25 horsepower. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Tier 4 interim emissions standard for a similarly sized engine, as defined by CARB regulations. Applicable construction documents shall clearly show the selected emission reduction strategy for construction equipment over 25 horsepower.
- Ensure that the construction contractor shall maintain a list of all operating equipment in use on the project site for verification by the City. The construction equipment list shall state the makes, models, and number of construction equipment on-site.
- Ensure that all equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations.

Implementation of the measures required under Section 17.04.050 of the City's Municipal Code would further reduce potential air quality impacts resulting from project implementation by requiring the use of Tier 4 equipment with advanced emission control technologies. Therefore,

²¹ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 75 to 80.

based on the above discussion, the project would not generate emissions that could interfere with attainment of ambient air quality standards.

The 2017 Clean Air Plan includes 85 control measures that are designed to reduce emissions of criteria air pollutants and toxic air contaminants, reduce emissions of GHGs, decrease demand for fossil fuels, and decarbonize the energy system. Consistent with the findings of the 2019 IS/MND, the project would implement measures consistent with applicable control measures by complying with General Plan policies and Master Plan standards/requirements. The project would comply with 2017 Clean Air Plan control measures BL4, NW2, SS38, TR9, and WR2 by planting additional trees on-site to contribute to a reduction in the urban heat island effect, implementing BAAQMD Basic Control Measures to control fugitive dust during construction activities, expanding bicycle infrastructure in the City, utilizing high-efficiency irrigation equipment, and planting drought-tolerant and low-water use landscaping. Based on this discussion, the project would support the primary goals of the 2017 Clean Air Plan by implementing actions consistent with the 2017 Clean Air Plan's control measures, and would not hinder the implementation of any 2017 Clean Air Plan control measure.

As discussed in Section 5.17 Transportation, the project would be consistent with existing land use patterns and would not conflict with any adopted City transportation or multi-modal planning policies. The project would add enhanced pedestrian and bicycle facilities on-site to improve connectivity and encourage biking and walking which, in turn, would reduce VMT. In addition, local park projects generate local-serving trips, which would limit any significant increases in VMT resulting from the project. In addition, based on the project's location adjacent to a high-quality transit corridor, the project would not be required to prepare a VMT analysis, pursuant to Section 17.08.030 of the Municipal Code, and would be assumed to have a less than significant VMT impact. Therefore, the project would not increase VMT or population within the City, and would not conflict with the 2017 Clean Air Plan.

Based on this discussion, the project would not generate emissions that could interfere with attainment of ambient air quality standards, would implement actions consistent with the 2017 Clean Air Plan's control measures, and would not result in a significant increase of VMT in the City. Therefore, the project would result in the same impact as the approved project of not conflicting or obstructing implementation of the 2017 Clean Air Plan. **(Same Impact as Approved Project)**

-
- b) Would the project 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?
-

The 2019 IS/MND determined that future development under the Master Plan would be unlikely to generate significant short- or long-term emissions and the City would reevaluate individual projects once project-level details were available. The 2019 IS/MND concluded that if future projects met BAAQMD's screening thresholds and implemented the recommended basic construction measures provided by BAAQMD, the Master Plan would result in less than significant air quality impacts at the

project-level. Since the Master Plan would not conflict with the 2017 Clean Air Plan and future projects would not result in significant construction or operational emissions, the Master Plan would not result in a cumulatively considerable contribution to regional air quality impacts.²²

As discussed under checklist question a) above, the project would result in less than significant criteria air pollutants because the implementation of each phase of improvements would be below the BAAQMD screening level for construction and operational criteria air pollutant emissions. The project would not involve the construction of any large structures requiring substantial earthwork, and construction activities would implement BAAQMD Basic Control Measures to control fugitive dust (i.e., particulate matter PM_{2.5} and PM₁₀) and would utilize Tier 4 construction equipment to further reduce emissions. In addition, the project would not conflict with the 2017 Clean Air Plan because it would not generate emissions that could interfere with attainment of ambient air quality standards, would implement actions consistent with the 2017 Clean Air Plan's control measures, and would not significantly increase VMT in the City. For these reasons, the project would result in the same impact disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

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

The 2019 IS/MND determined that future projects under the Master Plan would not emit substantial levels of diesel particulate matter or other TACs for prolonged periods of time and criteria and hazardous air pollutant emissions resulting from construction would not exceed BAAQMD screening criteria. In addition, future projects would not exceed BAAQMD screening levels and would comply with the City's construction and design standards which would control and reduce construction dust and exhaust emissions. The 2019 IS/MND, therefore, concluded that implementation of the Master Plan would not expose sensitive receptors to substantial pollutant concentrations.²³

As discussed under checklist questions a) and b) above, the three phases of project implementation would be below BAAQMD screening levels and construction activities would implement BAAQMD Basic Control Measures to control fugitive dust (i.e., particulate matter PM_{2.5} and PM₁₀) and utilize Tier 4 equipment to reduce TAC emissions. Based on this discussion, the project would not expose sensitive receptors to substantial pollutant concentrations, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

²² Ibid. Pages 80 to 83.

²³ Ibid. Page 84.

d) Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The 2019 IS/MND concluded that although construction activities would produce localized, temporary odors, the Master Plan would not result in long-term odors that would adversely affect a substantial number of people.²⁴

According to BAAQMD's CEQA Guidelines, an odor source with five or more confirmed complaints per year averaged over three years is considered to have a significant impact. Future project construction activities could result in odorous emissions from diesel exhaust associated with construction equipment. Because of the temporary nature of these emissions and highly diffusive properties of diesel exhaust, odorous exposure of sensitive receptors to these emissions would be limited. The project and temporary construction odors are consistent with the assumptions in the 2019 IS/MND. Therefore, the project would result in the same impact as disclosed in the 2019 IS/MND.

In addition, BAAQMD has identified a variety of land uses and types of operations that would produce emissions that may lead to odors. Land uses identified include wastewater treatment plants, sanitary landfills, food processing facilities, coffee roasters, composting facilities, and confined animal facility/feed lot/dairy facility. The project proposes the continuation of an existing park and public facilities use, which does not fall under any of the land uses identified by BAAQMD to cause objectionable odors. **(Same Impact as Approved Project)**

²⁴ Ibid. Page 84.

5.4 Biological Resources

The discussion in this section is based in part on a Tree Inventory Report prepared by HortScience | Bartlett Consulting dated November 2022. This report is attached to this Initial Study/Addendum as Appendix B.

5.4.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.4.1.1 *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. This includes direct and indirect acts, except for harassment and habitat modification, which are not included unless they result in direct loss of birds, nests, or eggs. 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 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

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (SCVHP) covers approximately 520,000 acres, or approximately 62 percent of Santa Clara County. It was developed and adopted through a partnership between Santa Clara County, the cities of San José, Morgan Hill, and Gilroy, Santa Clara Valley Water District (Valley Water), Santa Clara Valley Transportation Authority (VTA), USFWS, and CDFW. The SCVHP is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth in southern Santa Clara County. The Santa Clara Valley Habitat Agency is responsible for implementing the plan.

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies including, but not limited to, the policies and strategies listed below pertaining to biological resources.

Policy/Strategy	Description
Policy ES-5.1	Manage the public and private development to ensure the protection and enhancement of its urban ecosystem.
Policy ES-5.2	Encourage the clustering of new development away from sensitive areas such as riparian corridors, wildlife habitat and corridors, public open space preserves and ridgelines. New developments in these areas must have a harmonious landscaping plan approved prior to development.
Policy ES-7.1	In public and private development, use Low Impact Development (LID) principles to manage stormwater by mimicking natural hydrology, minimizing grading and protecting or restoring natural drainage systems.
Strategy ES-5.1.1	Ensure that the City's tree planting, landscaping and open space policies enhance the urban ecosystem by encouraging medians, pedestrian crossing curb-extensions, planting that is native, drought-tolerant, treats stormwater and enhances urban plant, aquatic and animal resources in both, private and public development.

Policy/Strategy	Description
Strategy ES-5.1.2	Ensure that sustainable landscaping design is incorporated in the development of City facilities, parks and private projects with the inclusion of measures such as tree protection, stormwater treatment and planting of native, drought tolerant landscaping that is beneficial to the environment.
Strategy ES-5.3.1	Continue to emphasize the planting of native, drought tolerant, pest resistant, non-invasive, climate appropriate plants and ground covers, particularly for erosion control and to prevent disturbance of the natural terrain.
Strategy ES-7.1.1	Continue to require topographical information; identification of creeks, streams and drainage areas; and grading plans for both public and private development proposals to ensure protection and efficient use of water resources.
Strategy LU-6.7.1	Establish and periodically revise a heritage tree list that includes trees of importance to the community.

Cupertino 2020 Parks and Recreation System Master Plan

The City’s Master Plan was adopted in February 2020, and outlines the City’s comprehensive plan for parks and recreational facilities in the City through the year 2040. The Master Plan is organized around seven goals, which include conservation, connection, equitable access, enhancement, activity, quality, and sustainability. Each of the seven goals has associated objectives that reflect the City’s desired outcomes and actions that provide ideas or strategies that help achieve the broader goals. The Master Plan has several goals and objectives that aim to protect natural resources and ensure that they are properly maintained and stewarded, including:

- Objective 1.C, which calls for the maintenance of natural areas in parks to control invasive species and preparation of a maintenance management plan to identify the tasks, frequencies, staffing, and resources needed to manage, maintain, and steward natural resources.
- Objective 1.D, which calls for the incorporation and enhancement of existing natural features when renovating parks or building new ones and the preservation of existing native or large canopy trees in parks.
- Objective 7.B, which calls for consideration of adding permeable surfacing to at least 75 percent of new paved trails and 50 percent of new parking lots, installing water-efficient, climate-controlled irrigation systems, water efficient fixtures in all new restrooms and water fountains, and integration of native and/or climate appropriate plants where possible.

City of Cupertino Municipal Code

The City of Cupertino recognizes the substantial economic, environmental, and aesthetic importance of its tree population. The City finds that the preservation of “protected trees” on private and public property, and the protection of all trees during construction, is necessary for the best interests of the City and of the citizens and public (Municipal Code Chapter 14.18).

The City’s Municipal Code calls for protection of “protected” trees and requires a permit prior to their removal. Pursuant to Municipal Code Section 14.18.050, protected trees include:

- Heritage trees in all zoning districts. Heritage trees are defined by the City any tree or grove of trees which, because of factors including, but not limited to, its historic value, unique quality, girth, height, or species, has been found by the Planning Commission to have a special significance to the community;
- All mature specimen trees of the following species on private property:
 - (1) 1. Quercus (native oak tree species), including:
 - (a) Quercus agrifolia (Coast Live Oak);
 - (b) Quercus lobata (Valley Oak);
 - (c) Quercus kelloggii (Black Oak);
 - (d) Quercus douglasii (Blue Oak);
 - (e) Quercus wislizeni (Interior Live Oak);
 - (2) Aesculus californica (California Buckeye);
 - (3) Acer macrophyllum (Big Leaf Maple);
 - (4) Cedrus deodara (Deodar Cedar);
 - (5) Cedrus atlantica 'Glauca' (Blue Atlas Cedar);
 - (6) Umbellularia californica (Bay Laurel or California Bay); and
 - (7) Platanus racemosa (Western Sycamore).
- Any development tree(s); and
- Approved privacy protection planting in R-1 zoning districts.

Any protected tree in any zoning district shall not be removed without first obtaining a tree removal permit. Replacement trees, of a species and size as designated by the approval authority and consistent with the replacement value of each tree to be removed, shall be planted on the subject property on which the tree(s) are to be removed. The City’s replacement tree ratios, as identified in Municipal Code Section 14.18.190, are listed below.

Table 5.4-1: City Tree Replacement Ratios

Trunk Size of Removed Tree	Corresponding Replacement Tree
Up to 12 inches	One 24-inch box tree
Over 12 inches and up to 18 inches	Two 24-inch box trees or one 36-inch box tree
Over 18 inches and up to 36 inches	Two 24-inch box trees or one 36-inch box tree
Over 36 inches	One 36-inch box tree
Heritage Tree of any size	One 48-inch box tree

If a replacement tree for the removal of a non-heritage tree or tree with trunk size equal to or less than 36-inches cannot be reasonably planted on the subject property, an in-lieu tree replacement fee shall be paid to the City’s tree fund to add or replace trees on public property in the vicinity of

the subject property or add trees or landscaping on City property (Municipal Code Section 14.18.160).

5.4.1.2 *Existing Conditions*

The project site is within an urban area and currently developed with an operational park, senior center, and community center. The site provides habitat and foraging opportunities for urban-adapted birds. Habitats primarily associated with Bay Area special-status species, such as riparian, wetland, salt marsh, freshwater marsh, and serpentine grassland habitats, are not present on or adjacent to the site. The nearest waterway is Stevens Creek, which is located approximately 0.8-mile to the west of the project site. Although these habitats are not located on-site, there are several special status species that have been recorded in the region, including, the California Clapper Rail, California Condor, California Least Tern, Marbled Murrelet, California Red-legged Frog, California Tiger Salamander, Foothill Yellow-legged Frog, and Monarch Butterfly.²⁵

The primary biological resources on-site are trees. The project site currently contains approximately 500 on-site trees, none of which are designated as Heritage trees under Section 14.18.090 of the City Code. Although there are no officially designated Heritage trees, all of the trees within the park have a protected status as public trees (pursuant to Chapter 14.12 of the City Code).

A tree inventory report evaluated the health of the trees on-site and found approximately 64 percent of the trees were in good condition, 26 percent were in fair condition, nine percent were in poor condition, and less than one percent were dead. The predominant tree species on-site are coast redwoods and callery pears, which comprise approximately 34 percent and 10 percent of the trees within the project site, respectively. The largest tree identified is a coast redwood tree located adjacent to the southwest corner of the softball field, which has a trunk diameter of approximately 60 inches and is in excellent health.

The tree inventory report also evaluated the suitability for preservation for each tree on-site. Of the approximately 500 trees on-site, 52 percent had high suitability for preservation, 31 percent had moderate suitability for preservation, and 17 percent had low suitability for preservation. For additional information regarding the trees on-site, see Appendix B.

²⁵ United States Fish and Wildlife Service. "Information for Planning and Consultation." Accessed October 24, 2023. <https://ipac.ecosphere.fws.gov/location/KZATYFQTTTRG3DAC6FSNN2QSDOI/resources>.

5.4.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or United States Fish and Wildlife Service (USFWS)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

-
- a) Would the project 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?
-

The 2019 IS/MND determined that some Master Plan projects could impact special-status species, sensitive natural communities, wetlands, wildlife corridors, and/or wildlife nursery sites. To mitigate

that potential impact to a less than significant level, the 2019 IS/MND identified 2019 IS/MND Mitigation Measure BIO-1, which is described below.²⁶

2019 IS/MND Mitigation Measure

Mitigation Measure BIO-1: The Capital Improvement Program (“CIP”) for Parks and Recreation improvements shall be reviewed annually by staff to identify projects that could potentially affect special-status species, sensitive natural communities, wetlands, wildlife corridors, and/or native wildlife nursery sites. Any such projects shall be reviewed by a professional in field biology. The biological professional shall:

- a) Research the potential occurrence of special-status species and sensitive communities in the areas affected by CIP projects by reviewing the California Natural Diversity Database, California Native Plant Society Inventory, IPaC, or other appropriate databases, by contacting resource agencies such as the California Department of Fish and Wildlife, U.S. Fish and Wildlife, and/or NOAA Fisheries Service, or other appropriate methods.
- b) For each CIP project approved for funding that could impact special-status species, sensitive natural communities, wetlands, wildlife corridors, and/or nursery sites during construction or as a result of the proposed use, including maintenance, prior to the start of construction identify all resource agency permits required for the project and ensure that the project is modified as necessary to minimize effects on biological resources and avoid impacts.
- c) For each CIP project that could have a significant impact on special-status species, sensitive natural communities, wetlands, wildlife corridors, and/or native wildlife nursery sites, specify measures to avoid impacts or to reduce impacts to a less-than-significant level that will be implemented as part of the project. Indicate the timing of when the measures would be implemented (e.g., prior to construction activities, during construction, post-construction etc.). These measures may include actions such as the following currently accepted measures:
 1. Pre-construction surveys for special-status plant and animal species, nesting birds, and roosting bats in the correct season and using CNPS, CDFW and/or other accepted protocols, as appropriate, to identify if the species are present and would be impacted by the project;
 2. Wildlife exclusion fencing to prevent species, such as protected amphibians and reptiles, from entering the work site. Regular fence

²⁶ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 104 to 105.

inspections, to assure that species are not trapped and to maintain the integrity of the fence.

3. Clear delineation of the work area and/or protected areas in the field to prevent construction activities from extending beyond required work areas and into nearby natural areas that contain sensitive species habitat or sensitive natural communities or wetlands. Environmentally sensitive areas may also be delineated on construction drawings for certain projects.
4. Silt fencing or other erosion control measures to protect water quality downstream of the project and the biological resources that rely on suitable water quality.
5. Worker environmental awareness training provided by a qualified professional (typically a biologist) prior to the start of any project activities that affect the physical environment to educate workers about the presence of environmentally sensitive areas, what species may be present, what laws protect the species, and what to do if a special-status species is encountered.
6. Construction site sanitation to dispose of food and beverage waste and associated wrappers or containers to minimize site attractiveness to wildlife during construction.
7. Wildlife protection measures, such as minimizing the use of monofilament netting which can ensnare reptiles and amphibians, covering trenches near suitable habitat so that species are not trapped and unable to hide from a predator, and/or daily pre-construction sweeps to verify special-status species are not present in the work area.
8. Actions to take if special-status species are discovered, such as establishment of buffer zones or other measures acceptable to resource agencies to protect the individual species.

As discussed in Section 5.4.1.2 Existing Conditions, the project site is within an urban area and is currently developed. The site provides habitat and foraging opportunities for urban-adapted birds and does not contain sensitive habitat that supports special-status species. Of the approximately 500 on-site trees, a total of approximately 140 trees would be removed under the project. These trees could provide nesting habitat for birds, including migratory birds and raptors. Nesting birds are protected under provisions of the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503, 3503.5, and 2800.

Construction of the project during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes abandonment and/or loss of reproductive effort is considered a taking by the CDFW. Any loss of fertile eggs, nesting raptors, or any activities resulting in nest abandonment would constitute an impact. Construction activities such as tree removal and site grading that disturb a nesting bird or raptor on-site or immediately adjacent to the construction zone would also constitute an impact.

In compliance with the MBTA, CDFW code, and 2019 IS/MND measure C1 in Mitigation Measure BIO-1, the project would conduct pre-construction surveys for nesting birds if construction activities occur during the bird nesting season (between February 1 and August 31) to reduce impacts to nesting birds to a less than significant level by completing preconstruction surveys to ensure no nesting birds or nests are located on-site during construction, and if they are, establishing buffer zones around nests during construction. **(Same Impact as Approved Project)**

-
- b) Would the project 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?
-

The 2019 IS/MND concluded that implementation of 2019 IS/MND Mitigation Measure BIO-1 would reduce any potential impacts to riparian habitat or other sensitive natural communities from projects proposed under the Master Plan a less than significant level.²⁷

As discussed in Section 5.4.1.2 Existing Conditions, there are no sensitive habitats on-site. The nearest waterway is Stevens Creek, which is located approximately 0.8-mile west of the project site and is separated from the site by existing development and SR 85. Although construction activities on-site would not present a direct risk to riparian habitat or other sensitive natural communities, the project would still implement measure C4 from 2019 IS/MND Mitigation Measure BIO-1, which requires installation of silt fencing or other erosion control measures to prevent polluted runoff. This would reduce the risk of indirect impacts to riparian habitats.

Therefore, the project would not have an impact on state or federally protected riparian habitat or other sensitive natural community identified in local or regional plans and policies, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- c) Would the project have a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means?
-

The 2019 IS/MND concluded that implementation of 2019 IS/MND Mitigation Measure BIO-1 would reduce any potential impacts to state or federally protected wetlands from projects proposed under the Master Plan a less than significant level.²⁸

As discussed in Section 5.4.1.2 Existing Conditions, there are no state or federally protected wetlands on or adjacent to the site. The nearest waterway is Stevens Creek, which is located

²⁷ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 104 to 105.

²⁸ Ibid. Pages 104 to 105.

approximately 0.8-mile west of the project site and is separated from the site by existing development and SR 85. Although construction activities on-site would not present a direct risk to any wetlands, the project would still implement measure C4 from 2019 IS/MND Mitigation Measure BIO-1 which requires installation of silt fencing or other erosion control measures to prevent polluted runoff thereby reducing the risk of indirect impacts.

Therefore, the project would not have an impact on state or federally protected wetlands, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- d) Would the project 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?
-

The 2019 IS/MND concluded that implementation of 2019 IS/MND Mitigation Measure BIO-1 would reduce any potential impacts to native resident or migratory fish or wildlife species and established native resident or migratory wildlife corridors from projects under the Master Plan a less than significant level.²⁹

Because the project site is surrounded by urban development, the site provides minimal dispersal habitat for native wildlife and does not function as a wildlife movement corridor. As discussed above, there are no riparian or wetland habitats on or adjacent to the site. The project would implement measures C1 and C4 from 2019 IS/MND Mitigation Measure BIO-1 to protect nesting birds, if present during construction, and reduce the risk of polluted stormwater runoff from the site. The project would, therefore, not substantially interfere with the movement of fish or wildlife species, nor interfere with established corridors or wildlife nursery sites, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- e) Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?
-

The 2019 IS/MND determined that future projects would be consistent with the City's General Plan policies, Municipal Code Chapter 14.18, and the biology-related Master Plan goals, objectives, and actions.³⁰

General Plan Policies

The General Plan contains policies and strategies (Policies ES-5.1 and ES-7.1, Strategies ES-5.1.2 and ES-5.2.1) that protect the urban ecosystem, enhance natural vegetation and sustainable

²⁹ Ibid. Pages 104 to 105.

³⁰ Ibid. Page 106.

landscaping, preserve natural hydrology, and protect riparian corridors. The project would be consistent with these policies and strategies by:

- As discussed under checklist question a), the project would comply with 2019 IS/MND Mitigation Measure BIO-1 by conducting a pre-construction nesting bird survey if construction activities would take place during nesting season. This would protect any potential nesting birds by establishing a protective buffer around the nests. The project would install new, climate appropriate landscaping throughout the project site, including a variety of California native plant species and drought-tolerant species that are low-water use.
- The project would result in the removal of approximately 140 trees. The proposed project would replace the removed trees by planting approximately 150 climate appropriate replacement trees throughout the project area. In addition, construction activities would implement appropriate measures to prevent polluted runoff, consistent with the requirements of 2019 IS/MND Mitigation Measure BIO-1.

For these reasons, the project would be consistent with General Plan policies related to protecting biological resources. **(Same Impact as Approved Project)**

Municipal Code Chapter 14.18

Chapter 14.18 of the Municipal Code includes regulations regarding the City's Protected Tree Ordinance, Standards for the Protection of Trees during Grading and Construction, and Replacement Tree Guidelines. As discussed in Section 5.4.1.2 Existing Conditions, none of the trees on-site are designated Heritage Trees, but they are classified as Protected Trees because they are in a City park. Replacement tree ratios for Protected Trees are not explicitly stated in the Municipal Code and the City has determined that a 1:1 replacement ratio is appropriate for this project. The project would remove approximately 140 trees and plant approximately 150 replacement trees, which exceeds the 1:1 replacement ratio. In addition, the project would comply with Section 14.18.200 of the Municipal Code which outlines requirements for protecting trees during demolition, grading, and construction operations. Based on this discussion, the project would be consistent with Municipal Code regulations related to protecting biological resources. **(Same Impact as Approved Project)**

Parks and Recreation System Master Plan

The Master Plan has several goals and objectives that aim to protect natural resources and ensure that they are properly maintained and stewarded (Objectives 1C, 1D, and 7B). Consistent with these objectives, the project would prioritize native plants in the area and maintain the park to limit the proliferation of invasive species, preserve existing native canopy trees, and incorporate green infrastructure elements such as bioswales and permeable pavers throughout the site. In addition, the new passive garden walk in the southern portion of the site would replace under-used areas of lawn with native plant species, consistent with Objective 7B. Based on this discussion, the project would be consistent with Master Plan goals and objectives related to protecting biological resources. **(Same Impact as Approved Project)**

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

The 2019 IS/MND concluded that implementation of the Master Plan would not conflict with an adopted Habitat Conservation Plan because the City is not a participating local partner in the SCVHP and the SCVHP does not include any locations within the City boundary.³¹ Therefore, there would be no impact to Habitat Conservation Plans or Natural Community Conservation Plans. **(Same Impact as Approved Project)**

³¹ Ibid. Page 106.

5.5 Cultural Resources

The discussion in this section is based in part on a Phase I Cultural Resource Inventory prepared by Albion Environmental, Inc., dated October 2022 and revised in October 2023. A copy of the Phase I Cultural Resource Inventory, which contains confidential information related to archaeological resources, is on file at the City.

5.5.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.5.1.1 *Regulatory Framework*

Federal and State

National Historic Preservation Act

Federal protection 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.

California Register of Historical Resources

The California Register of Historical Resources (CRHR) is administered by the State Office of Historic Preservation 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(c), a resource may be eligible for listing in the CRHR if it meets any of the NRHP criteria.

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 maintains 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

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.

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 and 5097.98

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.

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.

Cupertino General Plan: Community Vision 2015-2040

Memorial Park, the Community Center, and the Sports Complex adjacent to the project site are all considered Community Landmarks in the City's General Plan. The Gazebo Trim within Memorial Park is identified as a Historic Site in the City's General Plan and the Community Center Sports Complex adjacent to the site is a designated Community Landmark. The proposed project is subject to General Plan policies including, but not limited to, the policies listed below pertaining to cultural resources.

Policy/Strategy	Description
Policy LU-6.2	Projects on Historic Sites shall meet the Secretary of Interior Standards for Treatment of Historic Properties.
Policy LU-6.3	Projects on Historic Sites, Commemorative Sites and Community Landmarks shall provide a plaque, reader board and/or other educational tools on the site to explain the historic significance of the resource. The plaque shall include the city seal, name of resource, date it was built, a written description, and photograph. The plaque shall be placed in a location where the public can view the information.
Policy LU-6.8	Promote education related to the city's history through public art in public and private development.

Policy/Strategy	Description
Policy RPC-6.3	Utilize parks as locations of art and culture and to educate the community about the City’s history, and explore the potential to use art in facilities and utilities when located in parks.

City of Cupertino Municipal Code

Section 17.04.050 of the City’s Municipal Code outlines standard environmental protection permit submittal requirements that apply to development projects within the City. Projects in areas with known cultural resources, as identified in the 2015 General Plan EIR prepared by the City, are required to implement additional measures prior to ground disturbing activities. These include conducting a subsurface investigation of the project site to determine the potential extent of any buried archaeological materials, evaluating the materials (if discovered), and identifying ways to minimize negative impacts from development on the discovered materials.

Cupertino General Conditions

The City of Cupertino maintains a list of general conditions that contractors must implement or comply with while working on municipal projects. The following General Condition relates to cultural resources.

General Condition 7.18: Historic or Archeological Items.

(A) Contractor’s Obligations. Contractor must ensure that all persons performing Work at the Project site are required to immediately notify the Project Manager, upon discovery of any potential historic or archeological items, including historic or prehistoric ruins, a burial ground, archaeological or vertebrate paleontological site, including fossilized footprints or other archeological, paleontological or historical feature on the Project site (collectively, “Historic or Archeological Items”).

(B) Discovery; Cessation of Work. Upon discovery of any potential Historic or Archeological Items, Work must be stopped within an 85-foot radius of the find and may not resume until authorized in writing by the City. If required by City, Contractor must assist in protecting or recovering the Historic or Archeological Items, with any such assistance to be compensated as Extra Work on a time and materials basis under Article 6, Contract Modification. At the City’s discretion, a suspension of Work required due to discovery of Historic or Archeological Items may be treated as Excusable Delay pursuant to Article 5, or as a suspension for convenience under Article 13.

5.5.1.2 *Existing Conditions*

Historic Resources

The City of Cupertino was historically known for fruit agriculture and was dominated by prune, plum, apricot, and cherry orchards. Up until the late 1800s, Cupertino also had a variety of grape vineyards and wineries. In the early- to mid- 1900s, Cupertino began to develop more housing, and by the mid- to late-1900s more commercial and industrial uses were constructed in the City.

The project site contained orchards during the 1800s and early- to mid-1900s, and up until approximately 1965, a farmstead was located in the southernmost portion of the site. In addition, a second farmstead was located adjacent to the eastern boundary of the site. Given the historic agricultural use of the property and the historic farmsteads that were located on and adjacent to the site, a pedestrian survey of the project site was completed in September 2022. The survey located two historic-era resource clusters, which consisted of three historical ceramic fragments per cluster. One cluster was observed inside the central area of the site, and the other was on the east perimeter of the park parallel to Anton Way. Although ceramic materials were found on-site, these materials were located in areas that were consistently disturbed by construction activity and do not represent intact archaeological deposits. No other cultural resources were noted on-site. Based on this discussion, the central and southern portion of the project site where the historic farmsteads were located have a moderate potential to contain historic-era archaeological deposits.

To be considered a historic resource, a site must meet certain sets of criteria including relevance to local and regional history, its association with historic figures, and the distinctiveness of its architecture. Memorial Park contains one of the City's Historic Sites, which is the trim of the gazebo located in the central portion of the park adjacent to Anton Way. The Community Center Sports Complex, which is adjacent to the eastern park boundary, is also designated as a Community Landmark.³² There are no resources on-site that are listed on or eligible for listing on the NRHP or CRHP.

Prehistoric Resources

A records search at the Northwest Information Center of the California Historical Resources Information System (CHRIS) was conducted to identify all recorded archaeological sites on and within one-quarter mile of the project site. The record search found a single Native American resource within one-quarter mile of the project site and no known resources on-site.

The soils mapped at the project site are from the Holocene era, which typically have a moderate sensitivity for buried archaeological sites. Sites with prehistoric resources are typically located in relatively flat areas in proximity to sources of fresh water. The nearest freshwater source is Stevens Creek, located approximately 0.8-mile west of the site. Based on soil composition under the site and these geographic factors, the project site has a moderate sensitivity to contain buried prehistoric resources.

³² City of Cupertino. *Cupertino General Plan Community Vision 2040*. October 15, 2015. Figure LU-3.

5.5.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource as pursuant to CEQA Guidelines Section 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<hr/>				
a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to CEQA Guidelines Section 15064.5?				

The 2019 IS/MND determined that although most existing City parks do not contain historic resources, there are several historic resources in or adjacent to parks and recreational facilities (including within and adjacent to Memorial Park) that could be affected by implementation of the Master Plan. The 2019 IS/MND concluded that, since future projects would be designed and developed consistent with adopted City policies regarding protection of cultural/historic resources and would be analyzed in separate CEQA documents once project plans are developed, implementation of the Master Plan would have a less than significant impact on historic resources.³³

The site and adjacent sites do not contain any resources listed on or eligible for listing on the NRHP or the CRHP. As discussed in Section 5.5.1.2 Existing Conditions, Memorial Park contains a designated Historic Site, which is the trim of the gazebo. The Community Center Sports Complex adjacent to the eastern park boundary is designated as a Community Landmark. None of the proposed improvements would cause a substantial adverse change to the Community Center Sports Complex because the improvements would only occur on the project site, no physical changes would be made to the Community Center Sports Complex.

The gazebo was previously located on an artificial island in the pond that was located within the park. During the recent construction to remove the concrete lining and install new landscaping, the gazebo was fenced off and protected from demolition activities. The project would not include any

³³ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 113 to 114.

changes to the gazebo or its location, and it would continue to be protected during any future construction activities under the project. With implementation of the project, the gazebo would be surrounded by lawn area and a new pedestrian walkway would provide access to the gazebo for pedestrians. Because there would be no changes to the gazebo on-site or the Community Center Sports Complex on the adjacent property, impacts to these historic resources would be less than significant, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

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

The 2019 IS/MND determined that although many of the improvements proposed by the Master Plan would be projects with minimal ground disturbing components, any ground disturbing work would have the potential to disturb unknown archaeological resources. To mitigate these potential impacts to a less than significant level, future projects would be required to implement standard City General Conditions related to historic or archaeological items and 2019 IS/MND Mitigation Measure CULT-1, which is described below.³⁴

2019 IS/MND Mitigation Measure

Mitigation Measure CULT-1: Upon discovery of possible buried prehistoric or historic cultural materials, work within 25 feet of the find must be halted and the City must be notified. The City shall retain a qualified archaeologist who meets the U.S. Secretary of the Interior’s Professional Qualifications and Standards to review and evaluate the find. Construction work shall not begin again until the archaeological or cultural resources consultant has been allowed to examine the cultural materials, assess their significance, and offer proposals for any additional exploratory measures deemed necessary for the further evaluation of, and/or mitigation of adverse impacts to, any potential prehistorical or historical resources or unique archaeological resources that have been exposed.

If the discovery is determined to be a unique archaeological or historical resource, and if avoidance of the resource is not possible, the archaeologist shall inform the City of the necessary plans for treatment of the find(s) and mitigation of impacts. The City shall insure that the treatment program is completed. The work shall be performed by the archaeologist and shall result in a detailed technical report that must be filed with the Northwest Information Center, Sonoma State University. Construction in the immediate vicinity of the find must not recommence until treatment has been completed.

³⁴ Ibid. 114 to 116.

Pursuant to Section 7050.5 of the Health and Safety Code, and Section 5097.98 of the Public Resources Code of the State of California, in the event of the discovery of human remains during construction, there will be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains. The County Medical Examiner/Coroner will be notified and will determine whether the remains are Native American. If the Coroner determines the remains are Native American and are not subject to his or her authority, he or she will notify the California Native American Heritage Commission, which will attempt to identify descendants of the deceased Native American(s).

In anticipation of additional discoveries during construction, Archaeological Sensitivity Training shall be carried out by a qualified archaeologist for all personnel who will engage in ground moving activities on the site prior to resuming construction.

If a newly discovered resource is, or is suspected to be, Native American in origin, the resource shall be treated as a significant Tribal Cultural Resource, pursuant to Public Resource Code 21074, until the County has determined otherwise with the consultation of a qualified archaeologist.

The City shall coordinate with the archaeologist to develop an appropriate treatment plan for any resources that are discovered. The plan may include implementation of archaeological data recovery excavations to address treatment of the resource along with subsequent laboratory processing and analysis. If appropriate, the archaeologist may introduce archaeological monitoring on all or part of the site. An archaeological report shall be written detailing all archaeological finds and submitted to the City and the Northwest Information Center.

The City shall ensure that appropriate construction conditions are included in any contract that has the potential for ground disturbing operations. All excavation contracts for the project shall contain provisions for stopping work in the vicinity of a find exposing archaeological resources during subsurface construction.

The 2019 IS/MND concluded that implementation of 2019 IS/MND Mitigation Measure CULT-1 and City General Conditions related to historic or archaeological items would mitigate impacts to archaeological resources to a less than significant level.

During a survey of the project site, historic-era resource clusters consisting of historical ceramic fragments were found in the central area of the site. Although these ceramic materials were found on-site, they were located in areas that were consistently disturbed by construction activity and do not represent intact archaeological deposits. As discussed in Section 5.5.1.2 Existing Conditions, the site has a moderate sensitivity for pre-historic archaeological resources based on the soil profile and topography and a moderate sensitivity for historic-era archaeological resources based on the historic presence of farmsteads on and adjacent to the site. The sensitivity for historic-era

archaeological resources on-site is concentrated in the southern and central areas of the site. Implementation of the project would involve ground-disturbing activities during construction in these sensitive areas that could potentially uncover historic-era archaeological resources.

Consistent with Municipal Code Section 17.04.050, the project shall conduct a subsurface investigation (Extended Phase I Study) prior to the start of ground disturbing activities. Specifically, once design-level plans are available for the proposed improvements in the areas of the park with historic-era sensitivity and the extent of required ground disturbance is determined, an Extended Phase I Study shall be performed to confirm the presence/absence of unknown historical archaeological resources. Depending on the depth of ground disturbance required for individual improvements, the Extended Phase I Study could include either hand excavation or mechanical trenching in the park to test for historical archaeological resources. If any improvements under the project require ground-disturbing activities that reach a depth below four feet, an Extended Phase I Study shall be performed in the vicinity of those improvements to confirm the presence/absence of pre-colonial archaeological resources.

Should any archaeological resources be discovered during the subsurface testing, the project would comply with the requirements of 2019 IS/MND Mitigation Measure CULT-1 and City General Condition 7.18 to ensure that appropriate treatment plans are prepared under consultation with a qualified archaeologist. Based on this discussion, impacts to archaeological resources would be less than significant, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?
-

The 2019 IS/MND concluded that adherence to Section 7050.5 of the Health and Safety Code and Section 5097.9 of the Public Resources Code (as required by 2019 IS/MND Mitigation Measure CULT-1) would reduce the risk of disturbing human remains to a less than significant level.³⁵

As discussed above in checklist question b), the project site has moderate sensitivity for pre-historic resources and ground-disturbing activities during project construction could impact unknown underground resources, including human remains. With implementation of the City General Condition 7.18 and 2019 IS/MND Mitigation Measure CULT-1 and compliance with Health and Safety Code Section 7050.5 and PRC Section 5097.9, the project would reduce impacts to human remains to a less than significant level by pausing work and contacting the Santa Clara County Coroner to determine if the remains are Native American. Based on this discussion, the project would result in the same impact as disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

³⁵ Ibid. Page 116.

5.6 Energy

5.6.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND, with the exception of the adoption of the City’s Climate Action Plan 2.0 in 2022. Key regulations and project site conditions are described below.

5.6.1.1 *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.³⁶ Compliance with Title 24 is mandatory at the time new building permits are issued by city and county governments.³⁷

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 II program in 2022 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 2026 through 2035. The program promotes development of environmentally superior passenger cars and other vehicles, as well as saving the consumer money through fuel savings.³⁸

Regional and Local

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies and strategies including, but not limited to, the policies and strategies listed below pertaining to energy resources.

Policy/Strategy	Description
Policy ES-2.1	Encourage the maximum feasible conservation and efficient use of electrical power and natural gas resources for new and existing residences, businesses, industrial and public uses.
Strategy ES-2.1.2	Prepare and implement a comprehensive energy management plan for all applicable municipal facilities and equipment to achieve the energy goals established in the City’s Climate Action Plan. Track the City’s energy use and report findings as part of the Climate Action Plan reporting schedule. Embed this plan into the City’s Environmentally Preferable

³⁶ California Building Standards Commission. “California Building Standards Code.” Accessed August 16, 2023. <https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo>.

³⁷ California Energy Commission (CEC). “2022 Building Energy Efficiency Standards.” Accessed August 16, 2023. <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>.

³⁸ California Air Resources Board. “Advanced Clean Cars II.” Accessed August 16, 2023. <https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii>

Policy/Strategy	Description
	Procurement Policy to ensure measures are achieved through all future procurement and construction practices.
Strategy ES-2.1.5	Encourage the inclusion of additional shade trees, vegetated stormwater treatment and landscaping to reduce the “heat island effect” in development projects.
Strategy ES-2.1.9	Continue to encourage fuel-efficient transportation modes such as alternative fuel vehicles, driverless vehicles, public transit, car and vanpooling, community and regional shuttle systems, car and bike sharing programs, safe routes to schools, commuter benefits, and pedestrian and bicycle paths through infrastructure investment, development incentives, and community education.

City of Cupertino Climate Action Plan 2.0

Cupertino’s Climate Action Plan 2.0 was adopted by City Council on August 16, 2022, and contains a series of measures and actions meant to reduce GHG emissions and meet established community goals. The Climate Action Plan 2.0 includes actions in Measure TR-1 that encourage the City to develop facilities to support active modes of transportation, actions under Measure TR-5 that encourage the decarbonization of off-road equipment, including landscaping equipment, and actions under Measure CS-1 that would increase carbon sequestration through tree planting.

City of Cupertino Municipal Code

Chapter 16.58 of the City’s Municipal Code outlines the Green Building Standards applicable to development within the City. The provisions of this chapter apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated. This chapter also requires that development comply with the City’s local water-efficient landscape ordinance, which is further detailed in Chapter 14.15 of the Municipal Code. Chapter 17.04 outlines the standard environmental protection requirements that projects in the City must follow. These include requirements for air quality permits, GHG emissions, and energy consumption.

Cupertino General Conditions

The City of Cupertino maintains a list of general conditions that contractors must implement or comply with while working on municipal projects. The following General Condition relates to solid waste management and reducing energy use.

General Condition 7.19 Recycling and Waste Disposal

(C) Recyclable Materials. Contractor must recycle at least 65 percent of all materials at an approved recycling facility.

5.6.1.2 Existing Conditions

Total energy usage in California was approximately 6,278.7 trillion British thermal units (Btu) in the year 2021, the most recent year for which this data was available.³⁹ 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 20 percent (14,732.2 trillion Btu) for residential uses, 19 percent (1,396.7 trillion Btu) for commercial uses, 23.2 percent (1,704.4 trillion Btu) for industrial uses, and 37.8 percent (2,785 trillion Btu) for transportation.⁴⁰ This energy is primarily supplied in the form of natural gas, petroleum, nuclear electric power, and hydroelectric power.

Electricity

Electricity in Santa Clara County in 2021 was consumed primarily by the non-residential sector (74 percent), followed by the residential sector consuming 23 percent. In 2021, a total of approximately 16,904 gigawatt hours (GWh) of electricity was consumed in Santa Clara County.⁴¹

The community-owned Silicon Valley Clean Energy (SVCE) is the electricity provider for the City of Cupertino.⁴² 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. Both options are considered 100 percent GHG-emission free.

Demand for electricity on-site is generated by the senior center, community center, lighting, sound equipment, and irrigation equipment.

Natural Gas

PG&E provides natural gas services within the City of Cupertino. In 2022, California's natural gas supply came from a combination of in-state production and imported supplies from other western states and Canada.⁴³ In 2021 residential and commercial customers in California used 33 percent of the state's natural gas, power plants used 0.01 percent, the industrial sector used 33 percent.⁴⁴ In

³⁹ United States Energy Information Administration. "State Profile and Energy Estimates, 2020." Accessed August 4, 2023. <https://www.eia.gov/state/?sid=CA#tabs-2>.

⁴⁰ United States Energy Information Administration. "State Profile and Energy Estimates, 2020." Accessed August 4, 2023. <https://www.eia.gov/state/?sid=CA#tabs-2>.

⁴¹ California Energy Commission. Energy Consumption Data Management System. "Electricity Consumption by County." Accessed August 16, 2023. <http://ecdms.energy.ca.gov/elecbycounty.aspx>.

⁴² Silicon Valley Clean Energy. "Frequently Asked Questions." Accessed August 16, 2023. <https://www.svcleanenergy.org/faqs>.

⁴³ California Gas and Electric Utilities. 2022 *California Gas Report*. Accessed August 16, 2023. [https://www.socalgas.com/sites/default/files/Joint Utility Biennial Comprehensive California Gas Report 2022 .pdf](https://www.socalgas.com/sites/default/files/Joint%20Utility%20Biennial%20Comprehensive%20California%20Gas%20Report%202022.pdf).

⁴⁴ United States Energy Information Administration. "Natural Gas Consumption by End Use. 2021." Accessed August 16, 2023. <https://www.eia.gov/state/?sid=CA#tabs-2>.

2021, Santa Clara County used less than one percent of the state’s total consumption of natural gas.⁴⁵ There is no natural gas use with the park, but the community center and senior center both contain appliances that utilize natural gas.

Fuel for Motor Vehicles

In 2022, California produced 124 million barrels of crude oil and in 2019, 15.4 billion gallons of gasoline were sold in California.^{46, 47} 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 2021.⁴⁸ 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 April 2022 to require all cars and light duty trucks achieve an overall industry average fuel economy of 49 mpg by model year 2026.^{49, 50}

Visitors to the park and staff on-site use fuel for transportation to and from the site. Fuel is also used in landscaping and maintenance equipment on-site.

5.6.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁴⁵ California Energy Commission. “Natural Gas Consumption by County.” Accessed August 16, 2023. <http://ecdms.energy.ca.gov/gasbycounty.aspx>.

⁴⁶ U.S. Energy Information Administration. “Petroleum & Other Liquids, California Field Production of Crude Oil.” February 28, 2023. <https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mcrfpca1&f=a>

⁴⁷ California Department of Tax and Fee Administration. “Net Taxable Gasoline Gallons.” Accessed August 16, 2023. <https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist>.

⁴⁸ United States Environmental Protection Agency. “The 2022 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975.” December 2022. <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010U68.pdf>

⁴⁹ United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed August 16, 2023. <http://www.afdc.energy.gov/laws/eisa>.

⁵⁰ United States Department of Transportation. USDOT Announces New Vehicle Fuel Economy Standards for Model Year 2024-2026.” Accessed August 16, 2023. <https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026>

-
- a) Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?
-

The 2019 IS/MND determined that projects implemented under the Master Plan would utilize green building design techniques, water efficient systems, and climate appropriate landscaping. Future projects would also be subject to the City's General Plan and Climate Action Plan policies pertaining to the efficient use of energy, and would support non-vehicular travel within the City by providing facilities that encourage biking and walking to City park and recreation facilities. Based on those factors, implementation of the Master Plan was concluded to reduce fuel use in the City long-term and result in less than significant impacts due to inefficient or unnecessary consumption of energy resources.⁵¹

Construction

Construction of the project would require energy for the manufacture and transportation of materials, preparation of the project site (e.g., demolition and grading), and the construction of the various structures proposed under the project. Construction processes are generally designed to be efficient in order to avoid excess monetary costs. As required in Section 17.04.050 of the Municipal Code, the project would implement BAAQMD basic control measures, which include restricting equipment idling times and require contractors to post signs on the project site reminding workers to shut off idle equipment, thus reducing energy waste. The project would also comply with CALGreen and City General Condition 7.19 to divert a minimum of 65 percent of nonhazardous construction and demolition waste from landfills for recycling, thus minimizing energy impacts from the creation of excessive waste.

For these reasons, the project would not use fuel or energy in a wasteful manner during construction activities, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

Operation

Operation of the project site would be similar to existing conditions. Energy is consumed for multiple purposes, including the lighting and irrigation operating on-site and fuel consumption from vehicles traveling to and from the project site. The new lighting installed on-site would comply with CBC regulations for energy efficient lighting. In addition, the project would install new drought tolerant landscaping and high-efficiency irrigation which would also reduce energy consumption during project operation. The project would construct new bicycle parking infrastructure, a new dedicated bicycle lane, and pedestrian walkways which would promote alternative modes of

⁵¹ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 120 to 121.

transportation and reduce the use of gasoline. Based on the project’s adherence to current building codes and promotion of alternative modes of transportation, the proposed project would not result in wasteful, inefficient, or unnecessary consumption of energy during project operation, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

b) Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The 2019 IS/MND concluded that implementation of the Master Plan would not conflict with or obstruct any state or local plan for renewable energy or energy efficiency because future projects would comply with the City’s General Plan and Climate Action Plan, and the proposed facilities would not interfere with the installation of any renewable energy system.⁵²

The project site would continue to obtain electricity from SVCE, which is 100 percent GHG-emission free energy from renewable and hydroelectric sources, consistent with the state’s Renewables Portfolio Standard program and SB 350. The project would be consistent with General Plan Strategies ES-2.1.5 and ES-2.1.9 and Climate Action Plan 2.0 Measures TR-1 and CS-1 by replacing trees to be removed and planting additional trees to provide shade within the park, constructing vegetated bioswales to capture stormwater on-site, and constructing bicycle and pedestrian paths to promote alternative modes of transportation. Based on this discussion, the proposed project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

⁵² Ibid. Page 121.

5.7 Geology and Soils

The following discussion is based on a Geotechnical Evaluation prepared by Ninyo & Moore Geotechnical & Environmental Sciences Consultants, dated November 3, 2022. A copy of this report is included in Appendix C of this Initial Study/Addendum.

5.7.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.7.1.1 *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.

California Division of Occupational Safety and Health Regulations

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.

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies and strategies including, but not limited to, the policies and strategies listed below pertaining to geology and soils.

Policy/Strategy	Description
Policy HS-5.1	Evaluate new development proposals within mapped potential hazard zones using a formal seismic/geologic review process.
Strategy HS-5.1.3	Continue to implement and update geologic review procedures for Geologic Reports required by the Municipal Code through the development review process.

City of Cupertino Municipal Code

Section 16.08.120 of the City's Municipal Code outlines the requirements for development projects to conduct engineering geological investigations prior to receiving grading permits. Section 16.08.130 provides the City's requirements for soils engineering investigations, which would include data regarding the nature, distribution, erodibility of existing soil, strength of existing soils on a project site.

Cupertino General Conditions

The City of Cupertino maintains a list of general conditions that contractors must implement or comply with while working on municipal projects. The following General Condition relates to paleontological resources.

General Condition 7.18: Historic or Archeological Items.

(A) Contractor’s Obligations. Contractor must ensure that all persons performing Work at the Project site are required to immediately notify the Project Manager, upon discovery of any potential historic or archeological items, including historic or prehistoric ruins, a burial ground, archaeological or vertebrate paleontological site, including fossilized footprints or other archeological, paleontological or historical feature on the Project site (collectively, “Historic or Archeological Items”).

(B) Discovery; Cessation of Work. Upon discovery of any potential Historic or Archeological Items, Work must be stopped within an 85-foot radius of the find and may not resume until authorized in writing by the City. If required by City, Contractor must assist in protecting or recovering the Historic or Archeological Items, with any such assistance to be compensated as Extra Work on a time and materials basis under Article 6, Contract Modification. At the City’s discretion, a suspension of Work required due to discovery of Historic or Archeological Items may be treated as Excusable Delay pursuant to Article 5, or as a suspension for convenience under Article 13.

5.7.1.2 Existing Conditions

Regional Geology

The project site is located in the Santa Clara Valley, an alluvial basin bounded by the Santa Cruz Mountains to the west, the Diablo Range to the east, and the San Francisco 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 that comprise most of this basin consist of up to 1,000 feet of poorly sorted gravel, sand, and clay which were deposited in alluvial fan and deltaic depositional environments.

On-Site Geology

Soils

The site is underlain by Holocene age surficial sediments. The mapped soil profiles for the site indicate the underlying soil as being comprised of alluvial sand, silt, and gravel deposited in the upper part of the alluvial fans formed along the foothills of the Santa Cruz Mountains. Near-surface soil sampling conducted on-site found that the alluvium encountered in the soil borings generally consists of loose to very dense, poorly graded gravel, well-graded gravel with clay and sand, clayey gravel, clayey sand; and very stiff to hard, lean clay and silty clay.

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. The soils collected in the borings on-site had plasticity index scores ranging from six to 25, indicating a very low to low expansion potential that varies depending on the depth of the soil.

Site Topography

The project site is relatively flat with some areas graded slightly for draining and landscaping, as a result, the risk of erosion or landslide is low. There are no hillsides or steep embankments on-site and the elevation throughout the site ranges from 286 to 296 feet above mean sea level (amsl). No unique geologic features, such as serpentine rock outcrops and boulders, pinnacles, or sandstone are located on-site.

Groundwater

The City of Cupertino overlies the Santa Clara Subbasin (DWR Basin 2-9.02), a groundwater subbasin that is 297 square miles in area. Valley Water is responsible for managing groundwater in Santa Clara County, which includes conducting an artificial groundwater recharge program that involves releasing locally conserved or imported water to in-stream and off-stream facilities to augment groundwater supplies in the Santa Clara groundwater basin.

Soil borings were performed at depths of approximately 15 feet below ground surface (bgs) throughout the project site. No groundwater was encountered during the subsurface investigation, but it is estimated that historic high groundwater under the site is approximately 50 feet bgs. Water levels on-site may vary depending on seasonal precipitation, irrigation practices, and other climate conditions.

Seismic and Seismic-Related Hazards

Earthquake Faults

As the San Francisco Bay Area contains numerous active and potentially active faults, there is a high potential for seismic events such as fault surface ruptures and ground shaking, which can cause ground failure (landslides), settlement, erosion, liquefaction, lateral spreading, and soil expansion. Faults in the region are capable of generating earthquakes of magnitude 6.7 or higher.

During a major earthquake on a segment of one of the nearby faults, strong ground shaking is expected to occur at the project site. The ground shaking intensity felt at the project site would depend on the size of the earthquake (magnitude), the distance from the site to the fault source, the directivity (focusing of earthquake energy along the fault in the direction of the rupture), and the site-specific soil conditions. While no faults cross the project site, there are several major faults nearby including the Monte Vista-Shannon fault, San Andreas Fault, Hayward Fault, and Calaveras Fault. The project site is not located within a designated Alquist-Priolo Earthquake Fault Zone or a Santa Clara County Fault Hazard Zone.^{53, 54}

⁵³ CA Department of Conservation. *California Earthquake Hazards Zone*. Webmap. Accessed August 15, 2023. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>.

⁵⁴ Santa Clara County. *Geologic Hazards Zones. Maps 2 and 10*. Map. October 2012.

Liquefaction

Soil liquefaction can be defined as a complete loss of strength that causes otherwise solid soil to take on the characteristics of a liquid. The types of soil most susceptible to this hazard are loose, saturated, uniformly graded, fine-grain sands that comprise the soil layer within approximately 45 to 50 feet of the ground surface. Liquefaction mostly frequently occurs under vibratory conditions, such as those created by seismic events. The project site is not located within a State of California liquefaction hazard zone or a County Liquefaction Hazard Zone.⁵⁵ Based on this, the site has a low potential of liquefaction during moderate to large magnitude earthquakes on a nearby faults.

Lateral spreading typically occurs as a form of horizontal displacement of relatively flat-lying soil toward an open or “free” face such as an open body of water, channel, or excavation. This movement is often associated with liquefaction and commonly occurs on gentle slopes in seismically active regions. Lateral spread presents a significant hazard to the integrity of buildings and other structures. There are no adjacent bodies of water, channels, or excavations in the vicinity of the site; therefore, there is a very low potential for lateral spreading on-site.

Other Geologic Hazards

The project site is not located within a Santa Clara County Geologic Hazard Zone for compressible soil, landslides, or fault rupture.⁵⁶

Paleontological Resources

Most of Cupertino, including the project site, is located within a Holocene-age landform. Geologic units of Holocene age are generally not considered sensitive for paleontological resources, because biological remains younger than 10,000 years are not usually considered fossils. These sediments have low potential to yield fossil resources or to contain significant nonrenewable paleontological resources.⁵⁷ No paleontological resources have been identified within the project site.⁵⁸

⁵⁵ Ninyo & Moore Geotechnical & Environmental Sciences Consultants. *Geotechnical Evaluation*. November 3, 2022. Page 5.

⁵⁶ Santa Clara County. *Geologic Hazards Zones. Maps 2 and 10*. Map. October 2012.

⁵⁷ United States Department of the Interior. *Potential Fossil Yield Classification System*. July 2016. Accessed August 15, 2023. https://www.blm.gov/sites/blm.gov/files/uploads/IM2016-124_att1.pdf

⁵⁸ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 131.

5.7.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that will become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

-
- a) Would the project 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?
-

The 2019 IS/MND determined that implementation of the Master Plan would not directly or indirectly cause potential substantial adverse effects from the rupture of a known earthquake fault, strong seismic ground shaking, liquefaction, or landslides because future projects would not be located on active faults, would adhere to recommendations in site-specific geotechnical reports, and would comply with the CBC.⁵⁹

Fault Rupture

The project site is not located in an Alquist-Priolo Earthquake Fault Zone and no known faults cross the site. While existing faults that are currently considered active are located within 20 miles of the site (i.e., the Monte Vista-Shannon fault, San Andreas Fault, Hayward Fault, and Calaveras Fault), the proposed project is located outside of their fault rupture zones. For these reasons, the project would not directly or indirectly cause potential substantial adverse effects from rupture of a known earthquake fault, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

Seismic Ground Shaking

There are several major fault lines within approximately 20 miles of the project site that have the potential to produce a major earthquake during the lifespan of this project. During a major earthquake, this site is expected to experience strong ground shaking. The level of intensity of this ground shaking at the project site would depend on a variety of factors such as the magnitude, distance from the site to the fault source, and the site-specific soil conditions. The ground shaking could potentially damage structures and threaten the safety of occupants.

The project would construct all structures according to the standards listed in the current CBC and would implement the recommendations in the site-specific geotechnical report prepared for the project (as required in Municipal Code Sections 16.08.120 and Section 16.08.130) to reduce seismic and seismic-related hazards (including ground shaking, liquefaction, and expansive soils) to a less than significant level. Because the project would be properly designed, engineered, and constructed, the existing seismic hazards on-site would not be exacerbated by the project in a manner that would impact (or worsen) off-site conditions. Therefore, the project would result in a

⁵⁹ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 128 to 129.

less than significant impact, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

Liquefaction and Lateral Spreading

As discussed in Section 5.7.1.2 Existing Conditions, the project site is not located within a state- or county-designated liquefaction hazard zone and the site has a low potential of liquefaction during moderate to large magnitude earthquakes. In addition, there is a very low potential for lateral spreading on-site due to the lack of adjacent bodies of water, channels, or excavations in the vicinity of the site. The project would construct all structures according to the standards listed in the current CBC and would implement the recommendations in the site-specific geotechnical report prepared for the project, therefore, the project would not cause potential substantial adverse effects related to liquefaction and lateral spreading consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

Landslides

As discussed in Section 5.7.1.2 Existing Conditions, the project site is not located in a designated landslide hazard zone. The project site is relatively flat and is not located in the vicinity of steep embankments that could increase the risk of landslides affecting the site. Construction of the project would not include substantial earthwork that would create unstable slopes that would exacerbate any existing landslide risks. Therefore, the project would result in a less than significant impact, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

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

The 2019 IS/MND concluded that although future projects under the Master Plan would include grading or create new impervious surface area that could result in soil disturbance, alter drainage patterns, and/or cause erosion, these impacts would be reduced to a less than significant level because the project would be subject to Waste Discharge Requirements, Municipal Code Sections 16.08.120 and Section 16.08.130, and would implement BMPs to protect water quality during specific project construction activities.⁶⁰

Ground disturbance related to the demolition of the improvements on-site, removal of landscaping, and construction of the proposed improvements would occur on-site. Transportation of construction materials and equipment to and from the project site could also result in disturbance of the soils. These activities would increase exposure of soil to wind and water erosion and increase sedimentation.

⁶⁰ Ibid. Pages 129 to 130.

As discussed further in Section 5.10 Hydrology and Water Quality, the project would comply with current CBC regulations regarding erosion control and would implement BMPs to reduce runoff from the project site. In addition, the project would prepare an interim erosion and sediment control plan consistent with the requirements of Municipal Code Section 16.08.110 that would detail the location of erosion control measures and erosion control planting. By implementing best management practices and the recommendations of the site-specific geotechnical report, erosion and sedimentation impacts would be less than significant, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

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

The 2019 IS/MND concluded that future projects would reduce impacts to unstable soils to a less than significant level through compliance with current CBC regulations, Municipal Code Sections 16.08.120 and 16.08.130, and recommended mitigation or avoidance measures from site-specific geotechnical reports.⁶¹

As discussed under checklist question a), the project site location, topography, and adherence to the current CBC and recommendations in the site-specific geotechnical report (as required in Municipal Code Sections 16.08.120 and Section 16.08.130) regarding ground improvements and construction methods would reduce the risk of liquefaction at the project site to a less than significant level.

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. The project would be connected to the City's water system and would not require permanent groundwater extraction wells on-site. No construction dewatering would be required; therefore, the project would not contribute to significant subsidence risks.

Based on this discussion, the project would result in the same less than significant impact as disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

⁶¹ Ibid. Page 130.

-
- d) Would the project be located on expansive soil, as defined in the current California Building Code, creating substantial direct or indirect risks to life or property?
-

The 2019 IS/MND was unable to describe soil conditions at every park facility in the City, but the 2019 IS/MND concluded that compliance with current CBC regulations, Municipal Code Sections 16.08.120 and 16.08.130, and recommended mitigation or avoidance measures from site-specific geotechnical reports, would reduce potential impacts related to expansive soils to a less than significant level.⁶²

Expansive soils possess a “shrink-swell” characteristic. Shrink-swell is the cyclic change in volume (expansion and contraction) that occurs in fine-grained clay sediments from the process of wetting and drying. Structural damage may result over a long period of time, usually the result of inadequate soil and foundation engineering or the placement of structures directly on expansive soils. Based on the site-specific geotechnical report prepared for the project, the soils on-site have a very low to low expansion potential that varies depending on the depth of the soil.

The project would adhere to the standard engineering and building practices and techniques specified in the CBC and implement the design recommendations in the site-specific geotechnical report, which would further reduce potential impacts from expansive soils on-site. Based on this discussion, the project would not create substantial direct or indirect risks to life or property due to expansive soils, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- e) Would the project 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?
-

The 2019 IS/MND concluded that there would be no impact because there would not be any alternative wastewater disposal or septic tank systems installed during implementation of the Master Plan.⁶³

The project would connect to the City’s existing sanitary sewer system. Therefore, the project would not need to support septic tanks or alternative wastewater disposal systems on-site, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

⁶² Ibid. Page 130.

⁶³ Ibid. Page 130.

-
- f) Would the project directly or indirectly destroy a unique paleontological resource or site or unique geological feature?
-

The 2019 IS/MND determined that implementation of the Master Plan would be unlikely to result in impacts to unique paleontological resources or geological features given the age of the soil throughout most of the City and the absence of known paleontological resources in Cupertino. However, the 2019 IS/MND concluded that future projects would be further evaluated when design-level plans are available to determine whether the project would have the potential to encounter bedrock and unknown paleontological resources. This evaluation and implementation of any potential mitigation measures identified as necessary would reduce potential impacts to a less than significant level.⁶⁴

As discussed in Section 5.7.1.2 Existing Conditions and the 2019 IS/MND, most of the City, including the project site, is located within a Holocene-age landform which has low potential to yield fossil resources or significant nonrenewable paleontological resources due to the age of the soil. The project would implement City General Condition 7.18 to reduce impacts to unknown paleontological resources. by halting work if paleontological resources are discovered, and protecting and recovering the resource if feasible. This is consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

⁶⁴ Ibid. Pages 130 to 131.

5.8 Greenhouse Gas Emissions

5.8.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND, with the exception of BAAQMD updating their CEQA Guidelines and the City adopting their Climate Action Plan 2.0 in 2022. Key regulations and project site conditions are described below.

5.8.1.1 *Background Information*

Gases that trap heat in the atmosphere, GHGs, regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of CO₂ equivalents (CO₂e). 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. 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.

5.8.1.2 *Regulatory Framework*

State

Assembly 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 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 establishes a course for reducing per capita GHG emissions through the promotion of compact, high-density, mixed-use neighborhoods near transit, particularly within identified Priority Development Areas (PDAs).

CARB Scoping Plan

CARB adopted the 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) in December 2022 to outline goals and actions for various sectors to help California achieve carbon neutrality by 2045 or earlier. The 2022 Scoping Plan outlines cost-effective solutions that consider equity and affordability in addition to larger scale solutions that will transform the state's energy infrastructure to generate less GHG emissions.

Regional and Local

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 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.

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies and strategies including, but not limited to, the policies and strategies listed below pertaining to GHG emissions.

Policy/Strategy	Description
Policy ES-1.1	Incorporate the principles of sustainability into Cupertino's planning, infrastructure, and development process in order to achieve improvement, reduce GHG emissions, and meet the needs of the community without compromising the needs of future generations.
Policy ES-2.1	Encourage the maximum feasible conservation and efficient use of electrical power and natural gas resources for new and existing residences, businesses, industrial and public uses.
Strategy ES-1.1.1	Adopt, implement, and maintain a Climate Action Plan to attain greenhouse gas emission targets consistent with state law and regional requirements.

City of Cupertino Climate Action Plan 2.0

Cupertino's Climate Action Plan 2.0 was adopted by City Council on August 16, 2022, and contains a series of measures and actions meant to reduce GHG emissions and meet established community goals. The Climate Action Plan 2.0 includes actions in Measure TR-1 that encourage the City to develop facilities to support active modes of transportation, actions under Measure TR-5 that encourage the decarbonization of off-road equipment, including landscaping equipment, and actions under Measure CS-1 that would increase carbon sequestration through tree planting.

City of Cupertino Municipal Code

The following parts of the Municipal Code contain directives pertaining to building green and conserving water and energy.

- *Chapter 14.15, Landscape Ordinance*, the intent of this chapter is to reduce water waste in landscaping by promoting the use of region-appropriate plants that require minimal supplemental irrigation and by establishing standards for irrigation efficiency. New development projects that include landscape areas of 500 square feet or more are subject to the Ordinance.
- *Chapter 16.58, Green Building Standards*, the provisions of this chapter apply to the planning, design, operation, construction, use, and occupancy of every newly constructed building or structure, unless otherwise indicated.

5.8.1.3 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.

GHG emissions associated with the project site are primarily generated by visitors and staff vehicle trips to the site and operation of landscaping and maintenance equipment. The community center and senior center also utilize natural gas appliances that generate GHG emissions.

5.8.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<hr/>				
a) Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?				

The 2019 IS/MND determined that future projects would be relatively small in scale and would screen out of BAAQMD’s GHG screening size for City park land uses. In addition, the 2019 IS/MND concluded that future projects would be likely to reduce overall visitor and maintenance VMT GHG-emissions by providing a connected and accessible network of parks, improving access including for those with disabilities, and creating additional parks and recreational spaces in areas that are

currently underserved. Therefore, implementation of the Master Plan would result in less than significant GHG emissions.⁶⁵

The project size (22.5-acres) is below the GHG screening size identified by BAAQMD of 600 acres that was in place at the time 2019 IS/MND was adopted. In addition, the project includes improvements to the existing park and enhancements to bicycle and pedestrian access to the park. The project, therefore, would result in the same impact as disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

Since the certification of the IS/MND, BAAQMD has updated its CEQA Air Quality Guidelines with new GHG thresholds. Pursuant to the current BAAQMD Air Quality Guidelines, for land use projects to result in a less than significant GHG emissions 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).

The City's 2022 Climate Action Plan 2.0 is considered a qualified GHG reduction plan, and consistency with this plan can be demonstrated in a two-part process. The first part of the process is to determine whether the project is consistent with the established General Plan land use and

⁶⁵ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 136 to 137.

zoning designation, and the second part is illustrating the project’s compliance with applicable measures from the City’s CEQA GHG Emissions Analysis Compliance Checklist.⁶⁶

As discussed in Section 5.11 Land Use and Planning, the project is consistent with the existing General Plan land use and zoning designations, and does not propose any changes in the allowed land uses on-site. The project would be consistent with the City’s CEQA GHG Emissions Analysis Compliance Checklist by complying with all minimum requirements of CALGreen Code and the City Reach Code during design and construction, not using natural gas appliances or infrastructure, installing energy efficient lighting, sourcing energy from SVCE, expanding bicycle and pedestrian infrastructure to increase connectivity and encourage alternative modes of transportation, installing native and drought-tolerant species as part of the landscaping, installing low-flow fixtures, planting climate-adaptive trees, and installing bioswales and permeable pavement on-site.

In addition, the project would comply with Measure TR-1 and Measure CS-1 of the 2022 Climate Action Plan 2.0 by implementing the development of bicycle and pedestrian facilities to support active modes of transportation and planting additional trees to increase carbon sequestration and reduce the urban heat island effect.

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

The 2019 IS/MND determined that implementation of the Master Plan would not result in any impacts due to conflicts with applicable plans, policies, or regulations adopted for the purpose of reducing the emissions of GHGs because future projects would comply with the CARB Scoping Plan, 2017 CAP, and the City’s Climate Action Plan.⁶⁷

CARB Scoping Plan

As discussed in the 2019 IS/MND, the CARB Scoping Plan is primarily meant to recommend programs at the state-level to help California achieve carbon neutrality by 2045 or earlier. The City’s 2022 Climate Action Plan 2.0 is designed to help the City achieve their goal of carbon neutrality by the year 2040, which exceeds the goals set in the CARB Scoping Plan. Therefore, because the project is consistent with the City’s 2022 Climate Action Plan 2.0 as discussed in checklist question a) above and later on in this discussion, it would not conflict with the CARB Scoping Plan. **(Same Impact as Approved Project)**

⁶⁶ City of Cupertino. *California Environmental Quality Act (CEQA) Greenhouse Gas (GHG) Emissions Thresholds and Guidance*. April 29, 2022. Page 19.

⁶⁷ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 137 to 138.

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. As discussed in Section 5.3 Air Quality under checklist question a), the project is consistent with the 2017 Clean Air Plan because it would not generate emissions that could interfere with attainment of ambient air quality standards, would implement actions consistent with the 2017 Clean Air Plan's control measures, and would not significantly increase VMT in the City. **(Same Impact as Approved Project)**

General Plan

The proposed project would be consistent with General Plan Policies ES-1.1 and ES-3.1, and Strategy ES-1.1.1 by minimizing energy use and waste disposed of at a landfill during construction activities, installing high-efficiency lighting and irrigation equipment, promoting alternative modes of transportation by constructing bicycle parking infrastructure, new bicycle lanes, and pedestrian walkways, and implementing design features consistent with the City's 2022 Climate Action Plan 2.0. **(Same Impact as Approved Project)**

2022 Climate Action Plan 2.0

As discussed under checklist question a) above, the project would comply with Measure TR-1 and Measure CS-1 from the 2022 Climate Action Plan 2.0. In addition, because the project is consistent with the existing General Plan land use and zoning designations, would not propose any changes in the allowed land uses on-site, and complies with the applicable measures from the City's CEQA GHG Emissions Analysis Compliance Checklist, it would be considered consistent with the City's 2022 Climate Action Plan 2.0. **(Same Impact as Approved Project)**

5.9 Hazards and Hazardous Materials

The following discussion is based on the Phase I Environmental Site Assessment (ESA) completed by Cornerstone Earth Group, Inc. dated October 13, 2022. A copy of the report is included in Appendix D of this Initial Study/Addendum.

5.9.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.9.1.1 *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, 1986.⁶⁸

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

⁶⁸ United States Environmental Protection Agency. “Superfund: CERCLA Overview.” Accessed May 11, 2020. <https://www.epa.gov/superfund/superfund-cercla-overview>.

authority for the EPA, more stringent hazardous waste management standards, and a comprehensive underground storage tank program.⁶⁹

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 State Water Resources Control Board (SWRCB).⁷⁰

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.

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. The Santa Clara County Department of Environmental Health reviews CalARP risk management plans as the CUPA.

Asbestos-Containing Materials

Friable asbestos is any asbestos-containing material (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

⁶⁹ United States Environmental Protection Agency. "Summary of the Resource Conservation and Recovery Act." Accessed October 16, 2023. <https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>.

⁷⁰ California Environmental Protection Agency. "Cortese List Data Resources." Accessed October 16, 2023. <https://calepa.ca.gov/sitecleanup/corteselist/>.

uses of asbestos products.⁷¹ The EPA is currently considering a proposed ban on on-going use of asbestos.⁷² National Emission Standards for Hazardous Air Pollutants (NESHAP) guidelines require that potentially friable ACMs be removed prior to building demolition or remodeling that may disturb the ACMs.

CCR Title 8, Section 1532.1

The United States Consumer Product Safety Commission banned the use of lead-based paint in 1978. Removal of older structures with lead-based paint 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 lead-based paint is peeling, flaking, or blistered, it is required to be removed prior to demolition.

Regional and Local

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 National Pollutant Discharge Elimination System (NPDES) Permit (MRP) by the San Francisco Bay Regional Water Quality Control Board 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.⁷³ Municipalities throughout the Bay Area are currently modifying demolition permit processes and implementing PCB screening protocols to comply with Provision C.12.f. 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.

Santa Clara County Local Hazard Mitigation Plan

Santa Clara County's 2017 Local Hazard Mitigation Plan (LHMP) performs a full risk assessment on the nine hazards that present the greatest concern in Santa Clara County. The nine hazards focused

⁷¹ 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>

⁷² Ibid.

⁷³ California Regional Water Quality Control Board. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit*. November 2015.

on for this mitigation plan are climate change/sea-level rise, dam and levee failure, drought, earthquakes, floods, landslides, severe weather, tsunamis, and wildfires.

The City’s annex, Chapter 3 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 Cupertino, and a priority schedule for mitigation actions planned by local and regional agencies. These mitigation actions include requiring all new construction, including public facilities, to be built in accordance with the most recent Building and Fire Code standards, integrating the LHMP into other plans, ordinances and programs that dictate land use decisions within the community, maintaining good standing and compliance under the National Flood Insurance Program, and maintaining a storm drain master plan in order to develop and prioritize capital projects.

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies and strategies including, but not limited to, the policies and strategies listed below pertaining to hazards and hazardous materials.

Policy/Strategy	Description
Policy HS-1.1	Coordinate with Santa Clara County and local agencies to implement the Multi-Jurisdictional Local Hazard Mitigation Plan (LHMP) for Santa Clara County.
Policy HS-3.2	Involve the Fire Department in the early design stage of all projects requiring public review to assure Fire Department input and modifications as needed.
Policy HS-6.1	Require the proper storage and disposal of hazardous materials to prevent leakage, potential explosions, fire, or the release of harmful fumes. Maintain information channels to the residential and business communities about the illegality and danger of dumping hazardous material and waste in the storm drain system or in creeks.
Strategy HS-1.1.2	Ensure that mitigation actions identified in the LHMP are being incorporated into upcoming City sponsored projects, where appropriate.

City of Cupertino Municipal Code

Chapter 9.12 of the City’s Municipal Code contains the standards for the protection of health, life, resources, and property through prevention and control of unauthorized discharges of hazardous materials in the City of Cupertino. The Hazardous Materials Storage Ordinance regulates the storage, handling, and dispensing requirements for hazardous materials and other regulated materials in the City. Under Section 9.12.012, any person, firm, or corporation which stores any material regulated by the City is required to have a current Hazardous Materials Storage Permit. Chapter 16.40 of the Municipal Code contains regulations based on the 2022 California Fire Code, which govern conditions hazardous to life and property from fire or explosion. Section 17.04.050 of the City’s Municipal Code outlines standard environmental protection permit submittal requirements that apply to development projects within the City. Pursuant to this section, development projects are required to prepare a Phase I ESA to evaluate site history, existing observable conditions, current site use, and current and former uses of surrounding properties to

identify the potential presence of Recognized Environmental Conditions (RECs). If the Phase I ESA identifies RECs, then a Phase II ESA is required for the site.

Cupertino Emergency Operations Plan

The Cupertino Emergency Operations Plan (EOP) establishes policy direction for emergency planning, mitigation, response, and recovery activities within the City. The Cupertino EOP uses the Standardized Emergency Management System as required by California Government Code Section 8607(a) for managing responses to multi-agency and multi-jurisdiction emergencies in California, including those related to hazardous materials.

5.9.1.2 *Existing Conditions*

Site History

The project site has historically been used as agricultural land. As late as 1968, the site and adjacent parcels were developed with orchards and small structures typical of residences and associated outbuildings. The park was gradually built during the 1970s and 1980s, and the Quinlan Community Center was constructed on-site by 1991. There was a previous Senior Center building constructed on the southwest corner of the site by 1982; however, that was demolished and replaced by the current Senior Center in 2000.

On-Site Contamination

Based on the historic agricultural use of the site prior to development of the park and structures on-site, there is potential for residual agricultural chemicals in the soil (i.e., pesticides and fertilizers). The Cupertino Senior Center and Quinlan Community Center have maintenance rooms that contain paints and other common building maintenance supplies. There are several maintenance sheds within Memorial Park that contain materials such as fuel and pesticides. These materials are stored properly and there is no evidence of significant chemical spills. Based on the age of the existing Cupertino Senior Center and Quinlan Community Center buildings, it is unlikely that either building contains lead-based paint and/or ACMs. However, there are several structures within Memorial Park (i.e., restrooms, maintenance sheds, and storage sheds) that were constructed during the 1970s. These structures have a greater potential to contain lead-based paint and/or ACMs. The project site is not on the Cortese List⁷⁴ and there are no recorded hazardous materials releases on the project site.

⁷⁴ California Environmental Protection Agency. "Cortese List Data Resources." Accessed August 14, 2023. <https://calepa.ca.gov/sitecleanup/corteselist>.

Off-Site Sources of Contamination

Land uses surrounding the site include residential, recreational, and educational facility uses. There are no reported hazardous material spill incidents within the site vicinity that would be likely to significantly impact the site.⁷⁵

Airport Safety

The nearest airport to the project site is Moffett Federal Airfield, which is located approximately 5.3 miles north of the project site. The site is not located within the airfield’s Airport Influence Area, 65 dBA noise contour area, FAR Part 77 horizontal surface zone, or airport safety zones.

Wildland Fire Hazards

According to the California Department of Forestry and Fire Protection (CAL FIRE), the project site is not located in a very high, high, or moderate fire hazard zone.⁷⁶

5.9.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, will it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁷⁵ Cornerstone Earth Group, Inc. *Phase I Environmental Site Assessment - Cupertino Memorial Park, 10185 North Stelling Road, and 21251 Stevens Creek Boulevard, Cupertino*. October 13, 2022. Page 14.

⁷⁶ California Department of Forestry and Fire Protection. “FHSZ Viewer.” Webmap. Accessed August 15, 2023. <https://egis.fire.ca.gov/FHSZ/>.

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<hr/>				
a) Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				

The 2019 IS/MND determined that future projects constructed under the Master Plan would not involve the routine transport, use, or disposal of hazardous materials, and would only include small amounts of fuels, oils, lubricants, pesticides, paints, and cleaning agents are currently used within City facilities for routine maintenance. The 2019 IS/MND concluded that because future projects would be subject to state and local regulations regarding the proper handling and storage of hazardous materials and would be reviewed by the City once project-level plans were available, implementation of the Master Plan would result in a less than significant impact.⁷⁷

The project does not propose any land uses that would result in hazardous materials being routinely transported, used, or disposed of in quantities that would pose a significant health hazard to the public. After construction is completed, the project site would continue to use and store small amounts of standard fuels, oils, lubricants, pesticides, paints, and cleaning agents for routine maintenance. These small quantities of common hazardous materials would not pose a risk to site users or adjacent land uses as they would be properly stored and disposed of, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

⁷⁷ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 147 to 148.

-
- b) Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?
-

The 2019 IS/MND concluded that because future projects would be subject to state and local regulations regarding the proper handling and storage of hazardous materials and would be reviewed by the City once project-level plans were available, implementation of the Master Plan would not involve the use of hazardous materials in amounts that would pose a significant hazard to the environment through foreseeable upset and release conditions.⁷⁸

Historic Pesticide Use On-Site

Given the historic agricultural use in the project area, soils on-site may contain levels of pesticides exceeding applicable screening thresholds. The Phase I ESA prepared for the project identified this as a REC that should be evaluated further. The project would comply with Municipal Code Section 17.04.040 by preparing a Phase II ESA that would sample and analyze soil on-site to determine whether there are any elevated levels of soil contamination and identify proper remediation of that contamination (if found) under regulatory agency oversight.

Asbestos-Containing Materials and Lead-Based Paint

The Phase I ESA prepared for the project identified several structures within Memorial Park (i.e., restrooms, maintenance sheds, and storage sheds) that were likely constructed during the 1970s. Based on the construction date, it is possible that these structures contain lead-based paint and/or ACMs. In addition, it is possible that the soil near these wood-framed structures could be impacted by pesticides historically used to control termites. There is a potential that residual lead and pesticide concentrations could remain in soil on-site, which was identified as a REC in the Phase I ESA. Consistent with local and state regulations, an asbestos survey would be completed for existing buildings on-site prior to demolition in accordance with the NESHAP guidelines. Soil sampling and analysis for residual lead and pesticide concentrations would be completed as part of the previously mentioned Phase II ESA, consistent with the requirements of Municipal Code Section 17.04.040.

The proposed project would reduce impacts from historic agricultural use on-site, ACMs, and LBP to a less than significant level by requiring a survey for asbestos and its removal in accordance with NESHAP guidelines to control asbestos emissions, soil sampling to determine whether elevated levels of lead or pesticides are present in the soils, and removal and disposal of LBP in accordance with OSHA regulations to protect worker health and safety. **(Same Impact as Approved Project)**

⁷⁸ Ibid. Pages 147 to 148.

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

The 2019 IS/MND determined that although several parks and recreational facilities are near or immediately adjacent to schools, the small quantities and types of chemicals used in the parks for routine maintenance would not pose a hazard to the school populations. Compliance with applicable federal, state, and local regulation and the City's policies and regulations contained in the General Plan and Municipal Code would reduce potential impacts from hazardous materials to schools would to a less than significant level.⁷⁹

There are two schools within one-quarter mile of the project site: William Faria Elementary School at 10155 Barbara Lane 0.20-mile southeast of the site and Village Little Preschool Center at 10100 North Stelling Road 0.10-mile southeast of the site. As discussed under checklist question a) above, the project would not emit hazardous emissions or handle hazardous (or acutely hazardous) materials, substances, or waste. During project construction, the project would comply with CalARP, NESHAP guidelines, and MRP Provision C.12.f to properly screen, handle, transport, and dispose hazardous materials. In addition, as discussed in Section 5.3 Air Quality, the project would implement BAAQMD best management practices and using efficient construction equipment to reduce emissions of air pollutants.

The project site would continue to use and store small amounts of standard fuels, oils, lubricants, pesticides, paints, and cleaning agents for routine maintenance. These materials would continue to be stored consistent with City regulations, and would not create a hazard for on-site visitors or neighboring properties. Therefore, the project would not significantly emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. **(Same Impact as Approved Project)**

-
- d) Would the project 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?
-

The 2019 IS/MND concluded that none of the existing City parks or facilities in the Master Plan are listed on the Cortese List pursuant to Government Code Section 65962.5, therefore, there would be no impact.⁸⁰

The project site continues not to be included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5; therefore, it would result in the same impact as disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

⁷⁹ Ibid. Page 148.

⁸⁰ Ibid. Page 148.

-
- e) If located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?
-

The 2019 IS/MND concluded that since Cupertino is not within two miles of a public airport or within any airport land use plan defined by the Santa Clara County ALUC, implementation of the Master Plan would not result in a safety hazard for people residing or working in the project area. Therefore, there would be no impact.⁸¹

Moffett Federal Airfield, which is located approximately 5.3 miles north of the project site, is the nearest airport to the project site. The site is not located within the airfield's Airport Influence Area, 65 dBA noise contour area, FAR Part 77 horizontal surface zone, or airport safety zones. Therefore, the project would not result in a safety hazard or excessive noise for people residing or working in the project area, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- f) Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
-

The 2019 IS/MND concluded that future projects under the Master Plan would be reviewed in advance by the Santa Clara County Fire Department (SCCFD) and would be designed to be consistent with all applicable General Plan and Master Plan policies. Therefore, implementation of the Master Plan would not result in any impacts to an adopted emergency response plan or emergency evacuation plan.⁸²

Consistent with General Plan Policy HS-3.2, the SCCFD would review the proposed project during the design review process for each phase to ensure fire protection design features are incorporated and adequate emergency access is provided, and that none of the proposed improvements interfere with the City's EOP. The project would be designed in compliance with all City regulations pertaining to emergency access, and would comply with the County's LHMP by being built in accordance with the most recent Building and Fire Code, consistent with General Plan Strategy HS-1.1.2. Based on this discussion, the proposed project would not impair or physically interfere with the implementation of any adopted emergency response plan or emergency evacuation plan, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

⁸¹ Ibid. Page 148.

⁸² Ibid. Pages 148 and 149.

-
- g) Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?
-

The 2019 IS/MND disclosed that Memorial Park is not located in a Very High Fire Severity Zone (VHFSZ) or a High Fire Severity Zone (HFSZ).⁸³ This condition has not changed since the adoption of the 2019 IS/MND.

The project site is in a developed, urban area and is not located near wildland areas that would be susceptible to wildland fires. For these reasons, implementation of the proposed project would not expose people or structures to wildland fires, consistent with the findings of the 2019 IS/MND.

(Same Impact as Approved Project)

⁸³ Ibid. Page 149.

5.10 Hydrology and Water Quality

5.10.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.10.1.1 *Regulatory Framework*

Federal and State

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.). These regulations are implemented at the regional level by the RWQCBs. The project site is within the jurisdiction of the San Francisco Bay RWQCB.

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 (TMDLs) 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 SWRCB’s website.⁸⁴

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.

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 Storm Water Pollution Prevention Plan (SWPPP) must be prepared by a qualified professional prior to commencement of

⁸⁴ California State Water Resources Control Board. *2020-2022 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report)*. May 11, 2022.

construction and filed with the RWQCB by the project sponsor. The Construction General Permit includes requirements for 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 storm water discharges.

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 Permit Provision C.3

The San Francisco Bay RWQCB re-issued the MRP in May 2022 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.⁸⁵ 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, source control, and 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 development 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: (1) the post-project impervious surface area is less than, or the same as, the pre-project impervious surface area; (2) the project is located in a catchment that drains to a hardened (e.g., continuously lined with concrete) engineered channel or channels or enclosed pipes, which extend continuously to the Bay, Delta, or

⁸⁵ California Regional Water Quality Control Board San Francisco Region. *Municipal Regional Stormwater NPDES Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008*. May 11, 2022

flow controlled reservoir, or, in a catchment that drains to channels that are tidally influenced; or (3) the project is located in a catchment or subwatershed that is highly developed (i.e., that is 70 percent or more impervious).⁸⁶

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 2030.⁸⁷ Programs must include focused implementation of PCB control measures, such as source control, treatment control, and pollution prevention strategies. Municipalities throughout the Bay Area are updating their demolition permit processes to incorporate the management of PCBs in demolition building materials to ensure PCBs are not discharged to storm drains during demolition. 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 residential and wood frame structures are exempt.

Water Resources Protection Ordinance and District Well Ordinance

Valley Water operates as the flood control agency for Santa Clara County. Valley Water also provides stream stewardship and is the wholesale water supplier throughout the county, which includes the groundwater recharge program. Well construction and deconstruction permits, including borings 45 feet or deeper, are required under Valley Water's Well Ordinance 90-1. Under Valley Water's Water Resources Protection Ordinance, projects within Valley Water property or easements are required to obtain encroachment permits.

2021 Groundwater Management Plan

The 2021 Groundwater Management Plan (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 from imported sources. Imported water includes the District'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

⁸⁶ The Hydromodification Applicability Maps developed the permittees under Order No. R2-2009-0074 were prepared using this standard, adjusted to 65 percent imperviousness to account for the presence of vegetation on the photographic references used to determine imperviousness. Thus, the maps for Order No. R2-2009-0074 are accepted as meeting the 70 percent requirement.

⁸⁷ California Regional Water Quality Control Board San Francisco Region. *Municipal Regional Stormwater NPDES Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008*. May 11, 2022

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 the District’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 groundwater recharge through the provision of treated surface water and raw water, acquisition of supplemental water supplies, and water conservation and recycling.⁸⁸

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies and strategies including, but not limited to, the policies and strategies listed below pertaining to hydrology and water quality.

Policy/Strategy	Description
Policy ES-7.1	In public and private development, use low impact development (LID) principles to mimic natural hydrology, minimize grading and protect or restore natural drainage systems.
Policy ES-7.2	Minimize stormwater runoff and erosion impacts resulting from development and use LID designs to treat stormwater or recharge groundwater.
Policy ES-7.3	Ensure that surface and groundwater quality impacts are reduced through development review and volunteer efforts.
Policy ES-7.11	Water Conservation and Demand Reduction Measures. Promote efficient use of water throughout the City in order to meet State and regional water use reduction targets.
Strategy INF-4.1.1	Reduce the demand on storm drain capacity through implementation of programs that meet and even exceed on-site drainage requirements.
Strategy ES-5.3.1	Continue to emphasize the planting of native, drought tolerant, pest resistant, non-invasive, climate appropriate plants and ground covers, particularly for erosion control and to prevent disturbance of the natural terrain.
Strategy ES-7.1.1	Continue to require topographical information; identification of creeks, streams, and drainage areas; and grading plans for both public and private development proposals to ensure protection and efficient use of water resources.
Strategy ES-7.2.3	Minimize impervious surface areas, and maximize on-site filtration and the use of on-site retention facilities.
Strategy ES-7.3.1	Require LID designs such as vegetated stormwater treatment systems and green infrastructure to mitigate pollutant loads and flows.
Strategy ES-7.4.3	Review development plans to ensure that projects are examined in the context of impacts on the entire watershed, in order to comply with the City’s non-point source Municipal Regional Permit.

⁸⁸ Valley Water. *2021 Groundwater Management Plan, Santa Clara and Llagas Subbasins*. November 2021.

Cupertino 2020 Parks and Recreation System Master Plan

The City's Master Plan was adopted in February 2020, and outlines the City's comprehensive plan for parks and recreational facilities in the City through the year 2040. The Master Plan is organized around seven goals, which include conservation, connection, equitable access, enhancement, activity, quality, and sustainability. Each of the seven goals has associated objectives that reflect the City's desired outcomes and actions that provide ideas or strategies that help achieve the broader goals. The primary goal and objective in the Master Plan regarding hydrology is:

- Objective 1.D, which encourages projects to embrace storm water management by incorporating green infrastructure elements such as rain gardens, bioswales, permeable pavers and detention ponds to help reduce flooding, filter pollutants, and replenish groundwater during storm events.

City of Cupertino Municipal Code

In addition to the General Plan, the City's Municipal Code guides development in the City. Chapter 9.18, Stormwater Pollution Prevention and Watershed Protection, outlines the City's minimum requirements designed to control the discharge of pollutants into the City of Cupertino's storm drain system and to assure that discharges from the City's storm drain system comply with applicable provisions of the federal Clean Water Act and NPDES Permit. Section 16.08.110, Interim Erosion and Sediment Control Plan, requires preparation of an Interim Erosion and Sediment Control Plan. Consistent with this section of the Municipal Code, the plan shall be submitted to the Director of Public Works, calculate the maximum runoff from the site for a 10-year storm event, describe measures to be undertaken to retain sediment on the site, provide a brief description of the surface runoff and erosion control measures to be implemented, and detail vegetative measures to be undertaken.

Cupertino General Conditions

The City of Cupertino maintains a list of general conditions that contractors must implement or comply with while working on municipal projects. General Condition 7.20 – Storm Water Pollution control outlines a variety of requirements that projects must comply with. These include requirements to implement stormwater BMPs during construction, obtain all necessary permits, prepare a SWPPP is necessary, and prevent contaminated runoff from construction equipment.

5.10.1.2 *Existing Conditions*

Water Quality

The water quality of streams, creeks, ponds, and other surface water bodies can be greatly affected by pollution carried in contaminated surface runoff. Pollutants from unidentified sources, known as nonpoint 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.

While there are no streams, creeks, ponds, or other surface water bodies located within the project site, Stevens Creek is located approximately 0.8-mile west of the project site. Stevens Creek is on the 2006 Clean Water Act Section 303(d) list due to diazinon pollution, total toxicity levels, the water temperature in the creek, and solid waste pollution.

Groundwater

The City of Cupertino overlies the Santa Clara Subbasin (DWR Basin 2-9.02), a groundwater subbasin that is 297 square miles in area. Valley Water is responsible for managing groundwater in Santa Clara County, which includes conducting an artificial groundwater recharge program that involves releasing locally conserved or imported water to in-stream and off-stream facilities to augment groundwater supplies in the Santa Clara groundwater basin. Most of Cupertino, including the project site, is located within the recharge area of the Santa Clara Subbasin.⁸⁹ Valley Water owns and manages the only recharge facility within Cupertino, which is the McClellan Road Ponds recharge facility located 0.55-mile southwest of the project site.⁹⁰

As discussed in Section 5.7.1.2 Existing Conditions, no groundwater was encountered during the subsurface investigation on-site, and it is estimated that historic high groundwater under the site is approximately 50 feet bgs. Water levels on-site may vary depending on seasonal precipitation, irrigation practices, and other climate conditions.

Stormwater Drainage

The project site is developed with two existing buildings, large, landscaped areas, surface parking lots, walking paths, sports courts, and a softball field. The project site consists of eight acres (or approximately 35 percent) of percent impervious surfaces and 14.5 acres (or approximately 65 percent) of pervious surfaces. Stormwater runoff from the project site enters the City's main storm drain system and eventually flows to the San Francisco Bay.

Flooding

The project site is not located within a 100-year flood hazard area. According to the FEMA, the project site is in Zone X with 0.2 percent annual chance of flood.⁹¹

⁸⁹ Santa Clara Valley Water District. 2021 Groundwater Management Plan. Accessed August 16, 2023. https://s3.us-west-2.amazonaws.com/assets.valleywater.org/2021_GWMP_web_version.pdf.

⁹⁰ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 151.

⁹¹ Federal Emergency Management Agency. Flood Insurance Rate Map, Community Panel No. 06085C0208H. Effective Date May 17, 2009.

Other Inundation Hazards

A seiche is a standing wave oscillating in a body of water that can produce flooding along the shoreline under certain natural conditions.⁹² There are no bodies of water such as lakes, harbors, or reservoirs near the project site that would affect the site in the event of a seiche. The project site is not close enough to San Francisco Bay to be affected in the event of a tsunami.⁹³

5.10.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– result in substantial erosion or siltation on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– 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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
– impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

⁹² National Ocean Service. *What is a Seiche?* Accessed August 16, 2023.

<https://oceanservice.noaa.gov/facts/seiche.html>.

⁹³ Association of Bay Area Governments. *Tsunami & Additional Hazards*. Accessed August 16, 2023.

<https://abag.ca.gov/our-work/resilience/data-research/tsunami-additional-hazards>.

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
a) Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?				

The 2019 IS/MND determined that future projects under the Master Plan would result in minor site disturbances that could potentially increase the amount of sediment runoff into the City’s storm drains or natural drainage channels, which could impact runoff water quality. Consistent with the vision of the Master Plan, future projects would incorporate green infrastructure to capture runoff and would comply with applicable state and local ordinances such as the SWRCB Construction General Permit and Municipal Code Chapters 9.18, 9.19, and 16.08. The 2019 IS/MND found that, in combination with implementation of City General Conditions, adherence to these regulations would reduce impacts to water quality standards or waste discharge requirements to a less than significant level.⁹⁴

Construction

Implementation of the proposed project would require demolition, excavation, grading, and paving of the project site, which could result in temporary impacts to surface water quality. These construction activities could increase erosion and sedimentation once the disturbed soil is exposed to water and wind. This would increase the potential for soil, sediment, and pollutants to be carried by runoff into local waterways and the San Francisco Bay.

Since the proposed project would disturb more than one acre, it is required to comply with the State of California General Construction Permit and submit a SWPPP and NOI to the SWRCB. Compliance with the General Construction Permit would ensure that all BMPs related to stormwater pollution prevention for construction projects are implemented. In addition, the project would comply with City General Condition 7.20 which outlines specific measures and practices that are required to control stormwater pollution during construction activities. The project would also comply with Municipal Code Chapters 9.18, 9.19, and 16.18 which outline requirements for

⁹⁴ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 157 to 158.

stormwater pollution prevention and watershed protection, water resource protection, and Interim Erosion and Sediment Control Plans, respectively. For these reasons, project construction would not result in significant water quality impacts, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

Post-Construction

The project would replace more than 5,000 square feet of impervious surface at the project site; therefore, it is required to comply with Provision C.3 of the MRP which requires implementation of site design, source control, and LID-based stormwater treatment controls to reduce the pollutant loads of runoff from the project. The project would reduce and treat surface runoff on-site by constructing landscaped bioretention areas and installing pervious paving materials in select areas throughout the site to promote on-site infiltration. Development of the proposed project, in compliance with existing regulations and best management practices (including the MRP), would not result in significant water quality impacts, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- b) Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?
-

The 2019 IS/MND determined that future projects under the Master Plan would be consistent with the design requirements in the Master Plan which encourage installation of permeable surfaces. In addition, projects would comply with state and local requirements, such as incorporating LID treatment measures consistent with NPDES permit requirements. Based on these factors, the 2019 IS/MND concluded that implementation of the Master Plan would not substantially decrease water supplies or interfere substantially with groundwater recharge, and the impact would be considered less than significant.⁹⁵

Groundwater recharge occurs when surface water percolates through the soil to recharge groundwater aquifers. As discussed in Section 5.10.1.2 Existing Conditions, the project site is located within the recharge area of the Santa Clara Subbasin. The proposed project would increase on-site impervious surfaces by approximately 1.6 acres (or seven percent) compared to existing conditions. However, the project would construct landscaped bioretention areas and install pervious paving materials on-site to promote on-site infiltration, in compliance with Provision C.3 of the MRP. In addition, the project would plant drought-tolerant landscaping and install high-efficiency irrigation equipment, which would reduce the amount of water use on-site, consistent with Master Plan Objective 7B, the City's Landscape Ordinance, and the Green Building Code. Implementation of the project would not require pumping of groundwater underneath the project

⁹⁵ Ibid. Page 158.

site, nor would it interfere with the operation of the nearby McClellan Road Ponds recharge facility, which is located 0.55-mile southwest of the project site.

Based on this discussion, the project would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- c) Would the project 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?
-

The 2019 IS/MND determined that improvements identified in the Master Plan would not result in the alteration of the course of a stream or river, and compliance with existing regulations such as NPDES permit requirements, Municipal Code Chapters 9.18 and 16.08, and City General Conditions would prevent substantial erosion or siltation on- or off-site. In addition, projects implemented under the Master Plan would incorporate LID treatment measures consistent with NPDES permit requirements and comply with Master Plan Objective 1.D which is meant to reduce flooding, filter pollutants, and replenish groundwater. Projects under the Master Plan would not significantly change the amount of impervious surfaces within parks, and compliance with existing regulations in the City and the MRP would prevent the exceedance of existing or planned stormwater drainage systems.⁹⁶

There are no streams or rivers on-site, therefore, the proposed project would not affect the existing drainage pattern of any streams or rivers. As discussed under checklist question a) and checklist question b) above, although the proposed project would increase the amount of impervious surfaces on-site, it would also construct landscaped bioretention areas and install pervious paving materials on-site and comply with NPDES permit requirements, MRP, and Municipal Code Chapters 9.18 and 16.08. This would reduce the amount of stormwater runoff from the site and prevent the exceedance of capacity in the adjacent stormwater drainage systems serving the site.

Based on this discussion, the proposed project would not substantially alter the existing drainage pattern of the site or create or contribute runoff which would exceed existing stormwater drainage capacity or result in flooding on- or off-site, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

⁹⁶ Ibid. Pages 158 to 160.

-
- d) Would the project risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones?
-

The 2019 IS/MND determined that Memorial Park was not at risk of inundation from seiches or tsunamis, and future projects would not involve use of hazardous materials in large amounts. Based on this discussion, the 2019 IS/MND concluded that the risk of release of pollutants due to project inundation would be considered less than significant.⁹⁷

Consistent with the assumptions in the 2019 IS/MND, the project would not use or store substantial quantities of hazardous materials on-site. As discussed in Section 5.10.1.2 Existing Conditions, the project site is not located within a 100-year flood hazard area. The project site is in Zone X with a 0.2 percent annual chance of flooding.

San Francisco Bay presents an inundation risk to sections of the coastline during a tsunami. The project site is not located near enough to San Francisco Bay to be affected in the event of a tsunami. As discussed previously, there are no bodies of water such as lakes, harbors, or reservoirs near the project site that would affect the site in the event of a seiche.

Based on the above discussion, implementation of the proposed project would not risk release of pollutants due to inundation in flood hazard, tsunami or seiche zones, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- e) Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?
-

The 2019 IS/MND determined that future projects under the Master Plan would not conflict or obstruct the Basin Plan or Valley Water GWMP because future ground disturbing activities would implement BMPs and LID treatment measures. Therefore, the 2019 IS/MND concluded that implementation of the Master Plan would result in less than significant impacts to water quality control plans and sustainable groundwater management plans.⁹⁸

The San Francisco Basin Plan provides a framework for state and local governments to meet water quality objectives and criteria to protect the beneficial uses of local aquifers, streams, marshes, and San Francisco Bay. Consistent with the San Francisco Basin Plan, the proposed project would comply with the MRP requirement to install LID treatment controls to treat stormwater runoff. In addition, the project would not require any dewatering during excavation, would be designed to promote on-site water infiltration, and would include drought-tolerant landscaping and high-efficiency irrigation

⁹⁷ Ibid. Page 160.

⁹⁸ Ibid. Page 160.

to limit water use. Therefore, the project would not interfere with implementation of the 2021 Groundwater Management Plan.

For these reasons, the project would not conflict with water quality control plans or sustainable groundwater management plans, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

5.11 Land Use and Planning

5.11.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.11.1.1 *Regulatory Framework*

Local

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies including, but not limited to, the policies and strategies listed below pertaining to land use.

Policy/Strategy	Description
Policy LU-27.8	Protect residential neighborhoods from noise, traffic, light, glare, odors and visually intrusive effects from more intense development with landscape buffers, site and building design, setbacks and other appropriate measures.
Policy RPC-2.5	Provide parks and recreational facilities for a variety of recreational activities.
Policy RPC-4.1	Design parks appropriately to address the facility and recreational programming required by each special area and neighborhood based on current and future plans for the areas.

Heart of the City Specific Plan

The Heart of the City Specific Plan (Specific Plan) provides specific development guidance for the Stevens Creek Boulevard commercial corridor and is meant to guide the future development and redevelopment of the corridor. The Specific Plan provides standards and design guidelines for the properties within the Specific Plan area and outlines the appropriate development process for necessary improvements.

Cupertino 2020 Parks and Recreation System Master Plan

The City's 2020 Master Plan was adopted in February 2020, and outlines the City's comprehensive plan for parks and recreational facilities in the City through the year 2040. The Master Plan is organized around seven goals, which include conservation, connection, equitable access, enhancement, activity, quality, and sustainability. Each of the seven goals has associated objectives that reflect the City's desired outcomes and actions that provide ideas or strategies that help achieve the broader goals.

City of Cupertino Municipal Code

The Municipal Code contains all ordinances for the City and identifies land use categories, site development regulations, and other general provisions that ensure consistency between the

General Plan and proposed development projects. Title 19 of the Municipal Code establishes the City’s Zoning Ordinance. The Zoning Ordinance describes the zoning designations and contains the zoning map and development standards for each zoning designation. Zoning Ordinance Chapters 19.88 and 19.92 regulate Open Space and Parks and Recreation zones, respectively.

5.11.1.2 Existing Conditions

The project site is within the boundaries of the Heart of the City Special Area of the General Plan and has General Plan designations of Transportation, Parks and Open Space, and Public Facilities. The project site is within the West Stevens Creek Boulevard subarea of the Special Area and is in the Community Recreation Node which consists of Memorial Park, the Senior Center, Sports Center, and Quinlan Community Center. The site is within the Heart of the City Specific Plan Area zoning district, and has a zoning designation of Open Space/Public Park/Recreational Zone.

The project site is currently developed with an operational park which includes an amphitheater and various recreational facilities, the Cupertino Senior Center, and the Quinlan Community Center. The site is surrounded primarily by residential uses, and De Anza College is located south of the project site (south of Stevens Creek Boulevard).

5.11.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

a) Would the project physically divide an established community?

The 2019 IS/MND concluded that the Master Plan would not include any recommended projects that would physically divide an established community; therefore, there would be no impact.⁹⁹

The proposed project would implement various improvements to an existing City park and does not include improvements outside the existing park boundaries. This project would not involve the construction of substantial infrastructure, such as highways, freeways, or major arterial streets that

⁹⁹ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 165.

would physically divide the existing community surrounding the project site. The bicycle and pedestrian improvements included in the project would improve access to the park; therefore, the project would have no impact, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- b) Would the project 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?
-

The 2019 IS/MND determined that future projects under the Master Plan would occur at existing park and recreation facilities designated as park or public facilities and would comply with the City's adopted plans and policies and be designed to be consistent with Cupertino land use and zoning designations. Therefore, the 2019 IS/MND concluded that implementation of the Master Plan would result in less than significant impacts to land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect.¹⁰⁰

General Plan

The project site has General Plan designations of Transportation, Parks and Open Space, and Public Facilities, and is within the boundaries of the Heart of the City Special Area. The Transportation designation applies to streets, highways, and rail corridors and covers a small portion of the site east of the Senior Center which includes a segment of the Mary Avenue driveway entrance and the associated right-of-way. The Parks and Open Space designation applies to land that is owned by the public and used for recreation, and covers the central portion of the Park which currently includes the tennis courts, softball field, amphitheater, Veterans Memorial, and Senior Center. The Public Facilities designation applies to land used by a governmental entity for a public purpose, and covers the Quinlan Community Center and the main reservable picnic area on-site. The proposed project would include a series of improvements within the park that would provide upgraded recreational facilities to the public, which is consistent with the intent of the General Plan designations. **(Same Impact as Approved Project)**

Heart of the City Specific Plan

The project site is within the Heart of the City Specific Plan Area zoning district and has a zoning designation of Open Space/Public Park/Recreational Zone. Within the Specific Plan, the park is meant to be an area focused on commerce and community that supports walking, biking, and transit through the provision of pedestrian and bicycle links such as bikeways and pedestrian pathways. The project would be consistent with the zoning designation of the site by maintaining the current land uses and constructing improvements consistent with the Specific Plan's vision for the area. **(Same Impact as Approved Project)**

¹⁰⁰ Ibid. Page 165.

Cupertino 2020 Parks and Recreation System Master Plan

The Master Plan is organized around seven goals and their related objectives, which include conservation, connection, equitable access, enhancement, activity, quality, and sustainability. The project would be consistent with the assumptions in the 2019 IS/MND by maintaining the existing use on-site and implementing small-scale improvements to on-site amenities. **(Same Impact as Approved Project)**

5.12 Mineral Resources

5.12.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.12.1.1 *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.

5.12.1.2 *Existing Conditions*

The project site is not identified as a natural resource area containing mineral resources in the City's General Plan, the land type of the site is classified as Urban/Suburban Developed – Unsuitable for Extraction.¹⁰¹ The project site is currently developed as a park and there are no known mineral resources on-site.

¹⁰¹ City of Cupertino. *Cupertino General Plan Community Vision 2040*. October 15, 2015. Page ES-10.

5.12.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Result in the loss of availability of a known mineral resource that will be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

-
- a) Would the project result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state?
-

The 2019 IS/MND determined the implementation of the Master Plan would not create any loss of availability of a known mineral resource of value to the region and residents of the State, as no parks other than Linda Vista Park include known mineral resources.¹⁰² This condition has not changed, therefore, implementation of the project would result in the same impact as disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- b) Would the project 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?
-

As discussed in Section 5.12.1.2 Existing Conditions, the project site is not identified as a natural resource area containing mineral resources in the City's General Plan.¹⁰³ Therefore, implementation of the project would not result in an impact to mineral resources delineated on a local general plan, specific plan, or other land use plan, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

¹⁰² City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 167.

¹⁰³ *Ibid.* Page 167.

5.13 Noise

The following discussion is based on the Noise and Vibration Assessment completed by Illingworth & Rodkin, Inc. dated December 2023. A copy of the report is included in Appendix E of this Initial Study/Addendum.

5.13.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.13.1.1 *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} , DNL, or CNEL.¹⁰⁴ 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

¹⁰⁴ L_{eq} is a measurement of average energy level intensity of noise over a given period of time. Day-Night Level (DNL) 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} .

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.

5.13.1.2 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 5.13-1 below. These criteria can be applied to development projects in jurisdictions that lack vibration impact standards.

Table 5.13-1: 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

Source: Federal Transit Administration. *Transit Noise and Vibration Assessment Manual*. September 2018.

State and Local

California Green Building Standards Code

For commercial uses, CalGreen (Section 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 DNL 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.

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies including, but not limited to, the policies and strategies listed below pertaining to noise and vibration.

Policy/Strategy	Description
Policy HS-8.1	Use the General Plan Land Use Compatibility for Community Noise Environments chart, the Future Noise Contour Map and the City Municipal Code to evaluate land use decisions.
Policy HS-8.2	Minimize noise impacts through appropriate building and site design.
Policy HS-8.3	Regulate construction and maintenance activities. Establish and enforce reasonable allowable periods of the day, during weekdays, weekends and holidays for construction activities. Require construction contractors to use the best available technology to minimize excessive noise and vibration from construction equipment such as pile drivers, jack hammers, and vibratory rollers.
Strategy HS-8.2.3	Exercise discretion in requiring sound walls to be sure that all other measures of noise control have been explored and that the sound wall blends with the neighborhood. Sound walls should be designed and landscaped to fit into the environment.

City of Cupertino Municipal Code

The City of Cupertino Municipal Code contains a Zoning Ordinance that limits noise levels at adjacent properties. Municipal Code Section 10.48.010 defines daytime as the period from 7:00 AM to 8:00 PM weekdays, and the period from 9:00 AM to 6:00 PM on weekends. Nighttime is defined as periods of weekdays from 8:00 PM to midnight, and from midnight to 7:00 AM, and periods on weekends from 6:00 PM to midnight and from midnight to 9:00 AM. The following sections establish the applicable limits:

- 10.48.040 Daytime and Nighttime Maximum Noise Levels – Individual noise sources, or the combination of a group of noise sources located on the same property, shall not produce a noise level exceeding those specified on property zoned as follows, unless specifically provided in another section of this chapter in the Municipal Code:

Land Use at Point of Origin	Maximum Noise Level at Complaint Site of Receiving Property	
	Nighttime	Daytime
Residential	50 dBA	60 dBA
Nonresidential	55 dBA	65 dBA

- 10.48.050 Brief Daytime Incidents.
 - During the daytime period only, brief noise incidents exceeding limits in other sections of this chapter are allowed; providing the sum of the noise duration in minutes plus the excess noise level does not exceed twenty in a two-hour period.

Noise Increment Above Normal Standard	Noise Duration in Two-Hour Period
5 dBA	15 minutes
10 dBA	10 minutes

Noise Increment Above Normal Standard	Noise Duration in Two-Hour Period
15 dBA	5 minutes
19 dBA	1 minutes

- For multifamily dwelling interior noise, Section 10.48.054, the sum of excess noise level and duration in minutes of a brief daytime incident shall not exceed 10 in any two-hour period, measured at the receiving location.
- Section 10.48.050A does not apply to Section 10.48.055 (Motor Vehicle Idling).
- Section 10.48.051 Landscape Maintenance Activities
 - This section states that the use of motorized equipment for landscape maintenance activities for public schools, public and private golf courses, and public facilities is limited to the hours of 7 AM to 8 PM on weekdays and 7 AM to 6 PM on weekends and holidays. The section also states that the use of motorized equipment for landscape maintenance activities is exempt from the noise limits set forth in Section 10.48.040 provided reasonable efforts are made by the user to minimize disturbances to nearby residents by, for example, installation of appropriate mufflers or noise baffles, running equipment only the minimal period necessary, and locating equipment so as to generate minimum noise levels on adjoining properties.
- 10.48.052 Outdoor Public Events
 - A: Outdoor events open to the general public on nonresidential property, such as parades, rallies, fairs, concerts and special sales and promotional events, involving generation of noise levels higher than would normally occur, by use of the human voice, public address systems, musical instruments, electronic amplification systems, and similar sound producing activities, are allowed upon obtaining an appropriate permit from the city, and subject to the following general limitations:
 - 1. The event shall not produce noise levels above seventy dBA on any residential property for a period longer than three hours during daytime.
 - 2. The event shall not produce noise levels above sixty dBA on any residential property during the period from eight p.m. to eleven p.m., and above fifty-five dBA for any other nighttime period.
 - 3. Continuous or repeated peak noise levels above ninety-five dBA shall not be produced at any location where persons may be continuously exposed.
 - B: The conditions imposed upon the event or activity in the permit issued by the City, regarding maximum noise level, location of noise sources, or duration of activity, for example, may be more limiting than this section, to protect certain individuals, areas or nearby activities which would otherwise be disturbed, and these permit conditions, when in conflict with this section, are overriding.

- 10.48.053 Grading, Construction and Demolition
 - Grading, construction, and demolition activities shall be allowed to exceed the noise limits of Section 10.48.040 during daytime hours; provided, that the equipment utilized has high-quality noise muffler and abatement devices installed and in good condition, and the activity meets one of the following two criteria:
 - No individual device produces a noise level more than 87 dBA at a distance of 25 feet; or
 - The noise level on any nearby property does not exceed 80 dBA.
 - Notwithstanding Section 10.48.053A, it is a violation of this chapter to engage in any grading, street construction, demolition, or underground utility work within 750 feet of a residential area on Saturdays, Sundays and holidays, and during the nighttime period, except as provided in Section 10.48.030.
 - Construction, other than street construction, is prohibited on holidays, except as provided in Sections 10.48.029 and 10.48.030.
 - Construction, other than street construction, is prohibited during nighttime periods unless it meets the nighttime standards of Section 10.48.040.
 - The use of helicopters as a part of a construction and/or demolition activity shall be restricted to between the hours of 9:00 AM and 6:30 PM Monday through Friday only, and prohibited on the weekends and holidays. The notice shall be given at least 24 hours in advance of said usage. In cases of emergency, the 24-hour notice period may be waived.
- 13.04 Parks
 - Section 13.04.190, Closing Hours – Prohibitions, states that no person shall remain, stay, or loiter in any public park between the hours of 10 PM and 6 AM, unless otherwise posted at the public park.

5.13.1.3 *Existing Conditions*

The existing noise environment on-site is dominated by traffic noise from Stevens Creek Boulevard, Stelling Road, Mary Avenue, Anton Way, Christensen Drive, and Alves Drive. In addition to the local traffic noise, noise is generated on-site by park visitors utilizing the softball field, tennis courts (including one court that is dual-lined to provide four pickleball courts), amphitheater, Cupertino Veterans Memorial, two playground areas, BBQ and picnic areas, Cupertino Senior Center, Quinlan Community Center, and parking lots. Visitors also use the softball field as an unsanctioned DOLA when the softball field is not in use. There are also events hosted in the park throughout the year, as detailed in Section 4.2 Park Programming, which draw up to 5,000 attendees for major events like the annual Cherry Blossom Festival. The average ambient noise at the park is 56 to 58 dBA CNEL. A summary of the long- and short-term noise levels measured on-site are included in Table 5.13-2 and Table 5.13-3 below. The noise measurement locations are shown on Figure 5.13-1 below.

Table 5.13-2: Summary of Long-Term Noise Measurement Data (dBA)

Noise Measurement Location	Daytime Leq Range	Nighttime Leq Range	Average Noise Level (CNEL)
LT-1: Memorial Park - West of Anton Way	49 to 60	34 to 55	58
LT-2: Memorial Park – Western Parking Lot	47 to 65	37 to 53	56 to 57

Source: Illingworth & Rodkin, Inc. Memorial Park Specific Plan Noise and Vibration Assessment. October 16, 2023.

Table 5.13-3: Summary of Short-Term Noise Measurement Data (dBA)

Noise Measurement Location	L _{max}	L ₍₁₎	L ₍₁₀₎	L ₍₅₀₎	L ₍₉₀₎	L _{eq}
ST-1: Memorial Park - Picnic Area	64	62	58	53	48	55
ST-2: Memorial Park - Event Lawn and Tennis Courts	60	53	49	46	45	47
ST-3: Memorial Park - Playground	68	62	59	56	55	57
ST-4: Memorial Park - Softball Field	71	69	68	65	54	65
ST-5 Memorial Park - Pickleball Courts	68	65	61	56	53	58
ST-6 Memorial Park - Tennis Courts	70	64	59	57	56	58

Source: Illingworth & Rodkin, Inc. Memorial Park Specific Plan Noise and Vibration Assessment. October 16, 2023.



NOISE MEASUREMENT LOCATIONS

FIGURE 5.13-1

5.13.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The CEQA Guidelines state that a project would normally be considered to have a significant impact if noise levels conflict with adopted environmental standards or plans, or if noise levels generated by the project will substantially increase existing noise levels at noise-sensitive receivers on a permanent or temporary basis. CEQA does not define what noise level increase would be substantial. As discussed in CEQA Guidelines Section 15064(b), the determination of whether a project may have a significant effect on the environment calls for judgment on the part of the lead agency and must be based to the extent possible on scientific and factual data.

-
- a) Would the project 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?
-

Construction Noise

The 2019 IS/MND determined that future projects under the Master Plan could require the use of heavy-duty construction equipment that could temporarily increase noise levels at adjacent property lines near construction areas. However, the 2019 IS/MND concluded that these projects would be subject to City General Conditions and the noise regulations within the Municipal Code, which would reduce temporary construction noise impacts to a less than significant level.¹⁰⁵

¹⁰⁵ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 176 to 180.

As discussed in Section 4.6 Construction, for the purposes of this analysis, it is assumed that construction of the project would be completed over a period of approximately 15 years as funding is made available for individual improvements, and would be split into three main construction phases. Section 10.48.053 of the City's Municipal Code exempts construction noise from the noise limits defined in Section 10.48.040 if activities occur on weekdays during daytime hours, provided that the equipment utilized has high-quality noise muffler and abatement devices installed and are in good condition. The construction activities also need to meet the following two criteria: 1) no individual device shall produce noise levels exceeding 87 dBA at a distance of 25 feet; and 2) the noise level measured at any nearby property shall not exceed 80 dBA. Construction activities are prohibited on weekends, holidays, or during nighttime hours at sites within 750 feet of residential land uses.

As described in additional detail in Appendix E, there are existing residences surrounding the project site that would be exposed to varying levels of construction noise over the buildout of the project.¹⁰⁶ The project-specific analysis determined that construction noise levels would potentially reach 75 dBA L_{eq} on occasion at the nearest residential land use during the first five year phase, 74 dBA L_{eq} during the second five-year phase, and 75 dBA L_{eq} during the third five-year phase, as calculated from the center of the project site phases. The potential highest noise levels for the nearest residences during each phase would occur in the demolition and grading and excavation phases of construction. These construction noise levels would not exceed the exterior threshold of 80 dBA L_{eq} at the nearby land uses. While specific construction activities would at times exceed these thresholds when work is conducted near shared property lines, construction would move throughout the project site during the planned period and would not constitute a significant temporary increase.

Consistent with the requirements in Section 17.04.050 of the Municipal Code, residents in the surrounding area would be notified prior to the beginning of construction activities and a sign would be posted with information regarding how to file a complaint for excessive noise generation during project construction. In addition, the project would prepare a Construction Noise Control Plan that would be reviewed by the City prior to the issuance of permits. This plan would outline the appropriate noise reduction measures to be implemented during construction activities, designate haul routes that would be designed to avoid sensitive receptors to the extent feasible, and detail the steps that contractors would take to limit unnecessary engine idling. With implementation of these measures and adherence to the City's noise standards, the project would result in less than significant construction noise impacts, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

¹⁰⁶ Similar to the air quality analysis, the noise assessment conservatively assumed that the former residential building east of the project site, currently occupied by a roofing company, is the closest residence.

Operational Noise

The 2019 IS/MND determined that future projects under the Master Plan could generate noise from expanded, modified, or new recreational activities and operations. However, the 2019 IS/MND concluded that these projects would not be likely to result in a significant permanent increase in ambient noise as the City would review the proposed project designs to be consistent with General Plan Goal HS-8 and Policy HS-8.2, as well as Municipal Code Section 10.40.010. Therefore, operational noise impacts would be less than significant.¹⁰⁷

Park Operations

The improvements under the project would include relocated playground areas, new/renovated picnic areas, upgraded amphitheater seating and infrastructure, a new basketball court, and eight new pickleball courts. As part of the project, the City would also officially allow limited use of the softball field as a DOLA. The park hours would not change under the project, and operating hours would continue to be from sunrise to 10:00 PM, seven days a week. The project would not include any changes to the type or scale of events hosted at the park. The primary noise generating improvements under the project would be the new/relocated playground areas, basketball court, and pickleball courts. The other improvements listed above would not generate substantial noise above existing conditions.

As described in additional detail in Appendix E, the hourly average noise levels are not expected to exceed the Municipal Code Section 10.48.040 65 dBA threshold at the property lines of any adjacent residential land uses while each of the individual improvements are in use. The Municipal Code Section 10.48.050 maximum noise level threshold of 84 dBA is not expected to be exceeded at any of the receptors, even in the combined worst hour scenario where it is assumed that the basketball court, all eight pickleball courts, the All-Abilities playground, and the Nature playground are being used simultaneously. Maximum noise levels could reach 71 dBA L_{max} at the adjacent residential land uses, which does not exceed the established maximum noise level threshold of 84 dBA.

Based on a review of the future roadway noise contours identified in the City's General Plan, future noise levels at the surrounding residences would range from 58 dBA CNEL to 61 dBA CNEL. Because future exterior noise levels are expected to be greater than 60 dBA CNEL, a three dBA CNEL increase as a result of the project would be considered significant. Assuming worst-case conditions where the basketball court and pickleball courts are in use from 7:00 AM to 10:00 PM and the playgrounds are assumed in use from 9:00 AM until 7:00 PM, the permanent noise level increases were estimated to range from zero to two dBA CNEL. Therefore, the proposed improvements within the park would not result in a significant increase in ambient noise level.

¹⁰⁷ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 176 to 180.

Parking Activities and Project Traffic

The project would add approximately nine new parallel parking stalls along Anton Way adjacent to the pickleball courts. The noise associated with these parking stalls would primarily be generated by engines, door slams, and human voices. The ambient noise level at the nearest residential receptor would not be expected to increase due to the addition of these stalls because the noise levels generated would be similar to the existing conditions. These stalls would generate additional vehicle trips along Anton Way; however, the number of trips generated by each stall (1.7 trips per parking space on weekdays and 1.16 trips per parking space on weekends)¹⁰⁸ would not be significant compared to the existing number of trips along Anton Way and Stevens Creek (hourly traffic volumes of 32 and 1,492, respectively).¹⁰⁹ Because the project would not generate a significant number of additional trips, there would be a zero dBA CNEL increase associated with the improvements.

As discussed above, the project would not result in a substantial permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the City's General Plan or noise ordinance, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- b) Would the project result in generation of excessive groundborne vibration or groundborne noise levels?
-

The 2019 IS/MND determined that implementation of the Master Plan would not result in the operation of equipment or activities that would generate substantial groundborne vibration levels once operational. However, the 2019 IS/MND disclosed that groundborne vibration could be perceptible for surrounding residential properties during construction of proposed projects. Although the short-term, intermittent construction equipment vibration would be perceptible, it was concluded that it would not be at excessive levels that could cause structural damage and would result in a less than significant impact.¹¹⁰

The construction of the project may generate vibration when heavy equipment or impact tools (e.g., hoe rams) are used in close proximity to existing buildings. Construction activities would include demolition, site preparation, grading, and excavation, building exterior, building interior, and paving. Pile driving, which can cause excessive vibration, is not expected to be required.

Table 5.13-4 shows the estimated vibration levels at nearby structures resulting from operation of construction equipment at the project site.

¹⁰⁸ TJKM. *Trip Generation for New Parking Lot at Cupertino Memorial Park in Cupertino, CA*. August 2, 2023. Page 2.

¹⁰⁹ Illingworth & Rodkin, Inc. *Memorial Park Specific Plan Noise and Vibration Assessment*. October 16, 2023. Page 30.

¹¹⁰ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 180 to 181.

Table 5.13-4: Vibration Levels for Construction Equipment

Equipment	PPV at 25 ft. (in/sec)	Vibration Levels at Nearest Buildings (in/sec PPV)				
		Multi-Family Residential West (30 ft)	Single-Family Residential East (55 ft)	Single-Family Residential North (60 ft)	Future Mix-Use West (250 feet)	
		Clam shovel drop	0.202	0.165	0.085	0.077
Hydromill (slurry wall)	In soil	0.007	0.010	0.003	0.003	0.001
	In rock	0.014	0.022	0.007	0.006	0.001
Vibratory Roller	0.21	0.172	0.088	0.080	0.017	
Hoe Ram	0.089	0.073	0.037	0.034	0.007	
Large bulldozer	0.089	0.073	0.037	0.034	0.007	
Caisson drilling	0.089	0.073	0.037	0.034	0.007	
Loaded trucks	0.076	0.062	0.032	0.029	0.006	
Jackhammer	0.035	0.029	0.015	0.013	0.003	
Small bulldozer	0.003	0.002	0.001	0.001	0.0002	

Source: Illingworth & Rodkin, Inc. *Memorial Park Specific Plan Noise and Vibration Assessment*. October 16, 2023.

As shown in Table 5.13-4, the project-generated vibration levels would fall below the recommended threshold of 0.3 in/sec PPV at surrounding buildings; therefore, vibration from construction activities would not be expected to cause structural damage at these locations. However, vibration levels may still be perceptible to adjacent residents. Given the temporary nature and short duration of the construction phases that would have the highest potential to produce perceptible vibration, this would not be considered significant, consistent with the findings of the 2019 IS/MND. Based on this discussion, the project would not result in generation of excessive groundborne vibration or groundborne noise levels, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- c) 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?
-

The 2019 IS/MND concluded that since the City is not located in a noise-impacted area for any airport, no impacts would occur as a result of Master Plan implementation.¹¹¹

The nearest airport to the project site is Moffett Federal Airfield, which is approximately 5.3 miles north of the site. According to the CLUP, the project site is not located within its AIA, nor is it located within the 65 dB noise contour of Moffett Federal Airfield.¹¹² These conditions have not changed; therefore, implementation of the project would result in the same impact as disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

¹¹¹ Ibid. Page 181.

¹¹² Santa Clara County Airport Land Use Commission. *Moffett Federal Airfield Comprehensive Land Use Plan*. December 2018.

5.14 Population and Housing

5.14.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Project site conditions are described below.

5.14.1.1 Existing Conditions

As of January 2023, the City of Cupertino had an approximate population of 59,154 with an average of 2.7 persons per household.¹¹³ The project site is currently developed with Memorial Park, the Cupertino Senior Center, and the Quinlan Community Center. There are no housing units on-site.

5.14.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<hr/>				
a) Would the project 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)?				

The 2019 IS/MND concluded that implementation of the Master Plan would not induce substantial population growth either directly or indirectly since no residential development would be proposed under the Master Plan.¹¹⁴

¹¹³ California Department of Finance. "Estimate E-1: Population and Housing Estimates for Cities, Counties, and the State — January 1, 2022 and 2023." May 2023. Accessed August 16, 2023. <https://dof.ca.gov/forecasting/demographics/estimates-e1/>.

¹¹⁴ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 182.

The proposed project would implement various improvements to an existing City park consistent with the assumptions in the 2019 IS/MND. No housing or commercial space would be constructed as a part of the project. In addition, the project would not involve the extension of infrastructure that could induce unplanned population growth. The project would construct pedestrian pathways and new bicycle lanes on-site to improve on-site movement of park users and improve access from the existing residential neighborhoods surrounding the project site. Based on this discussion, the project would not induce substantial unplanned population growth, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

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

The 2019 IS/MND concluded that implementation of the Master Plan would not displace existing people or housing such that the construction of replacement housing would be necessary since future projects would be limited to improvements within existing park facilities.¹¹⁵ This condition has not changed. There are no existing housing units or residents on-site; therefore, the project would result in the same impact disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

¹¹⁵ Ibid. Page 182.

5.15 Public Services

5.15.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.15.1.1 *Regulatory Framework*

Local

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies and strategies including, but not limited to, the policies and strategies listed below pertaining to public services.

Policy/Strategy	Description
Policy HS-3.2	Involve the Fire Department in the early design stage of all projects requiring public review to assure Fire Department input and modifications as needed.
Policy HS-4.2	Consider appropriate design techniques to reduce crime and vandalism when designing public spaces and reviewing development proposals.
Policy RPC-4.1	Design parks appropriately to address the facility and recreational programming required by each special area and neighborhood based on current and future plans for the areas.
Policy RPC-4.2	Design parks to enhance public safety by providing visibility to the street and access for public safety responders.
Policy RPC-6.1	Ensure that the City continues to offer a wide range of programs to serve diverse populations of all ages and abilities.

Cupertino 2020 Parks and Recreation System Master Plan

The City's 2020 Master Plan was adopted in February 2020, and outlines the City's comprehensive plan for parks and recreational facilities in the City through the year 2040. The Master Plan is organized around seven goals, which include conservation, connection, equitable access, enhancement, activity, quality, and sustainability. Each of the seven goals has associated objectives that reflect the City's desired outcomes and actions that provide ideas or strategies that help achieve the broader goals.

City of Cupertino Municipal Code

The City of Cupertino Municipal Code contains directives pertaining to public services. Title 13 of the Municipal Code provides regulations and standards for parks and recreation buildings in the City. Title 13 also regulates any activities that may occur at parks and recreation building, including sanitation requirements, vehicle requirements, picnic area requirements, advertising and sale restrictions, administrative and enforcement authority, and violation penalties.

5.15.1.2 Existing Conditions

Fire Protection Services

Fire protection for the project site is provided by the SCCFD, which currently operates 15 fire stations, three of which are in the City of Cupertino. Cupertino Fire Station 1 is closest to the project site at 20215 Stevens Creek Boulevard, approximately 0.9-mile east of the project site. There are five divisions within the SCCFD. The Fire Prevention Division is responsible for building plan review, construction inspections, hazardous materials regulation, and fire safety inspections of commercial businesses, multi-family residential buildings and schools.¹¹⁶ The fire suppression (emergency response) force is contained within the Operations Division.

Police Protection Services

Police protection in Cupertino is provided by the Santa Clara County Sheriff's Office, West Valley Division (SCCSO).¹¹⁷ The SCCSO West Valley Division headquarters are located at 1601 South De Anza Boulevard, which is approximately two miles southeast of the project site.

Schools

The project site is within the district boundaries for Cupertino Union School District (CUSD) and Fremont Union High School District (FUHSD).¹¹⁸

Parks

The City of Cupertino has approximately 224 acres of park, trails, and sports fields.¹¹⁹ The project site contains Memorial Park, which is the largest park in the City, and contains tennis courts, a softball field, an amphitheater, the Cupertino Veterans Memorial, playground areas, picnic areas, and the Memorial Park Gazebo. The Cupertino Sports Center, which includes tennis courts, basketball courts, and other recreational facilities, is located adjacent to the eastern boundary of the site.

¹¹⁶ City of Cupertino. "Fire Department." Accessed August 16, 2023. <https://www.cupertino.org/our-city/departments/public-safety-programs/fire-department>.

¹¹⁷ City of Cupertino. "Sheriff's Office." Accessed August 16, 2023. <https://www.cupertino.org/our-city/public-safety-programs/sheriff-s-office>.

¹¹⁸ City of Cupertino. "Schools." Accessed August 16, 2023. <https://www.cupertino.org/our-city/schools>.

¹¹⁹ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 184.

5.15.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, the 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:				
a) Fire Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Police Protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Other Public Facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

- a) 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 fire protection services?

The 2019 IS/MND concluded that the Master Plan would primarily involve minor projects that would not substantially alter the accessibility or response time of emergency personnel to park facilities; therefore, the Master Plan would have no impact on police services.¹²⁰

The project proposes improvements to an existing park consistent with the assumptions in the 2019 IS/MND. The improvements would not substantially change or increase the use of the park. The park would continue to host the same or similar events at the park as it does under current conditions. The project would not result in the any additional programming, nor is it meant to accommodate larger crowds for the events that are currently held in the park. Therefore, these improvements would not substantially alter the accessibility or response time for fire protection services compared to existing conditions.

¹²⁰ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 188.

In addition, the Fire Prevention Division of the SCCFD would continue to conduct their building plan reviews, construction inspections, hazardous materials reviews, and fire safety inspections as individual projects are implemented on-site. For those reasons, development of the proposed project would not result in a significant impact to fire protection services in the City or require the construction of new or expanded fire protection facilities, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

- b) 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 police protection services?
-

The 2019 IS/MND concluded that the Master Plan would primarily involve minor projects that would not substantially alter the accessibility or response time of emergency personnel to park facilities; therefore, the Master Plan would have no impact on fire protection services.¹²¹

As discussed under checklist question a) above, the project would implement improvements consistent with the assumptions in the 2019 IS/MND. The improvements would not result in any additional event programming, nor would it allow for larger crowds for the events that are currently held in the park. Therefore, these improvements would not substantially alter the accessibility or response time for police protection services compared to existing conditions. In addition, each phase implemented under the project would be reviewed to ensure that appropriate design techniques to reduce crime and vandalism are incorporated, consistent with General Plan Policy HS-4.2. Therefore, development of the proposed project would not result in a significant impact to police protection services in the City or require the construction of new or expanded police protection facilities, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

- c) 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 schools?
-

The 2019 IS/MND concluded that none of the recommended projects in the Master Plan would require the provision of new or physically altered school facilities, and that future projects on joint-

¹²¹ Ibid. Page 188.

use fields with school campuses would be reviewed by the City and school districts at the time project-level details were available. ¹²²

The proposed project does not include any residential units; therefore, it would not generate any new students that could increase demand on public schools in the project area. In addition, Memorial Park is not a joint-use facility. Therefore, the project would not impact existing school services or result in the need for new schools in the project area, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- d) 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 parks?
-

The 2019 IS/MND determined that future projects under the Master Plan would be reviewed again once project-level information become available for specific projects, and that programmatic mitigation measures in the IS/MND would mitigate potentially significant impacts to less than significant levels. ¹²³

The project would implement improvements within an existing park facility, and the potential environmental impacts associated with the construction and operation of those improvements are discussed throughout this Initial Study/Addendum. As documented in this Initial Study/Addendum, the project would implement all programmatic mitigation measures identified in the 2019 IS/MND (including, 2019 IS/MND Mitigation Measures AES-1, BIO-1, CULT-1), consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- e) 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 other public facilities?
-

The 2019 IS/MND concluded that the Master Plan would primarily involve minor projects within park facilities; therefore, the Master Plan would have no impact on other governmental facilities, such as libraries. ¹²⁴

¹²² Ibid. Page 188.

¹²³ Ibid. Pages 188 to 189.

¹²⁴ Ibid. Page 189.

As discussed in checklist questions a) through d) above, the project would implement improvements consistent with the 2019 IS/MND, and would not include any residential development that would increase the number of residents and their associated demand on public facilities in the area. Therefore, the proposed project would not increase demand on other public facilities such as libraries, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

5.16 Recreation

5.16.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.16.1.1 *Regulatory Framework*

Local

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies and strategies including, but not limited to, the policies and strategies listed below pertaining to recreation.

Policy/Strategy	Description
Policy RPC-3.1	Design parks to utilize natural features and the topography of the site in order to protect natural features and keep maintenance costs low.
Policy RPC-4.1	Design parks appropriately to address the facility and recreational programming required by each special area and neighborhood based on current and future plans for the areas.
Policy RPC-6.1	Ensure that the City continues to offer a wide range of programs to serve diverse populations of all ages and abilities.
Policy RPC-7.2	Design facilities to be flexible to address changing community needs.
Policy RPC-7.3	Design facilities to reduce maintenance, and ensure that facilities are maintained and upgraded adequately.

City of Cupertino Municipal Code

The City of Cupertino Municipal Code contains directives pertaining to public services. Title 13 of the Municipal Code sets regulations and standards for parks and recreation buildings in the City. In addition, Title 13 regulates any activities that may occur at parks and recreation buildings, including sanitation requirements, vehicle requirements, picnic area requirements, advertising and sale restrictions, administrative and enforcement authority, and violation penalties.

Cupertino Bicycle Transportation Plan

The City's Bicycle Transportation Plan was adopted in June 2016 and includes an assessment of the bicycle environment in Cupertino by mapping existing bicycle facilities, bicycle-related collisions between 2009 and 2014, and bicycle network stress assessments. It also includes recommended improvements, including a loop trail.

Cupertino Pedestrian Transportation Plan

The City of Cupertino Pedestrian Transportation Plan was adopted in February 2018 and is the blueprint for the City to achieve its vision of an inviting, safe, and connected pedestrian network that enhances the quality of life for all community members and visitors.

Cupertino 2020 Parks and Recreation System Master Plan

The City's Master Plan was adopted in February 2020, and outlines the City's comprehensive plan for parks and recreational facilities in the City through the year 2040. The Master Plan is organized around seven goals, which include conservation, connection, equitable access, enhancement, activity, quality, and sustainability. Each of the seven goals has associated objectives that reflect the City's desired outcomes and actions that provide ideas or strategies that help achieve the broader goals. The Master Plan has several goals and objectives regarding recreation, including:

- Objective 1.C, which calls for the maintenance of natural areas in parks to control invasive species and preparation of a maintenance management plan to identify the tasks, frequencies, staffing, and resources needed to manage, maintain, and steward natural resources.
- Objective 7.C, which calls for the stewardship of resources and maintenance of assets to ensure high quality park facilities through the provision of funding, training, and additional maintenance activities where needed.

5.16.1.2 *Existing Conditions*

The City of Cupertino has approximately 224 acres of park, trails, and sports fields.¹²⁵ The project site includes Memorial Park, which contains recreational facilities such as tennis courts, a softball field, and playground areas. The Cupertino Sports Center, which includes tennis courts, basketball courts, and other recreational facilities, is located adjacent to the eastern boundary of the site.

¹²⁵ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 184.

5.16.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility will occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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

The 2019 IS/MND determined that implementation of the Master Plan would likely increase the number of visitors to City parks by increasing capacity of the parks and recreational facilities and attracting additional users with improved facilities. The 2019 IS/MND concluded that future project would be reviewed individually once design-level details were available, and that they would follow Master Plan goals to ensuring that appropriate level of maintenance occurs, consistent with the goals, objectives, and policies in the City’s General Plan. This would reduce impacts to parks to a less than significant level.¹²⁶

As discussed in Section 5.15 Public Services, the project would construct various improvements on site consistent with the assumptions in the 2019 IS/MND. The improvements would not substantially change or increase the use of the park. The park would continue to host the same or similar events at the park as it does under current conditions. The project would not result in the any additional programming, nor is it meant to accommodate larger crowds for the events that are currently held in the park.

Consistent with General Plan Policies RPC-3.1, and RPC-7.3, the project would be designed to maintain existing, established natural features where possible to reduce the need for additional maintenance on new planted areas. In addition, the project is consistent with the Master Plan and would comply with Master Plan Objectives 1.C and 7.C by maintaining the established natural resources in the park where possible and evaluating maintenance needs on an ongoing basis to ensure adequate park maintenance in the future.

¹²⁶ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 193 to 194.

Adherence to these General Plan Policies and Master Plan Objectives would reduce the risk of substantial occurrence or acceleration of the physical deterioration of the facilities on-site, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- b) 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?
-

The 2019 IS/MND determined that implementation of the Master Plan could include projects that would create new park and recreational facilities, as well as enhance existing park and recreation facilities. The 2019 IS/MND concluded that future projects under the Master Plan would be reviewed at the project-level, comply with City regulations and General Conditions, and implement the 2019 IS/MND programmatic mitigation measures. This would mitigate potentially significant impacts of future projects to less than significant levels.¹²⁷

The improvements included in the project are consistent with the Master Plan, and would be designed to comply with all applicable regulations (including those in the General Plan, Specific Plan, Municipal Code, City General Conditions, and regional storm water runoff management requirements) and implement all programmatic mitigation measures identified in the 2019 IS/MND (including 2019 IS/MND Mitigation Measures AES-1, BIO-1, CULT-1) to reduce impacts to a less than significant level.

Based on this discussion, the project would result in the same impact as disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

¹²⁷ Ibid. Page 194.

5.17 Transportation

The following discussion is based on the Trip Generation Technical Memorandum completed by TJKM dated August 2023. A copy of the memorandum is included in Appendix F of this Initial Study/Addendum.

5.17.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.17.1.1 *Regulatory Framework*

State

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 the Governor’s Office of Planning and Research (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.

Regional and Local

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies including, but not limited to, the policies and strategies listed below pertaining to transportation.

Policy/Strategy	Description
Policy LU-3.1	Ensure that project sites are planned appropriately to create a network of connected internal streets that improve pedestrian and bicycle access, provide public open space and building layouts that support city goals related to streetscape character for various Planning Areas and corridors.
Policy LU-27.4	Support pedestrian and bicycling improvements that improve access with neighborhoods to parks, schools and local retail, and between neighborhoods. Support traffic calming measures rather than blocking the street to reduce traffic impacts on neighborhoods.

Policy/Strategy	Description
Policy RPC-5.2	Develop a citywide network of pedestrian and bicycle pathways to connect employment centers, shopping areas and neighborhoods to services including parks, schools, libraries and neighborhood centers.
Strategy RPC-5.1.1	Implement recommendations in the Bicycle and Pedestrian Plan that link trails and open space to neighborhoods and special areas.
Policy M-1.2	Participate in the development of new multi-modal analysis methods and impact thresholds as required by Senate Bill 743. However, until such impact thresholds are developed, continue to optimize mobility for all modes of transportation while striving to maintain the following intersection Levels of Service (LOS) at AM and PM peak traffic hours: <ul style="list-style-type: none"> • Major intersections: LOS D; • Stevens Creek Boulevard and De Anza Boulevard: LOS E+; • Stevens Creek Boulevard and Stelling Road: LOS E+; and • De Anza Boulevard and Bollinger Road: LOS E+
Policy M-2.3	Promote pedestrian and bicycle improvements that improve connectivity between planning areas, neighborhoods and services, and foster a sense of community.
Policy M-3.1	Adopt and maintain a Bicycle and Pedestrian master plan, which outlines policies and improvements to streets, extension of trails, and pathways to create a safe way for people of all ages to bike and walk on a daily basis, and as shown in Figure M-1 of the General Plan.
Policy M-3.6	Require parking lots to include clearly defined paths for pedestrians to provide a safe path to building entrances.
Policy M-3.7	Plan for improvements to pedestrian and bicycle facilities and eliminate gaps along the pedestrian and bicycle network as part of the City’s Capital Improvement Program.
Policy M-8.2	Support development and transportation improvements that help reduce greenhouse gas emissions by reducing per capita VMT, reducing impacts on the City’s transportation network and maintaining the desired levels of service for all modes of transportation.

Heart of the City Specific Plan

The Heart of the City Specific Plan guides development and redevelopment of the Stevens Creek Boulevard corridor to implement the vision of “pedestrian-inclusive gathering places” to support a sense of place for Cupertino residents and visitors. The Specific Plan also includes streetscape design guidelines that emphasize improving the pedestrian environment.

Cupertino 2020 Parks and Recreation System Master Plan

The City’s Master Plan was adopted in February 2020, and outlines the City’s comprehensive plan for parks and recreational facilities in the City through the year 2040. The Master Plan is organized around seven goals, which include conservation, connection, equitable access, enhancement, activity, quality, and sustainability. Each of the seven goals has associated objectives that reflect the City’s desired outcomes and actions that provide ideas or strategies that help achieve the broader goals. The Master Plan has several goals and objectives that are related to improved transportation facilities.

Cupertino Bicycle Transportation Plan

The City's Bicycle Transportation Plan was adopted in June 2016 and includes an assessment of the bicycle environment in Cupertino by mapping existing bicycle facilities, bicycle-related collisions between 2009 and 2014, and bicycle network stress assessments. It also includes recommended improvements, including a loop trail. The Bicycle Transportation Plan also recommends constructing Class IV Separated Bike Lanes on Steven Creek Boulevard and Stelling Road, Class II Buffered Bike Lanes on Mary Avenue, and Class III Bike Routes within Memorial Park that would connect Christensen Drive with Mary Avenue and Alves Drive.

Cupertino Pedestrian Transportation Plan

The City of Cupertino Pedestrian Transportation Plan was adopted in February 2018 and is the blueprint for the City to achieve its vision of an inviting, safe, and connected pedestrian network that enhances the quality of life for all community members and visitors.

Cupertino ADA Transition Plan (2015)

The City adopted an ADA Self-Evaluation and Transition Plan in 2015 to review the programs, activities, and services provided by the City and identify and prioritize the removal of current barriers to accessibility in public facilities, including parks and recreational facilities.

City of Cupertino Municipal Code

The City outlines numerous policies relating to vehicles, bicycles, pedestrians, parking, and traffic in Title 11 of the Municipal Code. Chapter 11.08 discusses bicycle use, Chapter 11.09 discusses pedestrians, Chapters 11.24 to 11.28 discusses parking regulations, Chapter 11.32 discusses truck traffic routes, and Chapter 11.34 discusses roadway design features.

5.17.1.2 *Existing Conditions*

Roadway Access

Regional access to the project site is provided by SR 85, Interstate 280 (I-280), De Anza Boulevard, and Stevens Creek Boulevard. Local roadway access to the project site is provided by Mary Avenue, Stelling Road, Alves Drive, and Anton Way.

Existing Bicycle, Pedestrian, and Transit Facilities

Bicycle Facilities

Bicycle facilities within the vicinity of the project site consist of Class II bike lanes, enhanced bike lanes, and Class III bike routes.^{128, 129} Stevens Creek Boulevard, which is adjacent to the southern border of the project site, is classified as an enhanced bike lane along the project frontage that is oriented in an east-west direction. Stelling Road is classified as a Class II bike lane, and it has additional enhancements south of the Stevens Creek Boulevard intersection. Stelling Road is oriented in a north-south direction. Mary Avenue, which is west of the project site, also provides Class II bike lanes in a general north-south direction. Greenleaf Drive, which is north of the project site, is a Class III bike route that intersects with both Mary Avenue and Stelling Road. Bicycle parking is provided on-site adjacent to the Senior Center and Quinlan Community Center.

Pedestrian Facilities

The site has sidewalks on the project frontages along Stevens Creek Boulevard, Alves Drive, Stelling Road, and Mary Avenue. There are designated pedestrian walkway entrances to the site on Stevens Creek Boulevard, Anton Way, Alves Drive, Stelling Road, Christensen Drive, and Mary Avenue. The site has pedestrian paths throughout the whole park that connect to the different on-site recreational facilities and features such as the amphitheater and Veterans Memorial.

The primary intersection, Mary Avenue/Stevens Creek Boulevard, is a signalized intersection that has striped crosswalks on three out of the four sides of the intersection. The Stelling Road/Alves Drive intersection has striped crosswalks on all four sides of the intersection and, and the two crosswalks that cross Stelling Road have pedestrian activated flashing lights to alert vehicles.

¹²⁸ City of Cupertino. *Cupertino Bicycle Transportation Plan*. June 2016. Page 1-8.

¹²⁹ Class II bike lanes are characterized as on-street bike lanes with a striped lane, pavement markings, and signage for one way bicycle traffic. Enhanced bike lanes are typically Class II bike lanes that have been enhanced with green paint and/or buffer striping to increase visibility or lateral separation from vehicular traffic. Class III bike routes are typically characterized as streets where the lanes are wide enough, and the number of vehicles is low enough for both bicycles and vehicles to share the road.

Transit Facilities

The existing bus transit services in the vicinity of the project site are provided by VTA. There are two bus stops located along the project frontages, one is located on the northeast corner of the site in front of the Quinlan Community Center on Stelling Road and the second is located on the southwest corner of the site adjacent to the Senior Center on Stevens Creek Boulevard. The VTA services operating in the vicinity of the project area are listed below with information regarding their headways, or the frequency at which transit vehicles arrive at the transit stop during peak travel hours.

- **Local Route 51** runs from West Valley College to the Ames Research Center via the Stevens Creek Boulevard/Stelling Road intersection with peak headways of 30 minutes.
- **Local Route 55** runs from the Old Ironsides Station to De Anza College with peak headways of 30 minutes.
- **Frequent Route 23** runs from De Anza College to the Alum Rock Station with peak headways between 13 to 15 minutes.
- **Frequent Route 25** runs from the Stevens Creek Boulevard/Stelling Road intersection to the Alum Roack Station with peak headways of 23 minutes.
- **Rapid Route 523** runs from San José State University to Lockheed Martin via De Anza College with peak headways of 15 minutes.

5.17.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible land uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<hr/>				
a) Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadways, bicycle lanes, and pedestrian facilities?				

The 2019 IS/MND determined that the Master Plan included recommended projects that were consistent with recommendations in the City’s Bicycle Transportation Plan, Pedestrian

Transportation Plan, General Plan, and Countywide Trails Master Plan. It was concluded that since the Master Plan was consistent with these plans and future projects would be reviewed at the project-level to determine if potential impacts were covered by the programmatic 2019 IS/MND, there would be no impacts.¹³⁰

Roadway System

Section 17.08.030 of the Municipal Code provides screening guidelines for evaluating the transportation impacts of land use projects. As discussed further below, the project is consistent with General Plan Policies LU-3.1, LU-27.4, RPC-5.2, and M-2.3 because it would provide additional bicycle and pedestrian facilities that would improve local circulation and park accessibility. In addition, the project site is located within one-quarter mile of a High-Quality Transit Corridor or transit stop as defined by CEQA due to its location adjacent to Stevens Creek Boulevard and its proximity to nearby bus stops served by VTA. Therefore, the project would not be required to prepare a VMT analysis, consistent with Section 17.08.030 of the Municipal Code. In addition, parks (including the project site) are government/public facilities which are generally assumed to be local serving and are typically screened out of VMT requirements.

No changes are proposed to the surrounding streets as part of the project. The improvements to on-site parking would be consistent with the requirements listed in Chapters 11.24 to 11.28 of the Municipal Code, which outline the spacing, marking, and accessibility requirements for public parking areas. Based on this discussion, the project would not conflict with any program, plan, ordinance, or policy addressing the roadway system, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

Bicycle Facilities

The proposed Class I Bike Paths within the park would be consistent with what was recommended in the 2016 Bicycle Transportation Plan. These Class I Bike Paths would link the existing bicycle facilities on Alves Drive, Stelling Road, Christensen Way, and Mary Avenue by providing dedicated bicycle paths on-site. In addition, the project would install short- and long-term bicycle parking throughout the site and at key entry points to the park. This would be consistent with the vision of the Special Area and General Plan Policies LU-3.1, LU-27.4, RPC-5.2, and M-2.3. None of the proposed improvements would interfere with the improvements recommended in the 2016 Bicycle Plan for Mary Avenue and Stevens Creek Boulevard. In addition, these improvements would be consistent with General Plan Policies M-2.3, M-3.1, and M-8.2 by improving connectivity between neighborhoods, implementing recommendations from the 2016 Bicycle Transportation Plan, and constructing improvements that help reduce per capita VMT. Based on this discussion, the project would not conflict with any program, plan, ordinance, or policy addressing the bicycle circulation system, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

¹³⁰ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 201 to 202.

Pedestrian Facilities

Pedestrian facilities in the project area consist of sidewalks, crosswalks, pedestrian signals, and pedestrian pathways within Memorial Park. The project would maintain and realign existing pedestrian pathway entrances on each side of the park. All pedestrian pathways in the park would be resurfaced to ensure ADA compliance, and access points at the parking lots on-site would be updated with ADA compliant curb ramps. This would be consistent with the recommendations made in the City's 2015 ADA Transition Plan. The project would also be consistent with General Plan Policies LU-3.1, LU-27.4, RPC-5.2, and M-2.3 because it would provide additional pedestrian facilities that would improve local circulation and park accessibility. Based on this discussion, the project would not conflict with a program, plan, ordinance, or policy addressing the pedestrian circulation system, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

Transit Facilities

The project area is served by five VTA bus routes with stops within walking distance of the project site. The proposed project would result in the construction of various improvements within Memorial Park, but it is not expected to result in a substantial increase in use compared to existing conditions. Based on this discussion, the existing transit services in the area would continue to function adequately and the project would not obstruct the operation of the existing transit facilities, or conflict with a program, plan, ordinance, or policy addressing the transit circulation system, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

b) Would the project conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?

The 2019 IS/MND determined that while individual park improvements may increase usage of that park (resulting in increased vehicle trips and VMT), this increase would not be significant because most of those trips were assumed to be generated within Cupertino and the distances to neighborhood and local parks would be relatively short. The 2019 IS/MND concluded that since future projects under the Master Plan would not alter existing land use patterns and would be consistent with adopted City transportation and multi-modal planning policies, implementation of the Master Plan would result in less than significant VMT impacts.¹³¹

The project would maintain the existing park land use on-site and include bicycle and pedestrian improvements consistent with the assumptions in the 2019 IS/MND. Furthermore, parks (including the project site), are government/public facilities which are generally assumed to be local serving and are typically screened out of VMT requirements. In addition, as discussed briefly in checklist question a) above, the project is consistent with applicable General Plan policies and is located

¹³¹ Ibid. Pages 202 to 203.

within one-quarter mile of a High-Quality Transit Corridor. Therefore, the project would not be required to prepare a VMT analysis, consistent with Section 17.08.030 of the Municipal Code, and is assumed to have a less than significant VMT impact.

Based on this discussion, the project would not conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b), consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

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

The 2019 IS/MND concluded that future projects would be designed according to design and circulation policies for vehicles, bicycles, and pedestrians which would reduce hazards and traffic conflicts from incompatible uses to a less than significant level.¹³²

The project would consist of constructing minor improvements within Memorial Park, and would not introduce any incompatible land uses on-site. No physical changes are proposed to off-site public-right-of-way. The design of pedestrian pathways and bike lanes on-site would be consistent with City requirements as outlined in Chapter 11.08 of the Municipal Code. Changes to the existing parking lots on-site would be made consistent with requirements in the Municipal Code regarding driveway widths, site triangles, and drive aisle widths. The final site design of these improvements would be reviewed by the City to ensure that no hazards are created through project implementation. Therefore the project would have a less than significant impact related to geometric design hazards, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- d) Would the project result in inadequate emergency access?
-

The 2019 IS/MND concluded that implementation of the Master Plan would not include improvements that would alter the roadway system in a manner that would affect emergency access and future projects would be designed according to adopted City policies to ensure all standards for emergency access were met. Therefore, there would be no impact to emergency access.¹³³

Consistent with the assumptions in the 2019 IS/MND, the project would not include development of structures within the public rights-of-way and no alteration to the geometry of adjacent roadways would occur. The project would maintain existing emergency access to the site and the proposed improvements would be reviewed for consistency with applicable California Building Code

¹³² Ibid. Page 203.

¹³³ Ibid. Page 203.

and Fire Code requirements for access and safety at the time they are designed. As such, the proposed project would not have a significant emergency access impact, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project).**

5.18 Tribal Cultural Resources

5.18.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.18.1.1 *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

City of Cupertino Municipal Code

Section 17.04.050 of the City's Municipal Code outlines standard environmental protection permit submittal requirements. Among other requirements, this section includes specific measures for development projects to protect archaeological resources and tribal cultural resources. These measures include providing contractors with basic archaeological site indicators, ceasing work activities if resources are discovered, and consulting with tribal representatives.

Cupertino General Conditions

The City of Cupertino maintains a list of general conditions that contractors must implement or comply with while working on municipal projects. The following General Condition relates to cultural resources.

General Condition 7.18: Historic or Archeological Items.

(A) Contractor’s Obligations. Contractor must ensure that all persons performing Work at the Project site are required to immediately notify the Project Manager, upon discovery of any potential historic or archeological items, including historic or prehistoric ruins, a burial ground, archaeological or vertebrate paleontological site, including fossilized footprints or other archeological, paleontological or historical feature on the Project site (collectively, “Historic or Archeological Items”).

(B) Discovery; Cessation of Work. Upon discovery of any potential Historic or Archeological Items, Work must be stopped within an 85-foot radius of the find and may not resume until authorized in writing by the City. If required by City, Contractor must assist in protecting or recovering the Historic or Archeological Items, with any such assistance to be compensated as Extra Work on a time and materials basis under Article 6, Contract Modification. At the City’s discretion, a suspension of Work required due to discovery of Historic or Archeological Items may be treated as Excusable Delay pursuant to Article 5, or as a suspension for convenience under Article 13.

5.18.1.2 *Existing Conditions*

There are no known TCRs on-site. As discussed in Section 5.5 Cultural Resources, the site has a moderate sensitivity for pre-historic resources and a moderate sensitivity for historic-era archaeological resources.

5.18.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
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:				
a) 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)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<hr/>				
a) Would the project 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)?				

The 2019 IS/MND determined that future projects under the Master Plan could have the potential to encounter native soils and uncover historic or prehistoric tribal cultural artifacts. The 2019 IS/MND concluded that compliance with federal, state, General Plan, and Municipal Code policies in addition to implementation of 2019 IS/MND Mitigation Measure CULT-1 would reduce impacts to a less than significant level.¹³⁴

The project site does not contain any known TCRs. As discussed in Section 5.5 Cultural Resources, the project shall conduct a subsurface investigation (Extended Phase I Study) prior to the start of ground disturbing activities on-site, consistent with the requirements of Municipal Code Section

¹³⁴ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 207 to 208.

17.04.050. If any improvements on-site require ground-disturbing activities that reach a depth below four feet, an Extended Phase I Study shall be performed in the vicinity of those improvements to confirm the presence/absence of pre-colonial archaeological resources and/or TCRs.

Should any pre-colonial archaeological resources and/or TCRs be discovered during the subsurface testing, the project would comply with the requirements of 2019 IS/MND Mitigation Measure CULT-1 and City General Condition 7.18 to ensure that appropriate treatment plans are prepared under consultation with a qualified archaeologist and the California Native American Heritage Commission. Based on this discussion, impacts to TCRs would be less than significant, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

-
- b) Would the project 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?
-

As discussed under checklist question a), no TCRs were identified on the project site and compliance with Municipal Code Section 17.04.050 and implementation of 2019 IS/MND Mitigation Measure CULT-1 and City General Condition 7.18 would reduce impacts unknown, buried TCRs (if present on-site) to a less than significant level. As such, the project would not cause a substantial adverse change in the significance of a TCR, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

5.19 Utilities and Service Systems

5.19.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND, with the exception of the Urban Water Management Plan (UWMP) prepared by San José Water in 2020. Key regulations and project site conditions are described below.

5.19.1.1 *Regulatory Framework*

State

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 a 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 Cupertino adopted its most recent UWMP prepared by San José Water in 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. CalRecycle released an analysis titled “Analysis of the Progress Toward the SB 1383 Organic Waste Reduction Goals” in August of 2020, which recommended maintaining the disposal reduction targets set forth in SB 1383.¹³⁵

California Green Building Standards Code

In January 2010, the State of California adopted the California Green Building Standards Code, 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

¹³⁵ California Department of Resources Recycling and Recovery. *Analysis of the Progress Toward the SB 1383 Organic Waste Reduction Goals*. August 18, 2020.

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; and
- Recycling and/or salvaging 50 percent of nonhazardous construction and demolition debris.

Local

Cupertino General Plan: Community Vision 2015-2040

The proposed project is subject to General Plan policies including, but not limited to, the policies and strategies listed below pertaining to utilities and service systems.

Policy/Strategy	Description
Policy INF-3.1	Coordinate with water providers and agencies in their planning and infrastructure process to ensure that the City continues to have adequate supply for current needs and future growth.
Policy INF-5.2	Look for ways to reduce demand on the City’s wastewater system through implementation of water conservation measures.
Policy INF-7.2	Ensure that public and private developments build new and on-site facilities and/or retrofit existing on-site facilities to meet the City’s waste diversion requirements.
Strategy INF-2.4.2	Require undergrounding of all utility lines in new developments and highly encourage undergrounding in remodels or redevelopment of major projects.
Strategy INF-7.3.2	Encourage recycling and reuse of building materials during demolition and construction of City, agency and private projects.
Strategy RPC-3.1.1	Maximize the use of native plants and drought-tolerant planting.

Cupertino Zero Waste Plan

The City included a Zero Waste Plan within the Climate Action Plan 2.0 that was adopted on August 16, 2022. This portion of the plan includes three zero waste measures and a series of corresponding actions that can be implemented to reduce solid waste in the City.

- Measure W-1: Implement SB 1383 requirements and reduce communitywide landfilled organics 75 percent by 2025 and inorganic landfilled waste 35 percent by 2030. Reduce all landfilled waste 90 percent by 2040.
- Measure W-2: Reduce overall waste disposed to garbage, recycling, and compost per capita by 15 percent by 2035.
- Measure W-3: Meet or exceed the SB 1383 recycled organics products procurement requirements and sequester or avoid at least 0.018 MT CO2e per person by 2045.

Cupertino Municipal Code

The Municipal Code includes the following provisions regarding utilities and service systems:

- Chapter 14.15, Landscaping Ordinance, establishes water-efficient landscaping standards to conserve water use on irrigation. The provisions of this chapter apply to landscaping projects that include irrigated landscape areas, exceeding 2,500 square feet when these projects are associated with new water service, subdivision improvements, grading and drainage improvements, a new construction subject to a building permit, or building additions or modifications subject to grading and drainage plan approval.
- Chapter 15.20, Sewage Disposal Systems, establishes standards for the approval, installation, and operation of individual on-site sewage disposal systems consistent with the RWQCB standards. The chapter sets regulation for connecting to public sanitary sewer system.
- Chapter 16.58, Green Building Ordinance, includes the CALGreen requirements with local amendments for projects in the City. The City’s Green Building Ordinance codifies green building techniques, including measures affecting water use efficiency and water conservation. Section 16.58.220 includes Table 101.10 that identifies the green building requirements by type of building. Section 16.58.230 permits applicants to apply an alternate green building standard for a project in lieu of the minimum standards outlined in Section 16.58.220 that meet the same intent of conserving resources and reducing solid waste.
- Chapter 16.72, Recycling and Diversion of Construction and Demolition Waste, requires all projects within the City that involve construction, demolition, or renovation of 3,000 square feet or more to comply with the provisions of the chapter, and the compliance with the chapter will be attached as conditions of approval of any building or demolition permit issued. An applicant for a covered project is required to recycle or divert at least 60 percent of all generated construction and demolition (C&D) waste by salvage or by transfer to an approved facility. Prior to the permit issuance, the applicant is required to submit a properly completed Waste Management Plan, which includes the estimated maximum amount of C&D waste that can feasibly be diverted, which facility will handle the waste, and the total amount of C&D waste that will be landfilled.

5.19.1.2 *Existing Conditions*

Water Supply Sources

Potable water in Cupertino is provided by the California Water Service Company (Cal Water) and the San José Water Company (SJWC), who both purchase their water from Valley Water.¹³⁶ SJWC operates, maintains, and improves the Cupertino Municipal Water System (CMWS), which covers

¹³⁶ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 209.

the western portion of the City (including the project site). In 2020, the CMWS supplied 860 million gallon (MG) of potable water within its service area.¹³⁷ Currently, the project site utilizes potable water for drinking fountains, restrooms, interior plumbing, and landscape irrigation on-site.

Wastewater

Wastewater collection and treatment are provided to most of the City, including the project site, by the Cupertino Sanitary District (CSD).¹³⁸ The limited amount of wastewater generated on-site flows to existing eight-inch main lines in Christensen Drive, Alves Drive, Stelling Road, and the parking lot north of the Senior Center.¹³⁹ The wastewater collected by CSD is routed to the San José/Santa Clara Water Pollution Control Plant (WPCP) for treatment, which has a capacity to treat 167 million gallons per day (mgd) of wastewater. In 2022, the WPCP's average influent flow was 84.1 mgd.¹⁴⁰

Stormwater Drainage

Stormwater in the City is captured by Cupertino's storm drain system. Stormwater runoff from the project site is collected in storm drain inlets and routed to a 15-inch main line in Christensen Drive, a 45-inch main line in Stelling Road, a 12-inch main line in Alves Drive, a 22-inch to 27-inch line parallel to the western boundary of the site, an 18-inch main line in Mary Avenue, and a 24-inch main line in Stevens Creek Boulevard.

Solid Waste

Non-hazardous solid waste in Cupertino is sorted and disposed of at Newby Island Sanitary Landfill (NISL). As of January 2023, NISL had approximately 12.4 million cubic yards of capacity remaining and an estimated closure date of 2035.¹⁴¹ The project site currently generates limited amounts of waste (compared to other land uses like residential and commercial land uses).

Electric, Gas and Telecommunications Services

SVCE sources the electricity for properties in Cupertino and PG&E is responsible for delivering it through their existing utility lines. Electricity lines on-site are undergrounded. Electricity is used on-site for nighttime security lighting, operation of the community center and senior center buildings, and operation of the landscaping equipment.

¹³⁷ San José Water Company. *2020 Urban Water Management Plan*. June 2021. Page 2-1.

¹³⁸ Cupertino Sanitary District. "District Boundaries Map." Accessed August 18, 2023.

https://www.cupertinosanitarydistrict.org/services_service_area.

¹³⁹ Cupertino Sanitary District. "Maps: Sheet 7." Accessed August 18, 2023.

<https://www.cupertinosanitarydistrict.org/maps>.

¹⁴⁰ San José-Santa Clara Regional Wastewater Facility. *2022 Self-Monitoring Annual Report*. Page 5. Accessed September 27, 2023. Available at:

<https://www.sanjoseca.gov/home/showpublisheddocument/94789/638124181781530000>.

¹⁴¹ Boccaleoni, Anthony. Division Manager, Republic Services. Personal Communication. May 12, 2023.

5.19.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
Would the project:				
a) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Be noncompliant with federal, state, and local management and reduction statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<hr/>				
a) Would the project 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?				

The 2019 IS/MND determined that future projects under the Master Plan could require the installation of new water, stormwater drainage, and electric power facilities. However, these improvements would be done according to City policy and would include the implementation of

construction BMPs and General Conditions that would reduce potential impacts to a less than significant level.¹⁴²

The project would require the construction of new water, sanitary sewer, stormwater, and electric lines on-site and lateral connections to existing utility lines in surrounding streets to serve the relocated restrooms, power new lighting fixtures, and connect the new landscape irrigation equipment. The project would comply with the existing regulations, mitigation measures from the 2019 IS/MND, and City General Conditions identified throughout this Initial Study/Addendum to reduce potential environmental impacts during construction activities to a less than significant level, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

b) Would the project have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Based on the 2015 UWMP prepared by Valley Water, the 2019 IS/MND concluded that the Cupertino service area would maintain adequate supplies of water in future Normal Year, Single Dry Year, and Multiple Dry Year conditions. In addition, as future projects are proposed, project-level information would be reviewed by the City in accordance with CEQA which would reduce potential impacts to a less than significant level.¹⁴³

The 2020 UWMP that was prepared by SJWC subsequent to the adoption of the 2019 IS/MND discussed water supply reliability and drought risks within their service area, but since Valley Water supplies most of SJWC's water supply, they also utilized the findings and analysis included in Valley Water's 2020 UWMP.¹⁴⁴ As part of Valley Water's 2020 UWMP, a Drought Risk Assessment was conducted and found that Valley Water would have sufficient supplies to meet SJWC's demand through 2045 under normal year, single dry year, and five consecutive dry year conditions.¹⁴⁵ To ensure that adequate water supply is maintained during dry and multiple dry years where there may be shortfalls in supply, SJWC prepared a Water Shortage Contingency Plan that would institute mandatory conservation measures, with escalating levels of conservation requirements as the shortages in water supply increase. These measures include limiting outdoor water use, installing flow restrictor devices, and prohibiting non-essential uses of water.¹⁴⁶

The project would prioritize the planting of drought tolerant landscaping and would install high-efficiency irrigation equipment to limit water demand. The project would be required to comply with any conservation measures mandated by SJWC during future drought years. Compliance with

¹⁴² City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 215.

¹⁴³ Ibid. Page 215.

¹⁴⁴ San José Water Company. *2020 Urban Water Management Plan*. June 2021. Page 7-1.

¹⁴⁵ San José Water Company. *2020 Urban Water Management Plan*. June 2021. Page 7-13.

¹⁴⁶ San José Water Company. *2020 Urban Water Management Plan*. June 2021. Table 8-1.

these mandatory conservation measures and the limiting of water demand on-site through the use of drought tolerant landscaping and high-efficiency irrigation equipment would ensure that sufficient water supply is maintained in normal, dry, and multiple dry years, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

- c) Would the project 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?
-

The 2019 IS/MND determined that most of the projects recommended under the Master Plan would be smaller projects related to improving park amenities, infrastructure, or landscaping and would not result in an increase in the generation of wastewater. Although some projects such as renovation of existing park buildings and adding restrooms could result in a small increase in wastewater generation, it was found that this would not result in the exceedance of wastewater treatment capacity in the system. Any larger projects in the Master Plan would be reviewed at the time that project-level plans become available to ensure that impacts to the wastewater treatment system are reduced to a less than significant level.¹⁴⁷

The project would improve existing park amenities, upgrade two of the existing restrooms on-site, and would construct one new restroom south of the softball field. The proposed improvements would not substantially change or increase the use of the park. For this reason, the project would result in similar wastewater generation as under existing conditions. Given the existing, available treatment capacity at the WPCP (82.9 mgd) and the fact that the project would not result in substantially different wastewater treatment demand than under existing conditions, there would continue to be sufficient capacity at the WPCP to serve the project and future treatment demand, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

- d) Would the project 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?
-

The 2019 IS/MND determined that although future projects under the Master Plan could potentially increase solid waste generation due to increased uses of recreational facilities, it would not result in substantial amounts that would be in excess of state or local standards, or in excess of the capacity of local landfills such as Newby Island Sanitary Landfill (NISL). Therefore, implementation of the Master Plan would result in less than significant impacts.¹⁴⁸

¹⁴⁷ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 215 to 216.

¹⁴⁸ Ibid. Page 216.

In compliance with CALGreen requirements and consistent with General Plan Strategy INF-7.3.2, the project would be required to recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition debris resulting from construction activities. In addition, contractors implementing the project would be required to prepare Waste Management Plans, consistent with Chapter 16.72 of the Municipal Code.

The proposed improvements would not substantially change or increase the use of the park; therefore, the project would result in similar solid waste generation as under existing conditions. In addition, as discussed further in checklist question e) below, the project would be designed in compliance with the City's recycling requirements and Zero Waste Plan which would limit the amount of operational waste disposed of on-site. As of January 2023, NISL had approximately 12.4 million cubic yards of capacity remaining and an estimated closure date of 2035.¹⁴⁹ Based on the remaining capacity at NISL and the fact that the project would not result in substantially different solid waste generation than under existing conditions, NISL would have sufficient capacity to serve the project.

Because the project can be served by a landfill with capacity and would be required to comply with existing local and state programs and regulations, the project's impacts related to solid waste and landfill capacity and attainment of solid reduction goals would be less than significant, consistent with the findings of the 2019 IS/MND. **(Same Impact as Approved Project)**

e) Would the project be noncompliant with federal, state, or local management and reduction statutes and regulations related to solid waste?

The 2019 IS/MND concluded that since future projects would comply with the City's Zero Waste Policy and divert at least 65 percent of the construction waste from future projects, implementation of the Master Plan would not be noncompliant with any federal, state, or local management and reduction statutes and regulations related to solid waste.¹⁵⁰

As discussed under checklist question d) above, the proposed project would comply with state and local regulations related to solid waste reduction. The project would be consistent with Municipal Code requirements and comply with CALGreen standards for construction waste recycling and divert at least 65 percent of construction waste resulting from construction activities on-site. In addition, contractors hired to construct these improvements would be required to prepare a Waste Management Plan consistent with Municipal Code requirements. Consistent with SB 1383 and the City's Zero Waste Plan, organic waste collected on-site would continue to be diverted from landfills. The project, therefore, would result in the same impact as disclosed in the 2019 IS/MND. **(Same Impact as Approved Project)**

¹⁴⁹ Boccaleoni, Anthony. Division Manager, Republic Services. Personal Communication. May 12, 2023.

¹⁵⁰ City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Page 216.

5.20 Wildfire

5.20.1 Environmental Setting

The regulatory framework and existing conditions have not changed substantially since the adoption of the 2019 IS/MND. Key regulations and project site conditions are described below.

5.20.1.1 Regulatory Framework

State

Fire Hazard Severity Zones

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 (FHSZs), these maps influence how people construct buildings and protect property to reduce risk associated with wildland fires. FHSZs are divided into areas where the state has financial responsibility for wildland fire protection, known as state responsibility areas (SRAs), and areas where local governments have financial responsibility for wildland fire protection, known as local responsibility areas (LRAs). Homeowners living in an SRA are responsible for ensuring that their property is in compliance with California’s building and fire codes. Only lands zoned for very high fire hazard are identified within LRAs.

5.20.1.2 Existing Conditions

The project site is not classified as a very high fire hazard severity zone.¹⁵¹

5.20.2 Impact Discussion

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

¹⁵¹ California Department of Forestry and Fire Protection. FHSZ Viewer. Accessed October 1, 2023. <https://egis.fire.ca.gov/FHSZ/>.

	New Potentially Significant Impact	New Less than Significant with Mitigation Incorporated	New Less than Significant Impact	Same Impact as Approved Project
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
c) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) 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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The 2019 IS/MND determined that implementation of the project would not exacerbate wildfire risks, and would not expose people or structures to significant risk from wildfire.¹⁵² The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones; therefore, the project would not result in wildfire impacts. **(Same Impact as Approved Project)**

¹⁵² City of Cupertino. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019. Pages 220 to 221.

Section 6.0 References

The analysis in this Initial Study/Addendum is based on the professional judgement and expertise of the environmental specialists preparing this document, based upon review of the site, surrounding conditions, site plans, and the following references:

Association of Bay Area Governments and Metropolitan Transportation Commission. *Plan Bay Area 2050*. October 21, 2021.

---. *Tsunami & Additional Hazards*. Accessed August 16, 2023.

<https://abag.ca.gov/our-work/resilience/data-research/tsunami-additional-hazards>.

Bay Area Air Quality Management District. *Final 2017 Clean Air Plan*. April 19, 2017.

<http://www.baaqmd.gov/plans-and-climate/air-quality-plans/current-plans>.

California Air Resources Board. “Advanced Clean Cars II.” Accessed August 16, 2023.

<https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii>

---. “Overview: Diesel Exhaust and Health.” Accessed August 16, 2023.

<https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>.

California Building Standards Commission. “California Building Standards Code.” Accessed August 16, 2023. <https://www.dgs.ca.gov/BSC/Codes#@ViewBag.JumpTo>.

California Department of Conservation. *California Earthquake Hazards Zone*. Webmap. Accessed August 15, 2023. <https://maps.conservation.ca.gov/cgs/EQZApp/app/>.

---. “California Important Farmland Finder.” Accessed March 6, 2023. <https://maps.conservation.ca.gov/DLRP/CIFF/>

----. “Farmland Mapping and Monitoring Program.” Accessed February 17, 2023.

<http://www.conservation.ca.gov/dlrp/fmmp/Pages/Index.aspx>.

---. “Williamson Act.” <http://www.conservation.ca.gov/dlrp/lca>.

California Department of Finance. “Estimate E-1: Population and Housing Estimates for Cities, Counties, and the State — January 1, 2022 and 2023.” May 2023. Accessed August 16, 2023.

<https://dof.ca.gov/forecasting/demographics/estimates-e1/>.

California Department of Forestry and Fire Protection. “FHSZ Viewer.” Webmap. Accessed August 15, 2023. <https://egis.fire.ca.gov/FHSZ/>.

- . "Fire and Resource Assessment Program." Accessed February 17, 2023. <http://frap.fire.ca.gov/>.
- California Department of Housing and Community Development. "Regional Housing Needs Allocation" Accessed August 16, 2023. <https://www.hcd.ca.gov/planning-and-community-development/regional-housing-needs-allocation>.
- California Department of Resources Recycling and Recovery. Analysis of the Progress Toward the SB 1383 Organic Waste Reduction Goals. August 18, 2020. [https://www2.calrecycle.ca.gov/Publications/Details/1693#:~:text=Analysis%20of%20the%20Progress%20Toward,\(DRRR%2D2020%2D1693\)&text=SB%201383%20establishes%20targets%20to,75%20percent%20reduction%20by%202025](https://www2.calrecycle.ca.gov/Publications/Details/1693#:~:text=Analysis%20of%20the%20Progress%20Toward,(DRRR%2D2020%2D1693)&text=SB%201383%20establishes%20targets%20to,75%20percent%20reduction%20by%202025).
- California Department of Tax and Fee Administration. "Net Taxable Gasoline Gallons." Accessed August 16, 2023. <https://www.cdtfa.ca.gov/dataportal/dataset.htm?url=VehicleTaxableFuelDist>.
- California Department of Transportation. "Scenic Highways." Accessed February 17, 2023. <https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways>
- California Energy Commission. "2022 Building Energy Efficiency Standards." Accessed August 16, 2023. <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2019-building-energy-efficiency>.
- . "Natural Gas Consumption by County." Accessed August 16, 2023. <http://ecdms.energy.ca.gov/gasbycounty.aspx>.
- . Energy Consumption Data Management System. "Electricity Consumption by County." Accessed August 16, 2023. <http://ecdms.energy.ca.gov/elecbycounty.aspx>.
- California Environmental Protection Agency. "Cortese List Data Resources." Accessed October 16, 2023. <https://calepa.ca.gov/sitecleanup/corteselist/>.
- California Gas and Electric Utilities. 2022 *California Gas Report*. Accessed August 16, 2023. https://www.socalgas.com/sites/default/files/Joint_Utility_Biennial_Comprehensive_California_Gas_Report_2022.pdf.
- California Legislative Information. "Chapter 2.7. Modernization of Transportation Analysis for Transit-Oriented Infill Projects [21099- 21099]." Accessed February 17, 2023. https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=21099.&lawCode=PRC.

California Regional Water Quality Control Board San Francisco Region. *Municipal Regional Stormwater NPDES Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008*. May 11, 2022

---. *San Francisco Bay Region Municipal Regional Stormwater NPDES Permit*. November 2015.

---. "2020-2022 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report)." May 11, 2022. Accessed September 2, 2022.
https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2020_2022_integrated_report.html.

City of Cupertino. *Cupertino General Plan Community Vision 2040*. October 15, 2015.

--- "Fire Department." Accessed August 16, 2023.
<https://www.cupertino.org/our-city/departments/public-safety-programs/fire-department>.

---. "Schools." Accessed August 16, 2023. <https://www.cupertino.org/our-city/schools>.

---. "Sheriff's Office." Accessed August 16, 2023.
<https://www.cupertino.org/our-city/public-safety-programs/sheriff-s-office>.

----. *California Environmental Quality Act (CEQA) Greenhouse Gas (GHG) Emissions Thresholds and Guidance*. April 29, 2022.

---. *Cupertino Bicycle Transportation Plan*. June 2016. .

---. *Final Environmental Impact Report for the General Plan Amendment, Housing Element Update, and Associated Rezoning Project (SCH# 2014032007)*. December 4, 2014.

---. *Parks and Recreation System Master Plan – Initial Study/Mitigated Negative Declaration*. SCH # 2019109066. October 2019.

Cornerstone Earth Group, Inc. *Phase I Environmental Site Assessment - Cupertino Memorial Park, 10185 North Stelling Road, and 21251 Stevens Creek Boulevard, Cupertino*. October 13, 2022.

County of Santa Clara. *Geologic Hazards Zones. Maps 2 and 10*. Map. October 2012.

---. "Williamson Act and Open Space Easement." September 17, 2018. Accessed March 6, 2023. <https://www.sccgov.org/sites/dpd/programs/wa/pages/wa.aspx>.

Cupertino Sanitary District. "District Boundaries Map." Accessed August 18, 2023.
https://www.cupertinosanitarydistrict.org/services_service_area.

---. "Maps: Sheet 7." Accessed August 18, 2023. <https://www.cupertinosanitarydistrict.org/maps>.

Federal Emergency Management Agency. Flood Insurance Rate Map, Community Panel No. 06085C0208H.

National Ocean Service. *What is a Seiche?* Accessed August 16, 2023.

<https://oceanservice.noaa.gov/facts/seiche.html>.

Ninyo & Moore Geotechnical & Environmental Sciences Consultants. *Geotechnical Evaluation*. November 3, 2022

San José Water Company. *2020 Urban Water Management Plan*. June 2021.

San José-Santa Clara Regional Wastewater Facility. *2022 Self-Monitoring Annual Report*. Accessed September 27, 2023. Available at:

<https://www.sanjoseca.gov/home/showpublisheddocument/94789/638124181781530000>.

Santa Clara County Airport Land Use Commission. *Moffett Federal Airfield Comprehensive Land Use Plan*. December 2018.

Santa Clara County Fire Department. *2022 Annual Report*. April 26, 2023. Page 4. Accessed August 16, 2023. <https://www.sccfd.org/about-sccfd/key-reports-and-documents/>.

Santa Clara Valley Water District. 2021 Groundwater Management Plan. Accessed August 16, 2023.

https://s3.us-west-2.amazonaws.com/assets.valleywater.org/2021_GWMP_web_version.pdf.

Silicon Valley Clean Energy. "Frequently Asked Questions." Accessed August 16, 2023.

<https://www.svcleanenergy.org/faqs>.

United States Department of Energy. *Energy Independence & Security Act of 2007*. Accessed August 16, 2023. <http://www.afdc.energy.gov/laws/eisa>.

United States Department of the Interior. *Potential Fossil Yield Classification System*. July 2016.

Accessed August 15, 2023. https://www.blm.gov/sites/blm.gov/files/uploads/IM2016-124_att1.pdf

United States Department of Transportation. USDOT Announces New Vehicle Fuel Economy Standards for Model Year 2024-2026." Accessed August 16, 2023.

<https://www.nhtsa.gov/press-releases/usdot-announces-new-vehicle-fuel-economy-standards-model-year-2024-2026>

United States Energy Information Administration. "Natural Gas Consumption by End Use. 2021."

Accessed August 16, 2023. <https://www.eia.gov/state/?sid=CA#tabs-2>.

---. "Petroleum & Other Liquids, California Field Production of Crude Oil." February 28, 2023.
<https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=pet&s=mcrfpca1&f=a>.

---. "State Profile and Energy Estimates, 2020." Accessed August 4, 2023.
<https://www.eia.gov/state/?sid=CA#tabs-2>.

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>

---. "Summary of the Resource Conservation and Recovery Act." Accessed October 16, 2023.
<https://www.epa.gov/laws-regulations/summary-resource-conservation-and-recovery-act>.

---. "Superfund: CERCLA Overview." Accessed May 11, 2020.
<https://www.epa.gov/superfund/superfund-cercla-overview>.

---. "The 2022 EPA Automotive Trends Report: Greenhouse Gas Emissions, Fuel Economy, and Technology since 1975." December 2022.
<https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1010U68.pdf>

Personal Communication

- Boccaleoni, Anthony. Division Manager, Republic Services.

Section 7.0 Lead Agency and Consultants

7.1 Lead Agency

City of Cupertino

Public Works Department

Susan Michael, CIP Manager

7.2 Consultants

David J. Powers & Associates, Inc.

Environmental Consultants and Planners

Kristy Weis, Vice President/Principal Project Manager

Nick Towstopiat, Project Manager

Albion Environmental, Inc.

Archaeological Consultants

Jennifer M. Farquhar, Principal

Stella D'Oro, Senior Archaeologist, GIS Specialist

Cornerstone Earth Group, Inc.

Hazardous Materials Consultant

Ron L. Helm, Senior Principal Geologist

Stason Foster, Senior Project Engineer

HortScience | Bartlett Consulting

Biological Resources Consultant

Brenda Wong, Consulting Arborist and Urban Forester

Illingworth & Rodkin, Inc.

Acoustic & Air Quality Consultants

Michael Thill, Principal

Heather Bruce, Senior Consultant

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Ransom H. Hennefer, Principal Engineer

TJKM

Transportation Consultants

Mark Doty, Senior Planner

Renee Reavis, Transportation Engineer

Section 8.0 Acronyms and Abbreviations

AB	Assembly Bill
ABAG	Association of Bay Area Governments
ACM	Asbestos-Containing Material
ADA	Americans with Disabilities Act
ALUC	Airport Land Use Commission
AMSL	Above Mean Sea Level
APN	Assessor's Parcel Number
ATCM	Asbestos Airborne Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
Bay Area	San Francisco Bay Area
Basin Plan	Water Quality Control Plan for the San Francisco Bay Basin
bgs	Below Ground Surface
Btu	British Thermal Unit
CAAQS	California Ambient Air Quality Standard
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
CalARP	California Accidental Release Prevention
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CBC	California Building Standards Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFC	Chlorofluorocarbon
CFR	Code of Federal Regulations
CGS	California Geological Survey
CH ₄	Methane

CHRIS	California Historical Resources Information System
CLUP	Comprehensive Land Use Plan
CNEL	Community Noise Equivalent Level
CO	Carbon Monoxide
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalents
CRHR	California Register of Historical Resources
CUPA	Certified Unified Program Agency
dBA	A-weighted decibel
DNL	Day/Night Average Sound Level
DOLA	Dog Off Leash Area
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances Control
EIR	Environmental Impact Report
EO	Executive Order
EOP	Emergency Operations Plan
EPA	Environmental Protection Agency
ESA	Environmental Site Assessment
FAA	Federal Aviation Administration
FAR	Federal Aviation Regulations
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FIRMs	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
FTA	Federal Transit Administration
FUHSD	Fremont Union High School District
GHG	Greenhouse Gases
GHGRS	Greenhouse Gas Reduction Strategy
GWh	Gigawatt Hour
GWMP	Groundwater Management Plan
GWP	Global Warming Potential

HFCs	Hydrofluorocarbons
HSWA	Hazardous and Solid Waste Amendments
L _{eq}	Energy-Equivalent Sound/Noise Descriptor
LHMP	Local Hazard Mitigation Plan
LID	Low Impact Development
L _{max}	Maximum A-weighted noise level during a measurement period
LOS	Level of Service
LRA	Local Responsibility Area
MBTA	Migratory Bird Treaty Act
MG	million gallons
MMTCO _{2e}	Million Metric Tons of Carbon Dioxide Equivalent
MND	Mitigated Negative Declaration
mpg	Miles per Gallon
MRP	Municipal Regional Stormwater NPDES Permit
MSL	Mean Sea Level
MTC	Metropolitan Transportation Commission
N ₂ O	Nitrous Oxide
NAAQS	National Ambient Air Quality Standard
NAHC	Native American Heritage Commission
NCP	National Contingency Plan
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHPA	National Historic Preservation Act of 1966
NISL	Newby Island Sanitary Landfill
NO ₂	Nitrogen Dioxide
NOA	Naturally Occurring Asbestos
NOD	Notice of Determination
NOI	Notice of Intent
NO _x	Nitrogen Oxides
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
O ₃	Ozone

PCB	Polychlorinated Biphenyls
PCF	Perfluorocarbon
PDA	Priority Development Areas
PFCs	Perfluorocarbons
PG&E	Pacific Gas and Electric Company
PM	Particulate Matter
PM ₁₀	Particulate matter with a diameter of 10 microns or less
PM _{2.5}	Particulate matter with a diameter of 2.5 microns or less
PPV	Peak Particle Velocity
R&D	Research and Development
RAP	Removal Action Plan
RCRA	Resource Conservation and Recovery Act
RECs	Recognized Environmental Conditions
ROG	Reactive Organic Gases
RTP	Regional Transportation Plan
RWQCB	Regional Water Quality Control Board
SB	State Bill
SCCFD	Santa Clara County Fire Department
SCCSO	Santa Clara County Sheriff's Office
SCS	Sustainable Communities Strategy
SCVHP	Santa Clara Valley Habitat Plan
SF ₆	Sulfur Hexafluoride
SFHA	Special Flood Hazard Areas
SFPUC	San Francisco Public Utilities Commission
SHMA	Seismic Hazards Mapping Act
SMARA	Surface Mining and Reclamation Act
SMGB	State Mining and Geology Board
SMP	Site Management Plan
SO _x	Sulfur Oxides
SR	State Route
SRA	State Responsibility Area

SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TAC	Toxic Air Contaminants
TCR	Tribal Cultural Resources
Title 24	Title 24, Part 6 of the California Code of Regulations
TSCA	Toxic Substances Control Act
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
UWMP	Urban Water Management Plan
Valley Water	Santa Clara Valley Water District
VMT	Vehicle Miles Traveled
VTA	Santa Clara Valley Transportation Authority
Williamson Act	California Land Conservation Act
WPCP	San José/Santa Clara Water Pollution Control Plant
WUI	Wildland-Urban Interface
ZNE	Zero Net Carbon Emission

MEMORIAL PARK

SPECIFIC PLAN

CITY OF CUPERTINO, FEBRUARY 2024



revitalize
Memorial Park



This Page
Intentionally
Left Blank

Acknowledgments

City Council - 2024

Sheila Mohan, Mayor
J.R. Fruen, Vice Mayor
Liang Chao
Kitty Moore
Hung Wei

Parks and Recreation Commission - 2024

Jennifer Shearin, Chair
Hemant Buch, Vice Chair
Claudio Bono
Carol Stanek
Seema Swamy

Bicycle Pedestrian Commission - 2024

Herve Marcy, Chair
Joel Wolf, Vice Chair
Ilango Ganga
Grace John
John Zhao

City Staff

Susan Michael, Capital Improvement Programs Manager
Rachelle Sander, Director of Parks and Recreation
Chad Mosley, Director of Public Works/City Engineer

Consultants

Gates + Associates, Landscape Architecture and Planning
David J. Powers and Associates, Environmental Consulting and Planning
Ninyo & Moore, Geotechnical and Environmental Sciences
TJKM, Transportation Consulting
Sandis, Civil Engineering

City Council - 2023

Hung Wei, Mayor
Sheila Mohan, Vice Mayor
Liang Chao
J.R. Fruen
Kitty Moore

Parks and Recreation Commission - 2023

Carol Stanek, Chair
Jennifer Shearin, Vice Chair
Sashi Begur
Hermant Buch
Seema Swamy

Bicycle Pedestrian Commission - 2023

Joel Wolf, Chair
Herve Marcy, Vice Chair
Ilango Ganga
Grace John
John Zhao

This Page
Intentionally
Left Blank

Table of Contents

- Executive Summary**VII
- Chapter 1 **Introduction** 1
- Chapter 2 **About the Park**7
- Chapter 3 **From the Community**27
- Chapter 4 **Park Concept**37
- Chapter 5 **Implementation**.....73

Table of Figures

Figure 2-1: Memorial Park Location in the City of Cupertino	10
Figure 2-2: Memorial Park Context	13
Figure 2-3: Existing Vehicular Circulation	15
Figure 2-4: Existing Pedestrian and Bicycle Circulation	17
Figure 2-5: Existing Amenities	19
Figure 2-6: Existing Areas to Preserve	23
Figure 3-1: By the Numbers - Community Engagement	29
Figure 3-2: Outreach Process	29
Figure 3-3: Top 5 Most Liked Current Park Features (Round 1 Outreach)	30
Figure 3-4: Desired Scenarios for Current and Future Identity of Memorial Park (Round 1 Outreach)	31
Figure 3-5: Shared Key Themes Between Memorial Park & Parks and Recreation System Master Plan Community Outreach	33
Figure 3-6: Preferred Concept Breakdown (Round 2 Outreach)	34
Figure 3-7: Top 10 Most Important Features for the Final Design of Memorial Park (Round 2 Outreach)	34
Figure 3-8: Preferred Concept Plan Presented at the June 2023 City Council Meeting	35
Figure 4-1: Final Concept Plan	39
Figure 4-2: Site Programming and Zone Key Map	41
Figure 4-3: Photosimulation of the Passive Garden Walk	42
Figure 4-4: Final Concept - Zone A	43
Figure 4-5: Enlargement of Senior Center Deck / Plaza	44
Figure 4-6: Final Concept - Zone B	47
Figure 4-7: Photosimulation of the Event Lawn	48
Figure 4-8: Photosimulation of the Event Plaza	50
Figure 4-9: Final Concept - Zone C	51
Figure 4-10: Final Concept - Zone D	55
Figure 4-11: Festivals and Event Areas	59
Figure 4-12: Enlargement of Critical Intersection (1)	60
Figure 4-13: Enlargement of Critical Intersection (2)	60
Figure 4-14: Pedestrian and Bicycle Circulation	61
Figure 4-15: Vehicle Circulation	63
Figure 4-16: Proposed Tree Preservation	65
Figure 4-17: Proposed Tree Removals	67
Figure 4-18: Proposed Trees and Landscaping	69
Figure 5-1: Phasing Plan	77

Table of Tables

Table 2-1: Parking Lots and Stall Quantities..... 14

Table 3-1: Outreach Methods 32

Table 4-1: Proposed Tree Palette 68

Table 4-2: Proposed Tree Palette (continued)..... 70

Table 4-3: Proposed Tree Palette (continued)..... 71

Table 5-1: Total Project Cost Estimate..... 78

Table 5-2: Phase 1A Cost Estimate 79

Table 5-3: Phase 1B Cost Estimate..... 80

Table 5-4: Phase 2A Cost Estimate 81

Table 5-5: Phase 2B Cost Estimate..... 82

Table 5-6: Phase 2C Cost Estimate..... 83

Table 5-7: Phase 3 Cost Estimate..... 84

This Page
Intentionally
Left Blank



Executive Summary

Executive Summary

The City of Cupertino has a robust parks and recreation system that serves its diverse community of over 60,000 residents. Memorial Park is well-known as a key amenity for recreation, leisure, and celebration. As the largest park in the city, Memorial Park hosts concerts, festivals, and ceremonies that attract visitors from across the Bay Area year after year.

As identified in the Cupertino Parks and Recreation System Master Plan, Memorial Park is an ideal location to expand recreational opportunities to serve the greater community. This system-wide plan, adopted in 2020, also provides recommendations to improve circulation, infrastructure, and accessibility within the park. In immediate response to these recommendations, the City of Cupertino began developing a comprehensive vision for a revitalized Memorial Park.

The Memorial Park Specific Plan is the result of careful analysis and planning efforts in collaboration with City staff, local residents, and park visitors. This document analyzes the existing conditions of the park, documents previous planning efforts, contextualizes the park as a key component of the Cupertino community, and synthesizes feedback received from stakeholders. Over 3,300 people provided valuable input about their favorite park features, prioritized potential new amenities, and explored other important topics during community outreach events held both in-person and virtually.

The Memorial Park Specific Plan presents a conceptual design that responds to the community's preferences and priorities; celebrates existing historical, cultural, and environmental features; and proposes new amenities and infrastructural upgrades to enhance the overall visitor experience. Key renovations to the amphitheater and stage, an updated pathway network, new high-quality playgrounds, and dedicated pickleball courts are among the proposed improvements.

This plan also explores potential pathways for achieving the shared vision of a revitalized Memorial Park. A phasing plan, cost evaluation, funding strategy, and a summary of the environmental review findings are included in this plan. Serving as a comprehensive roadmap for stakeholders and decision-makers, the Memorial Park Specific Plan aims to ensure that this popular and well-known community park remains an active, safe, and accessible public resource.



Chapter 1

Introduction

This Page
Intentionally
Left Blank

Overview

Memorial Park is the largest park in the City of Cupertino park system. This popular 22-acre community park includes several acres of lawn, walking paths, a gazebo, two playgrounds, an amphitheater, a lighted softball field, reservable picnic areas, and six lighted tennis courts. Memorial Park features the Cupertino Senior Center, the Quinlan Community Center, and the Cupertino Veterans Memorial. This centrally-located park serves the entire community and hosts a variety of large social and civic events. Memorial Park is open daylight hours to 10:00 pm and has several on-site parking lots.

The Memorial Park Specific Plan seeks to celebrate the unique cultural, historical, and natural assets of the park. This plan will guide the future enhancements based on the vision and priorities of the community. This Specific Plan is a forward-looking document that studies the existing park site and context, analyzes the results of the extensive community engagement process, presents a comprehensive site concept, and recommends an implementation strategy for the future of Memorial Park. This plan aims to:

Build upon the vision of the Parks and Recreation System Master Plan;

Respond to community input and priorities;

Locate new amenities and enhance existing ones;

Investigate costs, funding mechanisms, and project partners; and

Summarize existing environmental review efforts and outline a strategy for moving forward.

Project Purpose

The Parks and Recreation System Master Plan, adopted in 2020, presents Cupertino’s vision for expanding civic event and community gathering spaces while improving the existing natural features in Memorial Park. The Parks and Recreation System Master Plan envisions the park as a community hub with robust multi-use and civic-focused event spaces, with updated event infrastructure—particularly the existing amphitheater—and improved circulation for visitors during large events. The development of the Specific Plan is identified as an immediate enhancement opportunity, recognizing this park as an ideal location to host programs, events, fairs, and festivals for visual, performing, and fine arts.

The Parks and Recreation System Master Plan additionally proposes that the park design preserves the existing lighted sports field, repurposes the pond, maximizes shade, enhances accessibility, integrates inclusive and experiential nature play elements, updates walkways and seating options, and considers a multi-court pickleball tournament venue.

The Memorial Park Specific Plan directly responds to the Parks and Recreation System Master Plan by providing recommendations to enhance the park’s unique identity and sense of place. The Specific Plan presents a comprehensive suite of improvements to achieve a balance between the built and natural environments. The final concept plan, driven by extensive community outreach, ultimately aims to meet the present and future event, gathering, recreation, and open space needs of Cupertino.

Guiding Principles

Guiding principles for the project build upon the goals in the Parks and Recreation System Master Plan, which were focused on supporting an engaged, healthy, and active community. The guiding principles for the Memorial Park Specific Plan are:

- Reinvigorate and revitalize parks and recreation facilities to support broad and inclusive recreation interests (Goal 4: Enhancement);
- Provide programs, events, and services that foster social cohesiveness and lively, diverse activities for people of all ages, abilities, cultures, and interests (Goal 5: Activity); and
- Create high quality recreation experiences, places, and services that are welcoming, safe, responsible, comfortable, and reflective of Cupertino’s unique character (Goal 6: Quality).

Project Process

The Memorial Park Specific Plan was developed over a period of a year and a half. During that time, an extensive community outreach process took place which invited local stakeholders and community members to discuss their priorities and preferences for a revitalized Memorial Park. Events were held in-person as well as virtually to reach over 3,000 diverse participants.

Participants were presented with design concept alternatives and responded to surveys that provided critical feedback to guide the planning and design process. Meetings were held with neighborhood groups, local civic and community organizations, cultural groups, school districts, advocacy groups, and City of Cupertino staff to develop a design concept and vision that is tailored to the needs of the Cupertino community.



Image 1-1: Memorial Park Sign

Document Organization

The Memorial Park Specific Plan is organized into five chapters. Each chapter builds upon the prior, culminating in the final concept plan and implementation strategy for a revitalized Memorial Park.

Chapter 1: Introduction

This chapter discusses the purpose, process, and guiding principles of the project.

Chapter 2: About the Park

This chapter provides context about the City of Cupertino and describes the existing conditions of Memorial Park.

Chapter 3: From the Community

This chapter summarizes the findings of the community engagement process that shaped the final concept plan.

Chapter 4: Park Concept

This chapter presents the final concept plan, developed in response to community input and feedback, for Memorial Park.

Chapter 5: Implementation

This chapter outlines the implementation strategies to revitalize Memorial Park.

Appendix

The appendices are bound under a separate cover and include supporting documentation for the Memorial Park Specific Plan, including reports, assessments, and analyses.

Appendix A. Parking Study

Appendix B. Tree Inventory Report

Appendix C. Community Engagement Data

Appendix D. Preliminary Concepts

Appendix E. Phase I Environmental Site Assessment

Appendix F. Geotechnical Evaluation

Appendix G. Planning Context

Appendix H. Site Assessment

This Page
Intentionally
Left Blank

Chapter 2

About the Park

This Page
Intentionally
Left Blank



Image 2-1: Memorial Park (September 2023)

Overview

This chapter will present background information on the park and its surroundings. The sections in this chapter include:

- Site Context
- The Park
- Surrounding Uses
- Park Access
- Park Circulation
- Existing Amenities
- Areas to Preserve
- Community Events
- Recent City Projects On-Site

The full Site Assessment is found in Appendix H. Relevant planning documents that were consulted for the Memorial Park Specific Plan are discussed in Appendix G.

Site Context

The City of Cupertino (City) is nestled into the foothills of the Santa Cruz Mountains at the west end of Silicon Valley. The City owns or manages 224 acres of community or neighborhood parks, recreational facilities, trail corridors, school sports fields, and special use sites across 34 locations. This includes indoor and outdoor athletic facilities offering baseball, softball, soccer, basketball, tennis, cricket, volleyball, swimming, and more. The City also provides a sports/teen center, senior center, community center, civic center, and golf course.

The Park

Memorial Park is a 22-acre community park centrally located on Stevens Creek Boulevard in Cupertino (Figure 2-1). This park sits one mile away from City Hall and is home to both the Quinlan Community Center and Cupertino Senior Center. Constructed in the mid-1970s, Memorial Park initially included a softball field, tennis courts, and a gazebo. Additional amenities and recreational facilities have been added over time, such as the large amphitheater, multi-use event lawn, playgrounds, walking paths, and Sister City monuments. Memorial Park hosts community events throughout the year, drawing visitors from across Cupertino and the Bay Area.

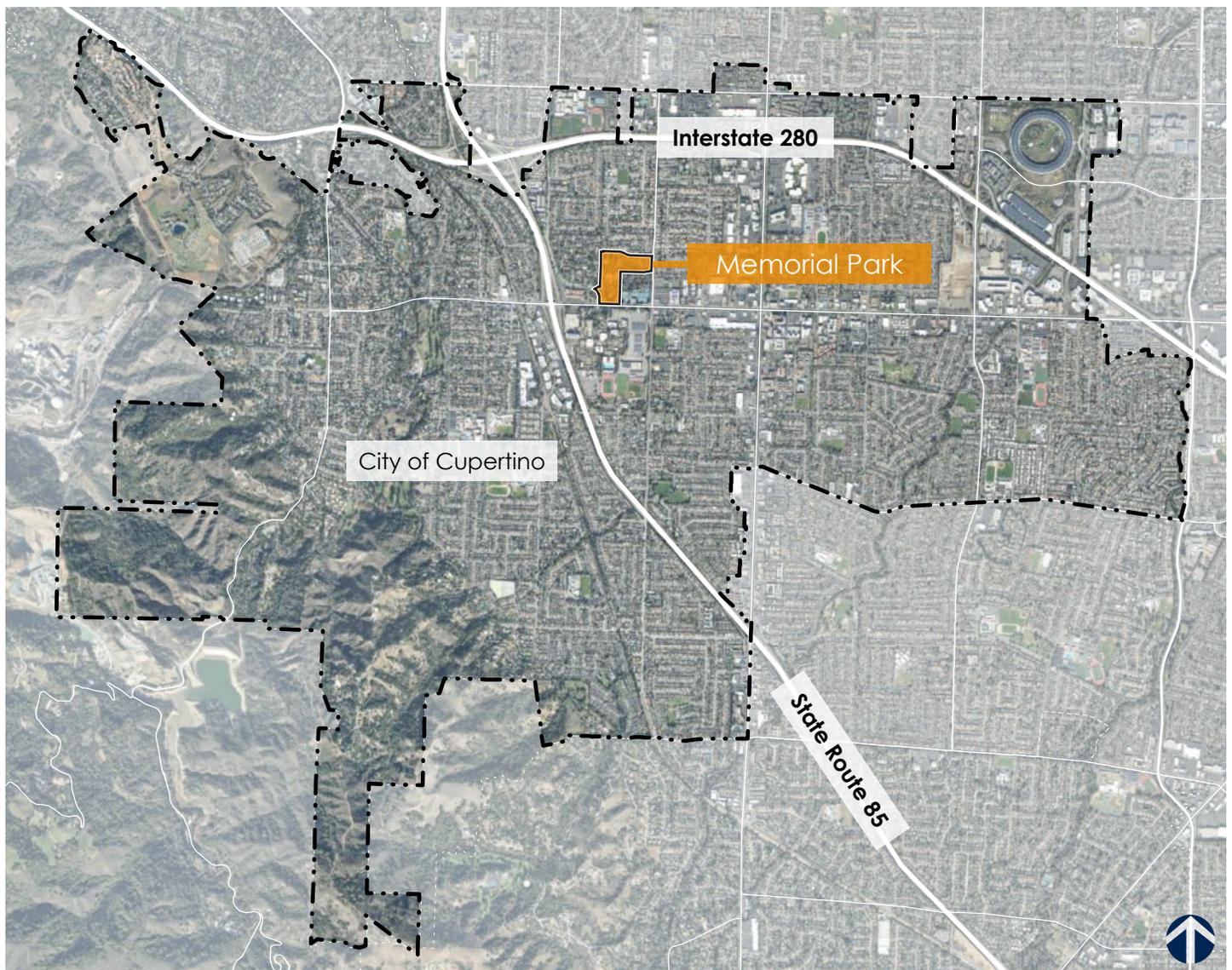


Figure 2-1: Memorial Park Location in the City of Cupertino



Surrounding Uses

Memorial Park is located along Stevens Creek Boulevard, a main commercial corridor with retail, restaurants, grocery stores, and other businesses. The surrounding area of the park is generally known as the residential Garden Gate neighborhood.

Memorial Park is near Garden Gate Elementary School, William Faria Elementary School, Abraham Lincoln Elementary School, and Homestead High School. Across from Stevens Creek Boulevard to the south is De Anza College, a public community college that offers over 70 associate degrees.

The Cupertino Sports Center is southeast of the park at the intersection of Stevens Creek Boulevard and North Stelling Road. This multipurpose facility offers tennis, pickleball, racquetball, basketball, and badminton. The facility hosts fitness classes, sports clubs, leagues, and camps for youth and adults.

The southwest corner of the park is adjacent to the Westport Cupertino development project. The 8-acre mixed-use development will include single-unit attached residences, senior housing, and commercial uses along Mary Avenue and Stevens Creek Boulevard.

Lastly, the Mary Avenue Dog Park is located northwest of the park. This dog park has separate fenced areas for small and large dogs and is open from 7:00 am to 8:00 pm every day. There are shaded benches, drinking fountains, and trash receptacles.

Park Access

Visitors typically travel to the park via Stevens Creek Boulevard (arterial running west to east) which borders Memorial Park to the south. Stevens Creek Boulevard connects to the West Valley Freeway (State Route 85) approximately a quarter-mile west of the site. State Route 85 connects to Interstate 280 at an interchange to the northwest of the park. De Anza Boulevard, an arterial running north to south, is located less than a mile east of the park (Figure 2-2).

There are several bus stops along Stevens Creek Boulevard as well as North Stelling Road, which partially borders Memorial Park to the east. Cupertino is served by the Santa Clara Valley Transportation Authority (VTA). The bus stop near the Cupertino Senior Center on Stevens Creek Boulevard is serviced by the local bus line (route 51), which also stops at the intersection of Stevens Creek Boulevard and North Stelling Road. The bus stop at Stevens Creek Boulevard and North Stelling Road is also serviced by the rapid bus line (route 523). The park is near a stop within the De Anza College campus that is serviced by the frequent bus line (route 23).

There are several bicycle routes to the park, most notably, the buffered bike lanes along Stevens Creek Boulevard, North Stelling Road, and Mary Avenue. To the west of Homestead High School is a pedestrian and bicycle route that connects to the northern end of Mary Avenue. This paved shared-use separated path utilizes the Don Burnett Bicycle-Pedestrian Bridge (also known as the Mary Avenue Bridge) to cross over Interstate 280. The bridge was opened in 2009 and connects Memorial Park to neighborhoods on the northern side of the interstate.



Figure 2-2: Memorial Park Context

Park Circulation

Vehicle and Parking

There are three vehicle access points into the park at Mary Avenue, Alves Drive, and North Stelling Road. The vehicle entrances lead into the three parking lots within the park. There is no internal vehicle circulation at Memorial Park, except for City maintenance and emergency vehicle access (Figure 2-3).

The southwestern parking area contains Lots 1, 2, and 3. Lots 1 and 2 are divided by a small speed bump and are both reserved for patrons with a Cupertino Senior Center permit. Lot 3 does not require a permit but has a two hour time limit from 8:00 am to 5:00 pm. Lot 3 terminates at a roundabout that allows for easy turn-around.

The parking lot along Alves Drive (Lot 4) is unrestricted (no permit requirement or time limit). During large civic events such as the Cupertino Holi Festival of Colors, this parking lot is converted to a food court area with food trucks, tables and chairs, portable restrooms, and handwashing areas. There is additional street parking on Alves Drive near this lot.

Lots 5 and 6 are primarily used for the Quinlan Community Center and can be accessed via North Stelling Road or Alves Drive. This parking lot features electric vehicle chargers and a pick-up/drop-off roundabout. This parking lot is also unrestricted, but there are several stalls reserved for City vehicles only.

The on-site parking lot stall inventory is shown in Table 2-1. There are 258 total on-site parking stalls, with an additional 55 on-street parking stalls, resulting in a total of 313 parking stalls available. All of the 55 on-street parking stalls are unrestricted and located on the north and south sides of Alves Drive. There are no other unrestricted on-street parking stalls along any other park frontage street.

The full Parking Study is found in Appendix A.

On-Site Parking Lots and Stall Quantities

Lot	Access From	Total Stalls	Accessible Stalls ¹
1	Mary Avenue	61	6
2	Mary Avenue	27	1
3	Mary Avenue	34	2
4	Alves Drive	50	2
5	North Stelling Road	42	2
6	North Stelling Road	44	1
All		256	14

¹ Accessible stalls are included in the total stalls quantities
 Source: TJKM Parking Study, 2022

Table 2-1: Parking Lots and Stall Quantities



Image 2-3: Parking Lot 4 along Alves Drive



Image 2-4: Parking Lot 3 Roundabout



-  Major Public Road
-  Minor Public Road
-  Public Access
-  Maintenance Access
-  Parking Lot
-  Accessible Stall

Figure 2-3: Existing Vehicular Circulation

Bicycle

Stevens Creek Boulevard and North Stelling Road have buffered bicycle lanes on both sides of the road (Figure 2-4). Mary Avenue has unprotected bicycle lanes on both sides (Class II), which transition north of the Cupertino Senior Center entrance to a buffered bicycle lane on the east side (also Class II) and a separated bikeway on the west side (Class IV). The Bicycle Transportation Plan recommends a separated bikeway on both sides of North Stelling Road and both sides of Stevens Creek Boulevard (Stevens Creek Boulevard is in progress as part of an ongoing phased project).

Since the park does not currently feature any designated bicycle trails, bicycle riding in the park is discouraged due to potential conflicts with pedestrians. There are several bicycle lockers at the Cupertino Senior Center's northern entrance.

Pedestrian

There is pedestrian access to Memorial Park on all sides except along the western edge, where the park abuts a residential development. Mary Avenue has a sidewalk along the park's western frontage and a protected pedestrian island by the Cupertino Senior Center parking lot vehicle entrance. To the north, along Christensen Drive, there is a pedestrian access point at the park's northwest corner. To the east, along North Stelling Road, pedestrians must go through or around Quinlan Community Center to access the park. Along Alves Drive there are sidewalks and several pedestrian access points. There is a pedestrian access point along Anton Way near the historic gazebo. To the south, Stevens Creek Boulevard has a continuous sidewalk but there is only one pedestrian access point into the park in the southeast corner. The south side of Christensen Drive and both sides of Anton Way do not have sidewalks.

Paved paths connect all uses and amenities to a comprehensive interior pedestrian network. The looped paths range in width from 4 to 6 feet and consist of concrete, asphalt, decomposed granite, or pavers, although a majority of them are 6-foot-wide asphalt paths. Cracking and tripping hazards are common; various areas do not provide accessibility features such as ramps or level surfacing.



Image 2-5: Concrete, Asphalt, and Dirt Paths Converge



Image 2-6: Asphalt Paths with Varying Elevation Changes



Image 2-7: Cracked Asphalt Path



Figure 2-4: Existing Pedestrian and Bicycle Circulation

- | | | | |
|--|------------------------|--|--------------------------------------|
| | Sidewalk | | Bicycle Lanes (Buffered, Class II) |
| | Pedestrian Circulation | | Bicycle Lane (Unprotected, Class II) |
| | Pedestrian Access | | Planned Separated Bikeway (Class IV) |
| | Building Access | | |

Existing Amenities

Memorial Park is a heavily utilized and amenitized park (Figure 2-5). There are two community facilities at opposite ends of the site, an amphitheater, picnic areas, multi-use lawn spaces, playgrounds, a softball field, tennis courts, and other amenities such as such as restrooms, benches, drinking fountains, bike racks, storage areas, and trash receptacles to support the function of the park. This section serves as an overview of the amenities, while Appendix H provides the full Site Assessment.

Quinlan Community Center

The Quinlan Community Center is a 27,000-square-foot recreation facility located in the southeastern portion of Memorial Park. The Quinlan Community Center, opened in 1990, is home to the City's Parks and Recreation Department and the Cupertino Historical Society and Museum. The facility is named after Robert W. Quinlan, Cupertino's second City Manager who served from 1971 to 1989. The building is multi-use, offering classrooms and a variety of other rooms available to rent for business or personal needs. The Quinlan courtyard on the western side of the building features a small shade structure that is bracketed by the wings of the building. The Quinlan event lawn lies immediately west of the courtyard. The courtyard is well-connected with the park's pathway network, with walkways from both the north and south ends of the courtyard wrapping around the Quinlan event lawn leading into the park.

Cupertino Senior Center

The Cupertino Senior Center, a membership-based recreation facility, is a 15,500-square-foot building located in the southern portion of Memorial Park along Stevens Creek Boulevard. The main entrance to the building is on the north side, served by a parking lot accessed via Mary Avenue. The main entrance features a memorial bench and low seat wall with engraved tile dedications bordering a paved plaza with shaded circular picnic tables and a decorative pergola. There is a small deck facing the park on the east side of the building.



Image 2-8: Quinlan Community Center, Street Frontage



Image 2-10: Quinlan Community Center, Courtyard



Image 2-9: Cupertino Senior Center, Street Frontage



Figure 2-5: Existing Amenities

- | | | |
|------------------------|----------------------|-----------------------|
| ① Amphitheater | ④a Playground (2-5) | ⑦ Spectator Seating |
| ②a Picnic (Drop-in) | ④b Playground (5-12) | ⑧ Restrooms |
| ②b Picnic (Reservable) | ⑤ Softball Field | ⑨ Maintenance/Storage |
| ③ Multi-Use Lawn | ⑥ Tennis Courts | ⑩ Cell Tower |

Amphitheater

Memorial Park is home to the only public amphitheater in Cupertino. It hosts the Summer Concert Series and Shakespeare in the Park, which both run during the summer months. The amphitheater is highly valued by the community. Terraced concrete seat walls are built into a small hillside area to provide formal seating. The seat walls are surrounded by lawn and are backed by a grove of trees. There are no ramps, stairs, or handrails and therefore limited accessibility.

Picnic Areas

The park has multiple picnic areas for drop-in use, as well as a large reservable picnic area, which can accommodate social gatherings of all sizes. These areas are largely without shade, which inhibit their use on hot and sunny days. The large reservable picnic area has a capacity of 113 people with 16 picnic tables, 2 serving tables, 3 barbeques, and a counter area with a sink. Electricity is available with a reservation to further enhance the usability of this key amenity. There are two smaller general use picnic areas around the softball outfield, each with two picnic tables and two barbeques. Lastly, there is a large general use picnic area near the 5-12 year old playground with space for multiple groups and barbeques. However, there is a lack of separation between the tables to create clear groupings.

Multi-Use Lawn Spaces

There are several areas of unobstructed multi-use lawn in Memorial Park. The northern portion of the park contains the largest multi-use lawn. It is rectangular, largely flat, and sits between the Quinlan Community Center and the reservable picnic area. The lawn is bounded on the remaining sides by a walking path within an allée of trees. The park also has smaller lawn spaces serving passive use activities.



Image 2-11: Amphitheater Seating



Image 2-12: Reservable Picnic Area



Image 2-13: Multi-use Lawn near Quinlan Community Center



Image 2-15: Playground, 2-5



Image 2-16: Softball Field



Image 2-14: Tennis Courts

Playgrounds

There are two playgrounds at Memorial Park. A playground appropriate for 2-5 year old children is located on the north end of the site, situated between the softball field and tennis courts. A playground appropriate for 5-12 year old children is located on the southern end of the site adjacent to Anton Way and the amphitheater. Both playgrounds are connected by pathways, within walking distance of restrooms, and have unshaded seating areas. Playgrounds are buffered from vehicle traffic by other park amenities.

The play structures lack clear paths of travel and accessible ramps. The play surfacing is composed of wood fiber surfacing bounded by concrete curbs, which does not provide an accessible transition.

Softball Field

Memorial Park features the only lighted softball field in the City. The softball field is primarily used by Cupertino Parks and Recreation sponsored leagues and local teams, but is also available for drop-ins and reservations during the weekends and off-season. This field attracts players and spectators from around the entire South Bay region given the high quality of this amenity.

Tennis Courts

There are six lighted first come, first served tennis courts, one of which is dual-striped for pickleball. The tennis courts are oriented north/south and are divided by a low fence with gaps to allow movement between courts. The tennis court area is protected by a high fence with privacy and wind screens.

Areas to Preserve

There are several areas and site elements of Memorial Park that were not considered for redesign as part of the Memorial Park Specific Plan, shown in Figure 2-6. These existing features are critically important to the identity of the park and/or otherwise constrained.

The Quinlan Community Center building will not be altered, which includes the small patio attached to the southern wing and the small play area attached to the northern wing. The Cupertino Senior Center building will also not be altered, although modifications to the existing deck were considered to improve the building's connection to the park's pedestrian network.

Several cultural elements in Memorial Park will be preserved. The Veterans Memorial, the grove of trees that encompass the memorial, and the other memorial trees were not considered for redevelopment in the Memorial Park Specific Plan. The two stone lanterns will remain, although their exact locations are subject to change. The gazebo, identified as a historic site in the General Plan, is fragile and therefore cannot be altered or relocated.

Lastly, the cell tower and its associated transformers have an active lease through 2040 and cannot be moved.



Image 2-17: Veterans Memorial



Image 2-18: Stone Lantern



Image 2-19: Cell Tower



Figure 2-6: Existing Areas to Preserve

- | | |
|--------------------------|------------------|
| ① Recreational Buildings | ④ Cell Tower |
| ② Veterans Memorial | ⑤ Stone Lanterns |
| ③ Historic Gazebo | ⑥ Memorial Trees |

Community Events

Memorial Park frequently hosts large community-wide and regional cultural events. Throughout the year, over a dozen events are held by organizations such as the local Rotary Club chapter, Cupertino Chamber of Commerce, and the Sister City program. These large events can attract thousands across the Bay Area to the park.

The Bay Area Diwali Festival of Lights is a free public event that showcases multicultural music, dance, workshops, arts and crafts, and food. For over 20 years, this family-friendly event has partnered with vendors and sponsors to provide fun and educational experiences for the greater region. Memorial Park also hosts the Cupertino Holi Festival of Colors, the Heritage India Faire & Purab Fest, the Cupertino Cherry Blossom Festival, the Summer Concert Series, Shakespeare in the Park, and more.

In addition to festivals and performances, Memorial Park is also home to ceremonies focused on reflection and remembrance. For example, the annual Veterans Day Ceremony recognizes local veterans at the Veterans Memorial statue titled “The Guardians.” The ceremony includes remarks by notable community members who offer commendations to all veterans, active duty military, and first responders.

Memorial Park also hosts the annual Bell Ringing for Peace Ceremony, which recognizes the bombing of the City of Toyokawa, Japan on August 7, 1945—a few weeks before the end of World War II. This ceremony hosts guest speakers that recount the tragedy, pledge a peaceful relationship, and celebrate over four decades of City sisterhood. The attendees gather around the senbazuru, a tower of 1,000 origami cranes prepared by the student delegates of the Cupertino-Toyokawa Sister Cities program, while the bells are rung for 30 seconds.



Image 2-20: Diwali Festival (2022)

Recent City Projects On-Site

Memorial Park Ponds Repurposing Project

The Memorial Park Ponds Repurposing Project removed approximately 71,000 square feet of existing concrete lining from the ponds located at the park during the summer and fall of 2022. The ponds were previously emptied and without water since 2013 due to drought conditions. The area was backfilled and graded, the irrigation systems were modified, and landscaping, turf, and pathways were installed. During construction, the stone lantern located in the central pond was temporarily relocated and subsequently returned to the original location. The project was completed in August 2023.



Image 2-21: Ponds at Memorial Park Before Removal (2012)



Image 2-22: Ponds at Memorial Park After Removal (2022)

This Page
Intentionally
Left Blank

The background is a dark blue field filled with various shades of blue. It features abstract, overlapping geometric shapes such as curved bands, triangles, and circles. In the lower-left quadrant, there is a small, dark blue crescent moon. The overall aesthetic is modern and minimalist.

Chapter 3

From the Community

This Page
Intentionally
Left Blank

Community Engagement Overview

The success of the Memorial Park Specific Plan relies on the involvement of community members to shape the project’s vision, goals, and priorities. Outreach and engagement are pivotal components of any public project to ensure that the final plan accurately and holistically represents the community and its diverse residents.

Community outreach questions were developed around three identity scenarios—Civic Event Space (e.g., festivals, concerts, sports), Community Gathering Space (e.g., playgrounds, picnics, classes), and Natural Site and Park (e.g., green space, walking paths, nature areas)—which link directly to the vision outlined for Memorial Park in the Cupertino Parks and Recreation System Master Plan (2020).

The initial goal for Memorial Park outreach was to collect data on the community’s likes, needs, and wants in terms of park identity scenarios, elements, and amenities. A second round of engagement focused on collecting feedback about preliminary concept plans and prioritizing features for the development of a final concept plan. Community input was gathered in September/October 2022 (Round 1) and January/February 2023 (Round 2) through online and in-person engagement activities. Over 3,300 community responses were

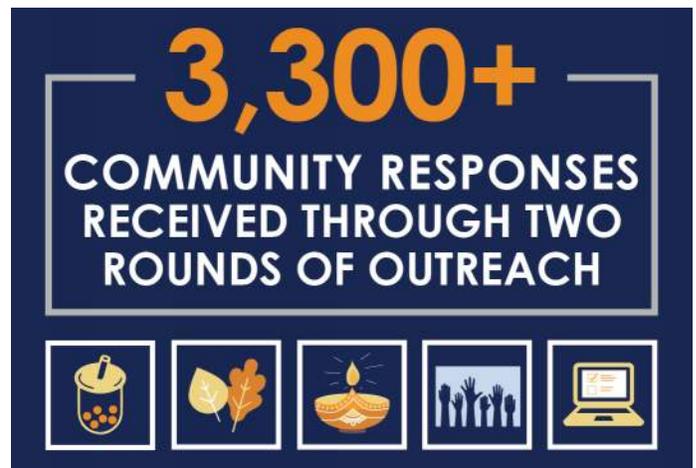


Figure 3-1: By the Numbers - Community Engagement

received in the first two rounds of public outreach, providing essential input to shape the revitalization of Memorial Park. Participants representing a wide range of ages and ethnicities were excited about the opportunity to revision the park and eager to share their opinions in conversations with the project team and in online responses. A third and final round of outreach included a public review period and final presentations of the Memorial Park Specific Plan to the Parks and Recreation Commission and City Council.



Figure 3-2: Outreach Process



Figure 3-3: Top 5 Most Liked Current Park Features (Round 1 Outreach)



Image 3-1: Round 1 Pop-Up Event, September 2022

The outreach efforts revealed that Memorial Park is a well-utilized and beloved community asset drawing visitors for a wide range of activities. Among the community members surveyed, most visit Memorial Park to attend a festival or event, and the park’s reputation as a popular venue for public performances and celebrations is an important part of its identity. Walking paths, natural areas, trees, open lawn space, events, and playgrounds were top-rated features of the park, illustrating how effectively Memorial Park balances active and passive recreation, play experiences, nature elements, and community connection.

While planning for the park’s future, the community favored building on Memorial Park’s strong foundation, citing new recreation amenities including water play and nature play, better connections for bike access, more amenities for all ages/abilities, and an expanded tree canopy to provide more shade as the most desired enhancements. Although it was a popular park amenity during initial community engagement for the Memorial Park Specific Plan, water play did not align with the City of Cupertino’s sustainability goals and was not furthered in the design process.

Community outreach participants preferred a park design that combines a variety of recreation options, such as pickleball and tennis, with expanded opportunities for play, social gathering, and the enjoyment of nature. Garden areas, trees, shaded picnic areas, playgrounds, sports courts, upgraded restrooms, and an upgraded amphitheater were all important priorities for the final concept plan.

Overall, the community supports the unique features and diverse uses of Memorial Park, while desiring enhancements to social and recreational experiences and improvement of the park’s natural amenities. The public recognizes the multi-faceted ways the park serves the Cupertino community by providing a trifecta of equally engaging identity scenarios as a civic event space, community gathering space, and natural site and park.

SCENARIOS
CURRENT
AND FUTURE
MEMORIAL
PARK
IDENTITY

*Survey Questions #6-7
 and In-Person Votes*

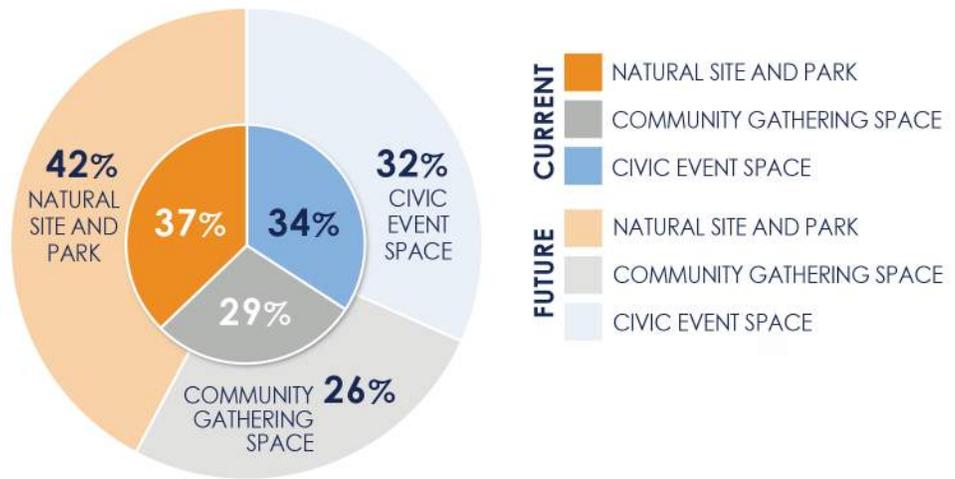


Figure 3-4: Desired Scenarios for Current and Future Identity of Memorial Park (Round 1 Outreach)

The community envisions a future Memorial Park that perpetuates these three identities as it evolves. Enhanced opportunities for access, play, recreation, events, social gathering, and experiencing nature are methods to further the uniqueness of the park.

For detailed information about outreach efforts and results, see Appendix C.

Methods

Community engagement for the project was conducted in a hybrid manner, utilizing virtual and in-person formats to solicit input and provide a variety of convenient options to get involved. Outreach activities included virtual focus group meetings, two webinars, two online surveys, several public presentations, a public comment period, and several in-person events in Cupertino. The engagement strategy utilized multiple avenues to increase public awareness of the project and its community outreach events, including digital and printed promotional materials. See Table 3-1 for a list of outreach efforts.

The identity scenarios of Civic Event Space, Community Gathering Space, and Natural Site & Park

which directly align with key community outreach themes and recommendations for Memorial Park outlined in the City's Parks and Recreation Master Plan

will form the foundation of the Memorial Park Specific Plan.

Method	Intent/Purpose	Media	Duration
Engage Cupertino (Project Website)	An information resource for residents and location to post status updates about the project.	Online	Entire project
Survey	To gather community input on existing conditions and future desires for Memorial Park.	Online; available in English, Chinese, and Hindi	September 15 to October 9, 2022; January 25 to February 22, 2023
Pop-up Events	To complement the online survey with in-person participation opportunities.	In-person; printed boards with interactive dot stickers	September 17, 24, and October 8, 2022
Open House	To complement the online survey with in-person participation opportunity.	In-person; printed boards with interactive dot stickers	February 4, 2023
Focus Group Interviews	To begin the outreach process with City staff and the community.	Virtual	September through December 2022
Community Webinar	To gather community feedback on existing conditions and future desires for Memorial Park.	Virtual	September 15, 2022 February 9, 2023
Commission and Council Presentations	To present the project, gather input, and report on the project status.	Virtual; presentation	February 2, 2023 February 23, 2023 June 1, 2023 June 21, 2023
Public Comment Period	To present the preferred site plan to the community for input.	Virtual	August/September 2023
Park Sign	To inform about the project status and encourage community input.	In-person; posted in Memorial Park	Entire project
Social Media Post	To spread the word about community engagement efforts and generate participation.	Online; Facebook and Instagram profiles	Entire project
Postcards and Door Hangers	To spread the word about community engagement efforts and generate participation.	Postcards distributed to all City residences and door hangers to park-adjacent residences	September 2022 January 2023
Commission and Council Announcements	To announce the project, gather input, and encourage participation.	Virtual and in-person; presentation	September and October 2022 January and February 2023
City Newsletter	To spread the word about community engagement efforts and generate participation.	Virtual and hard copies	January 26 and February 2023

Table 3-1: Outreach Methods

Round 1: Community Themes

Community outreach efforts during the initial stage of the project collected input on a wide range of topics including current park features, usage habits, and ideas for revitalizing Memorial Park. Engagement activities consisted of three pop-up events, an online survey, a community webinar, and five focus group interviews. Outreach themes highlighted during the first round of engagement align with several themes and priorities identified in the City’s Parks and Recreation System Master Plan, as outlined below.

Overall, the community wants Memorial Park to be easy to get to and move through, include distinctive spaces for social activities, offer a wide variety of engaging recreation options in a nature-oriented setting, and support a healthy, cohesive community in a manner that is uniquely Cupertino. Suggested improvements for the park focused on a

combination of passive and active uses, as well as social and individual experiences. Improving event spaces such as the amphitheater, enhancing the tree canopy and shade, adding recreation activities and amenities, enhancing nature experiences, expanding inclusive options, and improving park access were recommendations outlined in the Parks and Recreation System Master Plan equally supported by outreach input for the Memorial Park Specific Plan.

Additionally, participants in Round 1 outreach supported the following park features:

- Multi-use pathways and bike-friendly access points
- All-abilities, nature, and water play amenities
- Native plant and demonstration gardens
- Spaces for festivals and community events
- Dedicated pickleball and tennis courts
- Picnic areas with shade

Community Outreach Themes from 2020 System Master Plan that Align with Memorial Park Specific Plan Outreach Results



PARK & FACILITY ACCESS

Residents want easy, enhanced access to parks and recreation opportunities.



NATURE EXPERIENCE

Community members want more opportunities to connect to nature.



EXTRAORDINARY PLAY

Cupertino desires a variety of play experiences for all ages and abilities.



UNIQUELY CUPERTINO

Parks and recreation opportunities should reflect Cupertino’s character, heritage, and diverse community.



RECREATION VARIETY

Residents and visitors desire a wide range of recreation options.



SOCIAL GATHERING & CELEBRATION

Residents appreciate community events and would like to see more spaces in Cupertino for bringing people together.

Figure 3-5: Shared Key Themes Between Memorial Park & Parks and Recreation System Master Plan Community Outreach

Round 2: Preferred Design

The second round of community engagement presented three preliminary concept plans and collected feedback to develop a preferred design for Memorial Park. Engagement opportunities included an online survey, webinar, community open house, public presentations, and the public comment period. The goal of this round of outreach was to gauge public sentiment about different concept options and determine priorities for the final plan.

Each park concept was inspired by one of the three identity scenarios—Civic Event Space, Community Gathering Space, and Natural Site and Park. Concept A (Community Focus) offered a wide range of community-oriented activities while balancing the natural and civic elements of the park. Concept B (Nature Focus) expanded and enhanced the park’s natural elements and blended them with other civic and community-oriented spaces. Concept C (Civic Focus) enhanced opportunities for civic engagement while integrating nature and community-oriented elements of the park. Appendix D contains the three preliminary concept plans.

Concept Priorities

Results from Round 2 outreach revealed the community’s preferences and priorities for Memorial Park’s design. In general, the community preferred a balance of passive and active amenities, including

IDENTIFY YOUR PREFERRED CONCEPT

All Outreach Methods

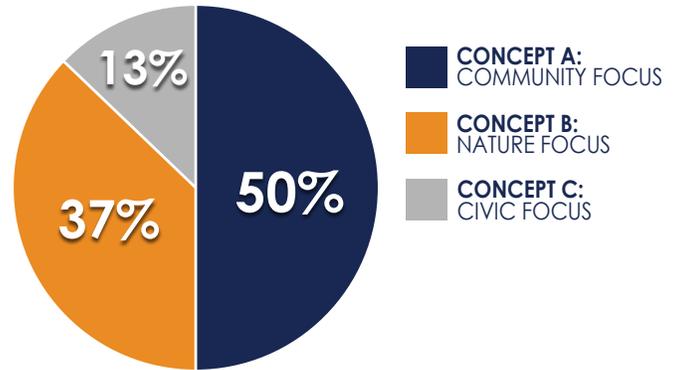


Figure 3-6: Preferred Concept Breakdown (Round 2 Outreach)

play, social gathering, fitness, nature, and civic engagement, and favored the concept plan that best reflects those priorities. Features such as playgrounds, pickleball courts, a passive garden walk, and the amphitheater ranked as favorite elements of each of the three concepts.

When asked to select the most important features across all three concept plans to be included in the final design, the community again focused on a unique combination of play-based recreation, nature elements, and social amenities (see Figure 3-7). The majority of participants chose Concept A as their preferred concept, which focused on recreation and play with a relocated/expanded playground as part of a multi-age play area to replace the softball field.



Figure 3-7: Top 10 Most Important Features for the Final Design of Memorial Park (Round 2 Outreach)

Preferred Concept Plan

Feedback from the community, as well as City staff and commissioners, was synthesized into the preferred concept plan for Memorial Park. This design used Concept A—the favorite concept from Round 2 outreach—as a base, while blending some of the most popular features from Concepts B and C into a single plan that cohesively serves the diverse needs of the community. A key feature of the preferred plan was a large multi-age play area with a relocated/expanded playground and three dedicated pickleball courts on the site of the existing softball field, as shown in Concept A.

The preferred concept was presented to City Council in June 2023. In consideration of public comments received, the preferred design was approved by Council with the condition that the softball field remained in its current location and the new features included in the preferred design for that area be relocated.

Revised Preferred Concept Plan

A revised preferred concept plan was available online for public review in August/September 2023. In the updated design, the softball field remained in its existing location, as per Council’s direction, in place of the previously proposed multi-age play area. Several new park amenities were relocated to other areas of the park, including four dedicated pickleball courts in the southeast corner of the park. Feedback received from the local pickleball community during the public comment period for this design indicated that the number of pickleball courts should be increased to a total of eight to accommodate growing demand.

The following chapter presents the final concept plan and its amenities, proposed site circulation, trees and landscaping, and other components of the revitalized Memorial Park.



Figure 3-8: Preferred Concept Plan Presented at the June 2023 City Council Meeting

This Page
Intentionally
Left Blank

Chapter 4

Park Concept

Final Concept

The final concept plan (Figure 4-1) emerged as a result of the comprehensive outreach approach discussed in the previous chapter. The proposed design provides a cohesive park space that has clear organizational hierarchy, directly responds to the priorities identified in the community outreach process, and builds upon the shared vision for Memorial Park as outlined in the Parks and Recreation System Master Plan.

This chapter presents a conceptual design that celebrates Memorial Park's existing historical and environmental features while proposing new amenities and infrastructural improvements to enhance the overall visitor experience. The design preserves important cultural features of the park, such as the Veterans Memorial, as well as preserving key recreational opportunities, such as tennis and softball. A renovated amphitheater and stage, dedicated pickleball courts, and an all-abilities playground are among the proposed improvements to revitalize Memorial Park.

The final concept plan considered the existing and future uses of the park amenities to provide a balanced and functional outdoor space. Trash receptacles, drinking fountains, benches, and bicycle racks will be incorporated strategically near amenities, restrooms, and other destinations to enhance visitor comfort and convenience. Additional trees, plantings, and bioretention areas are recommended to maintain the park's aesthetic environment while enhancing its ecological value. Lastly, the final concept improves park circulation with an expanded multi-use path network that provides bicycle connections to the City's extensive active transportation system.

The remainder of this chapter discusses the programming of the park, outlines the new or enhanced site elements, provides character images to communicate ideas, describes the improved circulation network, explores event and festival considerations, and summarizes the landscaping recommendations.

- ① New Site Arrival
- ② New Parking Stalls
- ③ Upgraded Restroom
- ④ Passive Garden Walk
- ⑤ Pickleball Courts
- ⑥ Expanded Senior Center Deck / Plaza
- ⑦ Fitness Station
- ⑧ Bocce Court
- ⑨ Reservable Picnic Area
- ⑩ Nature Playground
- ⑪ Enhanced Pedestrian / Bicycle Access
- ⑫ Veterans Memorial
- ⑬ Upgraded Amphitheater and Stage
- ⑭ Historic Gazebo
- ⑮ Event Lawns
- ⑯ Event Plaza
- ⑰ All-Abilities Playground
- ⑱ New Restrooms
- ⑲ Basketball Court
- ⑳ Existing Softball Field / DOLA
- ㉑ Dedicated Tennis Courts
- ㉒ Upgraded Quinlan Courtyard
- ㉓ Upgraded Parking Lots



Figure 4-1: Final Concept Plan

Site Programming

Site programming involves the thoughtful planning, design, and arrangement of distinct areas within the park to support specific activities and experiences. Effective site programming ensures that each designated area can accommodate its intended purpose while also considering factors like accessibility, safety, and aesthetics.

The programmed areas accommodate a diverse range of community needs, interests, and priorities. Their organic arrangement ensures that the park's layout is balanced and cohesive, while establishing a harmonious, vibrant, and functional blend of active and passive recreation opportunities. Programmed uses are also separated into well-defined pockets to avoid interference and conflict between incompatible uses while maintaining a permeable, attractive, and approachable hierarchy of activities. Deliberate and intentional site programming produces an engaging and enjoyable rhythm as a visitor travels through the park.

Figure 4-2 shows the primary programmed areas: sports, play, social gathering and picnic, festivals and events, and experiential garden. The general definitions and benefits of the programmed areas are discussed below. Specific site elements and physical design features within Memorial Park are explored in the following section, organized by the zones labeled in the figure.

Social Gathering and Picnic

This area provides a space for casual social gatherings as well as opportunities for relaxation and passive enjoyment. Picnic tables and barbecues provide spaces for cookouts and communal dining experiences to share and enjoy meals with family and friends, while also supporting passive uses such as reading, studying, crafting, and board games. Some of the amenities in this programmed area are rentable, including the Quinlan courtyard, large picnic area, and historic gazebo.

Play

Play areas are designed for children and families to engage in a variety of physical, social, and imaginative activities. These areas support family outings, caretaker-child bonding, quality outdoor experiences, and community building. They provide opportunities for children to develop skills and explore their interests in a safe and supervised environment.

Experiential Garden

Experiential gardens are valuable for promoting relaxation, contemplation, and mindfulness by offering a tranquil and meditative space. This area allows a visitor to peacefully explore and appreciate the natural environment. Experiential gardens may showcase a variety of materials and plant species, focusing on unique textures, fragrances, and colors that create a sensory and educational experience while supporting the health and resilience of the local ecosystem.

Festivals and Events

By allocating spaces for festivals and large events, a park can enrich the cultural, social, and economic fabric of the community. These areas provide opportunities for celebrating cultural diversity through educational and artistic exhibitions and performances; boosting tourism and the local business economy by attracting outside visitors from the greater region; and building a community sense of pride and identity by creating platforms for local performers, artists, and vendors to gain recognition.

Sports

This programmed zone features recreational facilities and spectator areas designed for sports-related activities. Although sports fields and courts typically have striping and features aligned with the rules and requirements of one particular sport, they are often flexible to accommodate a wide range of casual athletic hobbies. Athletic areas may support organized sports leagues and competitive tournaments as well as casual and spontaneous games. This usage category plays an important role in promoting physical fitness, social interaction, and community engagement.

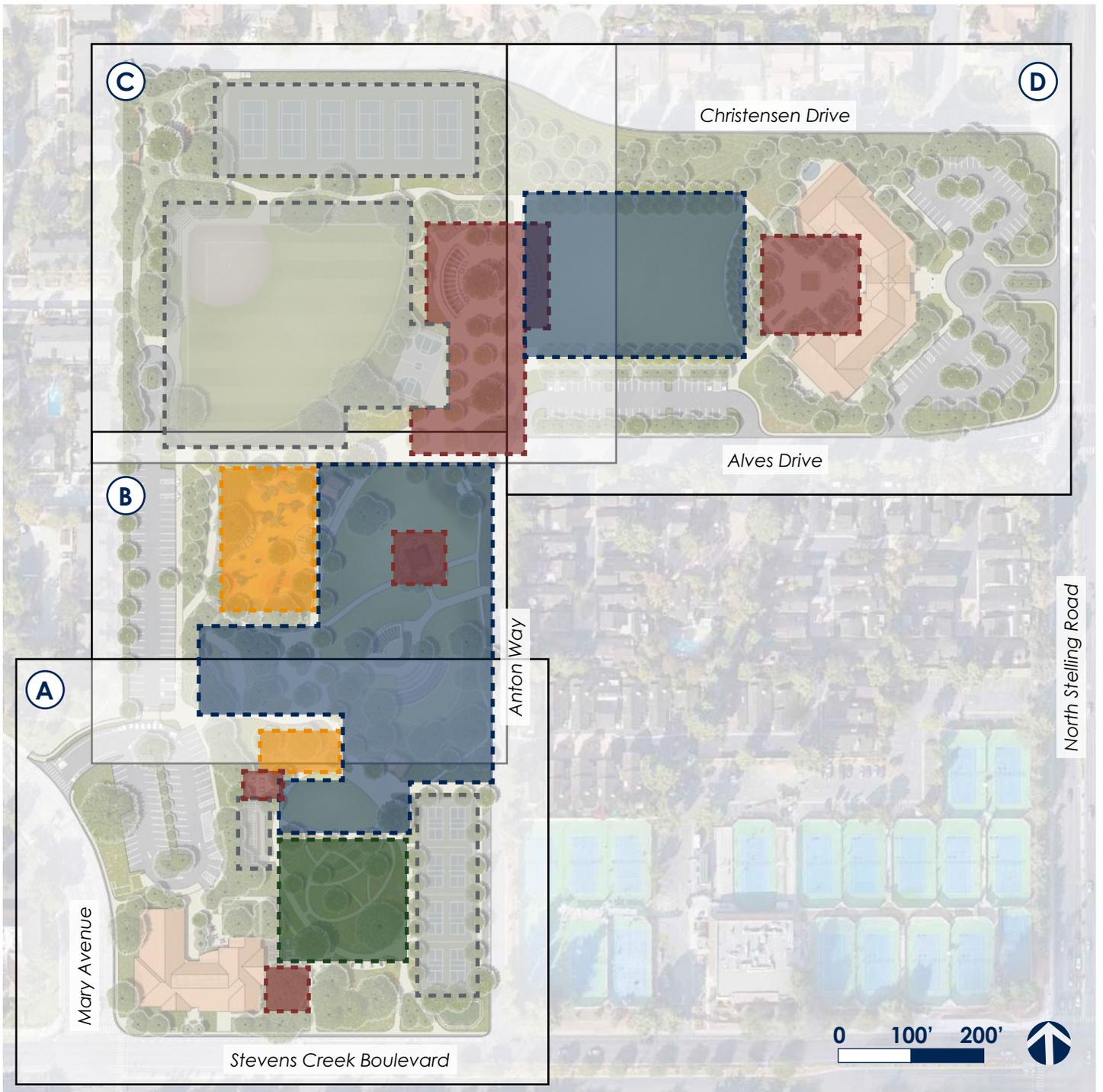


Figure 4-2: Site Programming and Zone Key Map

- | | | | |
|--|-----------------------------|---|----------------------|
|  | Social Gathering and Picnic |  | Festivals and Events |
|  | Play |  | Sports |
|  | Experiential Garden |  | Zones |

Site Elements - Zone A

Passive Garden Walk

The passive garden walk provides a quiet and aesthetic space for meditation and passive enjoyment of the natural environment. This amenity features walking paths that meander through planting and landscaped areas. The passive garden walk will feature native and adapted low-water plant species, providing visual interest and species richness. Seating elements with back support are placed strategically along the meandering pathways, encouraging visitors to linger in this serene setting (Figure 4-3).

In response to the City's Green Stormwater Infrastructure Plan, the site will include stormwater treatment areas with educational signage. Stevens Creek Boulevard frontage will also accommodate street stormwater runoff.



Image 4-1: Passive Garden Walk



Figure 4-3: Photosimulation of the Passive Garden Walk

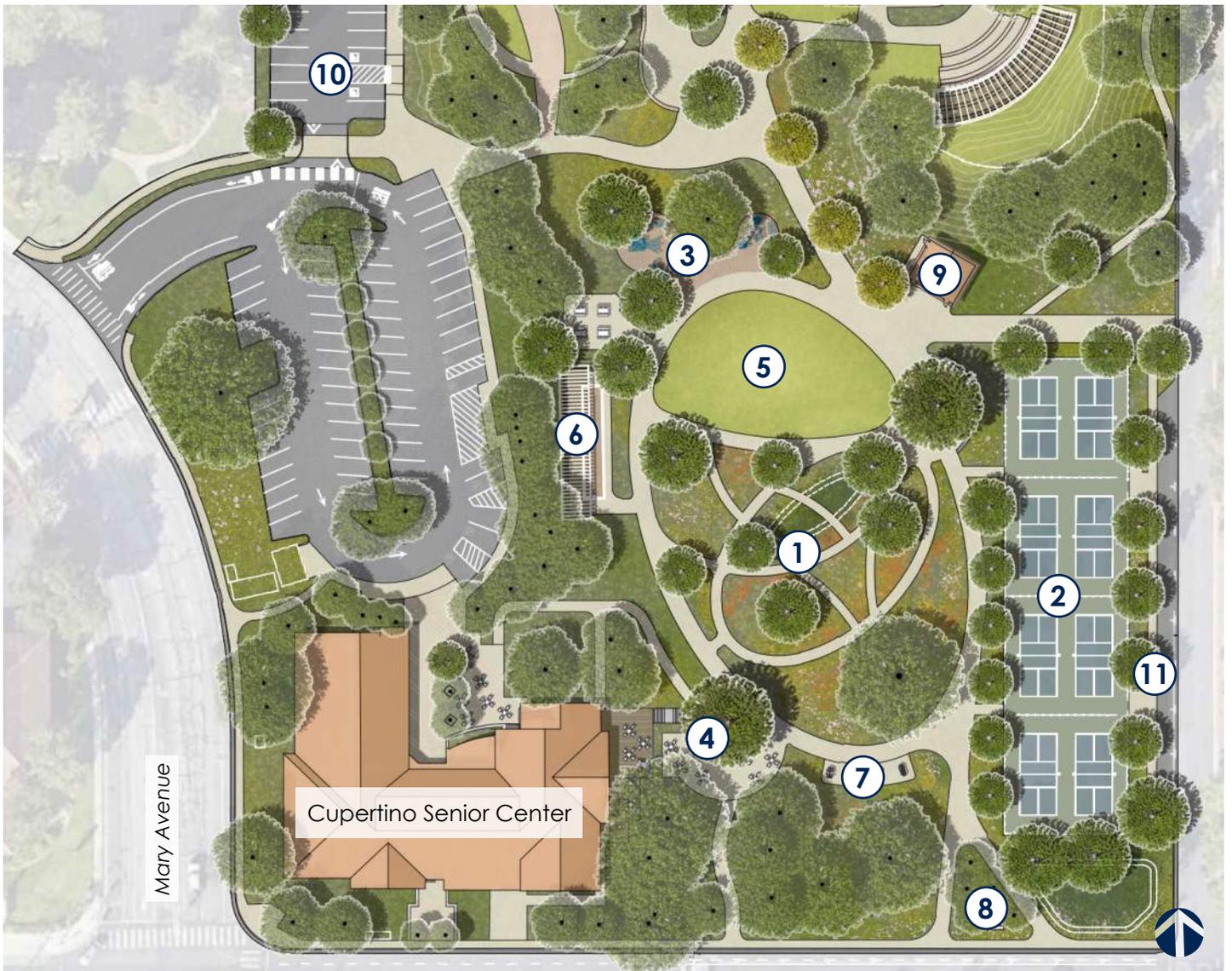
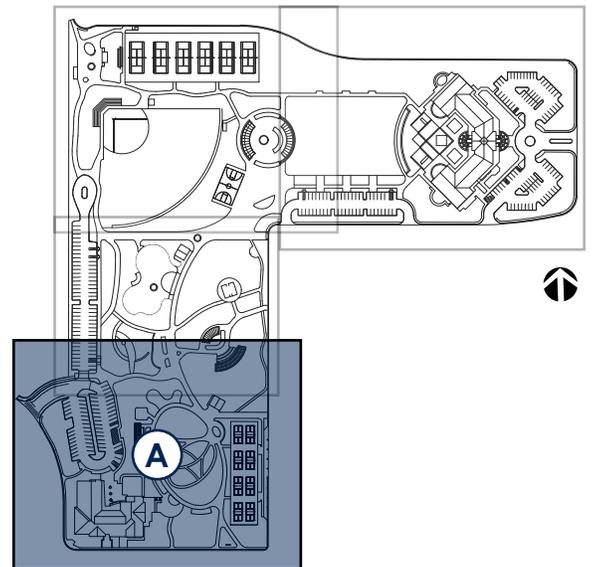


Figure 4-4: Final Concept - Zone A

- ① Passive Garden Walk
- ② Pickleball Courts
- ③ Nature Playground
- ④ Expanded Senior Center Deck / Plaza
- ⑤ Event Lawn
- ⑥ Bocce Court
- ⑦ Fitness Station
- ⑧ Park Sign
- ⑨ New Restroom
- ⑩ Upgraded Parking Lot
- ⑪ New Parking Stalls



KEY MAP

Pickleball Courts

The final concept includes eight dedicated pickleball courts located in the southeast corner of the park. This location is ideal due to the proximity to the Cupertino Sports Center, which has overlapping and compatible uses. The reservable courts will be contained by a 6-foot fence and feature waiting areas with benches and drinking fountains at the eastern entrances.

The pickleball courts are oriented north/south and are organized into two clusters of four courts with permanent nets. The pickleball courts are expected to accommodate multiple games to accommodate the growing pickleball demand. Lighting is recommended to allow for evening use.

Nature Playground

The nature playground features boulders, logs, and other natural materials for creative and imaginative play. Nature playgrounds provide opportunities for unstructured activities that bolster sensory development and environmental education. This amenity is the smaller of the two playgrounds in the park, and is accompanied by an adjacent small reservable picnic area with a barbeque.

Expanded Senior Center Deck / Plaza

The Cupertino Senior Center deck will be expanded to accommodate a larger number of guests for events and activities held at the facility. The deck will feature a gentle ramp that connects to the pathway network and a small plaza at the ground level (Figure 4-5).

Event Lawn

The event lawn provides a large open space that is flexible and multi-use. The grassy area would be ideal for events and social gatherings, quiet lounging and relaxing, or informal lawn games. The event lawn features seat walls along the edge allowing for rest and observation. This amenity would also accommodate spillover from the adjacent nature playground and picnic area.



Image 4-2: Pickleball Courts



Image 4-3: Nature Playground



Figure 4-5: Enlargement of Senior Center Deck / Plaza

Bocce Court

The proposed bocce court is north of the Cupertino Senior Center and is expected to be utilized by members of this facility. This amenity is reservable but open for drop-in use when not otherwise occupied. The bocce court will have a shade structure and seating for additional comfort, and will require little maintenance aside from periodic compaction.

Fitness Station

The park design features an outdoor fitness station, which will be equipped with exercise equipment for visitors to engage in strength and balance training. The fitness station intends to provide free access to physical exercises guided by signage and featuring accessible design.

Park Sign

A relocated park sign will enhance the arrival experience for a visitor entering the park from the southeast corner. The sign, centered between two entry pathways, will improve visibility of the park for pedestrians, bicyclists, and drivers traveling along Stevens Creek Boulevard.

New Restroom

A small restroom building will provide bathroom stalls as well as drinking fountains and storage for park equipment. This restroom replaces an existing restroom planned for removal, and will serve the adjacent amenities such as the nature playground and pickleball courts.

Upgraded Parking Lot

The Cupertino Senior Center parking lot is recommended for resurfacing and restriping. While the arrangement and number of parking stalls would not change, landscape improvements to the planting areas and an asphalt concrete overlay would enhance the visitor arrival experience. A new speed table at the northern edge of the parking lot would serve as a traffic calming device that improves circulation, safety, and accessibility, as discussed further in the Site Circulation section.



Image 4-4: Bocce Court



Image 4-5: Fitness Station

New Parking Stalls

The pickleball courts will be bordered to the east by nine new parallel parking stalls. One of the eight stalls is accessible. The adjacent sidewalk connects the stalls to the park's circulation network. Directly north of the parking stalls is a 15-foot maintenance vehicle access point off of Anton Way.

Site Elements - Zone B

All-Abilities Playground

A primary focal point of the park’s design is the large all-abilities playground. This key amenity accommodates people of all abilities, including those with physical, sensory, or cognitive disabilities. Adaptive equipment such as handrails, transfer platforms, and specialized seating accommodate a variety of physical needs, in addition to ramps and pathways that allow efficient access for individuals with mobility devices. The all-abilities playground aims to create a welcoming environment to support many types of play by including multi-sensory elements and variety of social spaces. These features are built upon the primary elements of play, which include balancing, sliding, brachiating, spinning, climbing, swinging, running, and free play.

The all-abilities playground will feature resilient rubber surfacing and will utilize the existing natural topography for locating slides and pathways. This amenity is the largest of the two proposed playgrounds in the park and will be accompanied by an adjacent picnic area with accessible picnic tables.

Upgraded Amphitheater and Stage

The existing amphitheater and stage are highly used amenities in Memorial Park, frequently hosting concerts and theatrical performances. As part of this final concept plan, the amphitheater will be expanded in size and will receive upgrades to seating, stairs, and pathways to enhance accessibility. The amphitheater and stage will feature new shade structures to extend usage during hot and sunny days, new surfacing, and technological enhancements that will expand entertainment opportunities. The existing hill behind the amphitheater seating will continue to offer additional informal seating options for viewers.



Image 4-6: All-Abilities Playground

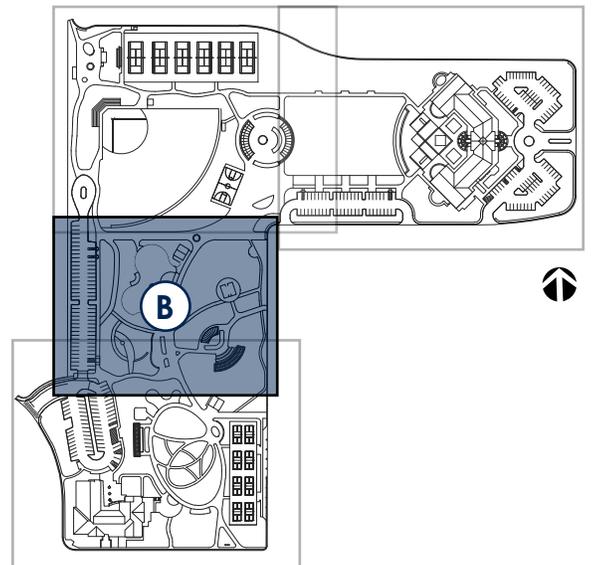


Image 4-7: All-Abilities Playground



Figure 4-6: Final Concept - Zone B

- ① All-Abilities Playground
- ② Upgraded Amphitheater and Stage
- ③ Historic Gazebo
- ④ Event Lawn
- ⑤ Veterans Memorial
- ⑥ Seating / Picnic Area
- ⑦ Upgraded Parking Lot
- ⑧ New Restroom



KEY MAP

Historic Gazebo

As discussed in Chapter 2, the existing gazebo is identified as a historic site in the General Plan. While there will be no alterations to the historic gazebo’s structure, the planting area along its border will be refreshed and its paved platform area will be resurfaced. The paved area will feature several picnic tables for drop-in use. The gentle improvements to this cultural amenity are expected to increase its aesthetic character, celebrate its history, and increase visitation as a key destination in the park.

Event Lawn

This additional event lawn provides extra flat and open space for picnics, lounging, and playing games. Crowds can spill over into this area, which is expected to occur during large events at the amphitheater. The proposed event lawn is flexible and can accommodate a variety of uses (Figure 4-7).



Image 4-8: Event Lawn



Figure 4-7: Photosimulation of the Event Lawn

Veterans Memorial

Similar to the historic gazebo, the Veterans Memorial will be preserved in its existing condition. The memorial will feature minor adjustments to the existing surrounding topography. The brick pavers featured in the Veterans Memorial have inscribed messages that will continue to be maintained. This cultural amenity will continue to accommodate quiet moments of reflection for visitors, the annual Veterans Day Ceremony, and other community events and gatherings for many years to come.

Seating / Picnic Area

Additional seating opportunities are proposed at several key locations in this portion of the park. Benches, picnic tables, and seat walls are recommended to improve visitor comfort and accessibility. Where feasible, these areas may be accompanied by educational signage highlighting landscape and garden elements.

Upgraded Parking Lot

The final concept plan recommends resurfacing and restriping this parking lot. An asphalt concrete overlay will follow minor adjustments to the parking lot planting areas to accommodate a widened pedestrian and bicycle multi-use path. While the locations of the parking lot stalls will shift, the overall number of stalls available to visitors will not change.

New Restroom

A small restroom structure will provide convenient access to bathroom stalls, drinking fountains, and park storage for the adjacent amenities and uses.



Image 4-9: Seating Opportunities



Image 4-10: New Restroom

Site Elements - Zone C

Event Plaza

The new event plaza offers additional opportunities for small to medium-sized gatherings. It bridges the proposed event lawn areas, allowing for overflow during highly-attended events. This public space serves as a primary entry into the park, conveniently located adjacent to a parking lot as well as the pedestrian entrance accessible from the Alves Drive sidewalk. The event plaza features decorative pavement colors and textures, creating a distinctive pedestrian experience while also allowing a key point of access for emergency vehicles. A grid arrangement of trees, with seating elements under the canopy, provide a shady spot for park visitors to enjoy. The event plaza is expected to be a heavily-used park amenity and destination given its convenient location and aesthetic characteristics (Figure 4-8).



Figure 4-8: Photosimulation of the Event Plaza

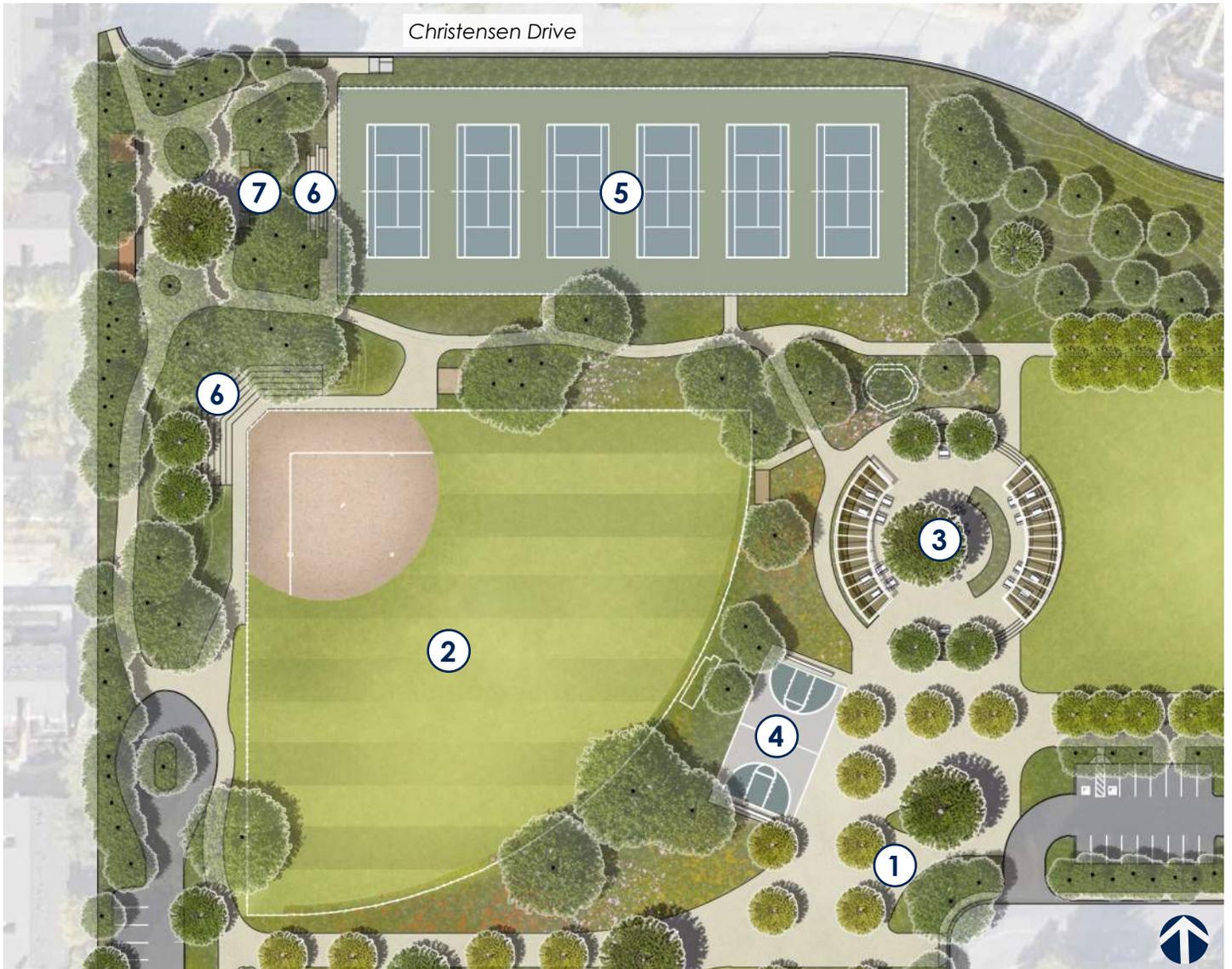
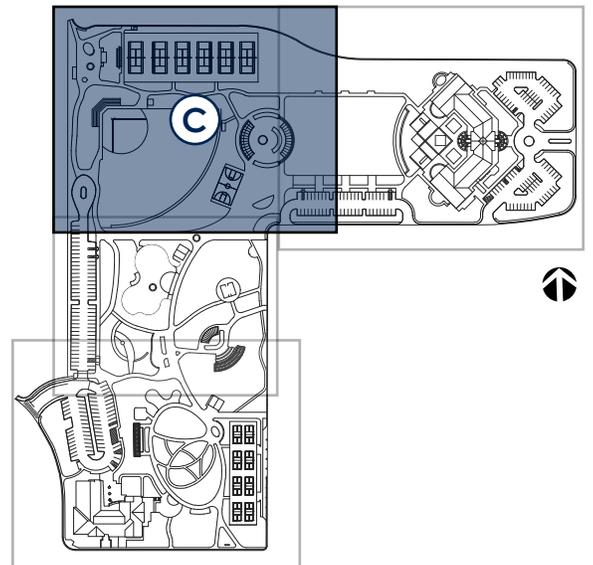


Figure 4-9: Final Concept - Zone C

- ① Event Plaza
- ② Existing Softball Field / DOLA
- ③ Reservable Picnic Area
- ④ Basketball Court
- ⑤ Dedicated Tennis Courts
- ⑥ Upgraded Spectator Seating
- ⑦ Upgraded Restroom



KEY MAP

Softball Field / DOLA

Memorial Park features a high quality lighted softball field with a scoreboard that attracts visitors from across the South Bay region. This amenity has field preparation services (such as dragging, watering, chalking, and bases) made available through the Parks and Recreation Department reservation system.

The final concept plan recommends that this amenity serve a double purpose as a dog off-leash area (DOLA) when not in use for softball during regular hours of park operation. At present, the softball field is informally used by dog owners. Formalizing this existing usage would improve safety and mitigate potential conflicts, such as spillover from the adjacent all-abilities playground interfacing with off-leash dogs. Improvements to accommodate this usage include closing the gaps in the fencing to enclose the area, as well as new site elements such as drinking fountains with pet bowls, trash receptacles, and additional bag dispensers to supplement the existing ones placed strategically throughout the park. The final concept plan recommends modernizing the existing field lighting and control system, as well as annual inspection and maintenance of the system, to ensure this amenity remains safe during evening use.

The softball field will remain as a reservable amenity that continues to host organized league events given its high quality condition and functionality. In addition to the proposed upgrades to the lighting system, the final concept plan recommends enhancements to the spectator seating area and adjacent restroom facilities, as well as adjustments to the topography and plantings of the bermed area behind the spectator seating to further enhance the visitor experience.

Reservable Picnic Area

The picnic area adjacent to the Quinlan event lawn will be expanded in size. As the largest and only reservable picnic area in the park, this amenity is used for celebrations and gatherings such as birthday parties, family reunions, community cookouts, and more. The ample counter space, electricity outlets, and trash/recycle/compost receptacles establish this



Image 4-11: Softball Field (Existing)



Image 4-12: Reservable Picnic Area with Shade

area as a valuable community resource. The existing sinks, barbeques, seating elements, and concrete surfacing will be upgraded to ensure that this space continues to facilitate safe and convenient food preparation and cleanup for large groups.

The reservable picnic area will be further improved by the addition of two new shade structures to extend usage on hot and sunny days. The existing terraced stairs on the eastern side of the picnic area, sloping downwards to the Quinlan event lawn, functions as an informal stage. This feature will be expanded and improved to further accommodate events and community gatherings.

Basketball Court

A full-size basketball court, available for drop-in use, will accompany the other sports opportunities in this portion of the park. The court is also adjacent to the reservable picnic area and event plaza. Given the adjacency to the cell tower and transformers, the court's location preserves maintenance access, and is compatible with the adjacent softball use.

The court will be 84 feet by 50 feet, which is the standard dimension for high school and middle school games. It will feature lighting for evening use and seat walls along the sides of the court for players and spectators. The existing berms provide casual seating opportunities, partially shaded by existing trees, to supplement the seating opportunities in the event plaza.

Dedicated Tennis Courts

One of the six existing lighted tennis courts has dual striping for pickleball, providing four pickleball spaces within one tennis court. As part of the park's design plan, the pickleball usage will be moved to dedicated courts in the southeastern portion of the park, and the dual striping will be removed. Aside from updates to the striping, the tennis courts are in good condition and will not receive direct improvements.

While the tennis courts are first come, first served, this area can host several simultaneous games and is therefore used for casual tournaments organized informally by community members. The tennis courts are expected to continue to host casual tournaments given their high quality condition, existing lighting, and nearby restroom facilities. The bermed area to the west of the courts will remain, with minor improvements to the topography, as well as enhancements to the spectator seating area.

Upgraded Spectator Seating

Both the tennis courts and the softball fields are accompanied by concrete and brick terraced seat walls serving as an opportunity for spectator viewing. While not currently accessible, the final concept plan recommends upgrades to the existing spectator seating to allow for free and full access to the amenity for visitors of all ability levels.

Upgraded Restroom

The existing restroom nestled under the tennis court spectator seating will be renovated to provide features that are compliant with the Americans with Disabilities Act (ADA). These crucial upgrades will enhance the visitor experience and ensure safety for all park users. This restroom is expected to be a key amenity for tournaments and organized sports events held at the tennis courts and softball field, as well as large events in other areas such as the Quinlan event lawn.

Site Elements - Zone D

Quinlan Courtyard

The Quinlan Community Center is a very active hub of the City. This facility frequently hosts events organized by the City as well as local organizations and residents. The Quinlan courtyard is frequently used as an outdoor component of events occurring inside the building's lobby, such as the annual Community Tree Lighting in December.

The final concept plan recommends extending the paved area of the courtyard. This extension allows additional space for a variety of seating opportunities, and will allow the courtyard to accommodate a larger number of guests and types of activities. The shade canopy will be enhanced with new trees and shade structure.

The final concept plan does not recommend alterations to the building itself or its attached outdoor small play area and seating node. However, the park design includes landscape improvements around the edges of the building and within the parking lots. The trees in the landscape islands within the parking lot will be replaced in compliance with the arborist report's classification of these trees as having a low suitability for preservation.

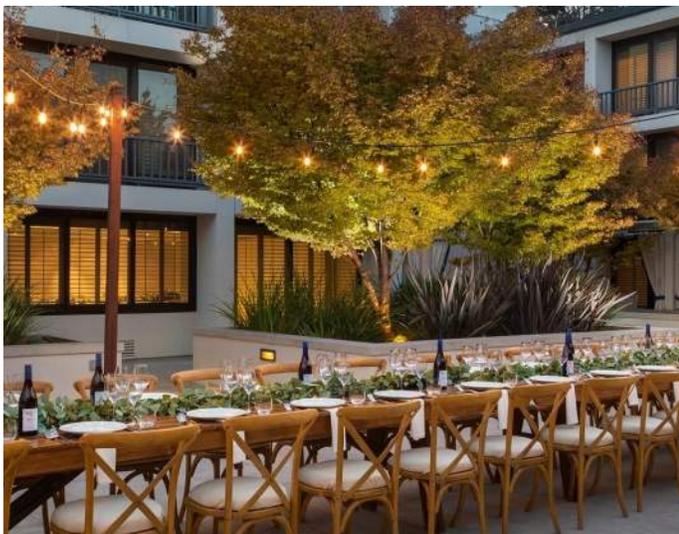


Image 4-14: Quinlan Courtyard as Event Space

Quinlan Event Lawn

The Quinlan event lawn is a popular location for large community events. At approximately 50,000 square feet, this amenity can also accommodate regional events such as the Bay Area Diwali Festival of Lights. This large multi-use lawn also provides space for spillover from events occurring at the Quinlan Community Center and its courtyard.

The existing looped pathway around the Quinlan event lawn is a popular walking route for visitors. At present, the eastern side of the loop travels through the Quinlan courtyard. As a result, passive uses such as strolling or dog walking can conflict with other uses such as an active celebration or a solemn ceremony taking place in the courtyard.

The final concept plan recommends an additional pathway along the eastern side of the Quinlan event lawn, located west of the retaining wall and linear arrangement of trees that visually separate the amenities. This allows pedestrians to complete the loop without encroaching on events or being hindered by a crowd. The proposed pathway runs alongside the existing retaining wall, providing access to informal seating. The wall is shaded under a row of existing Purpleleaf Plum trees that offer a pop of color in the spring, as well as a proposed additional row of Purpleleaf Plum trees, discussed further in the Trees and Landscaping section.

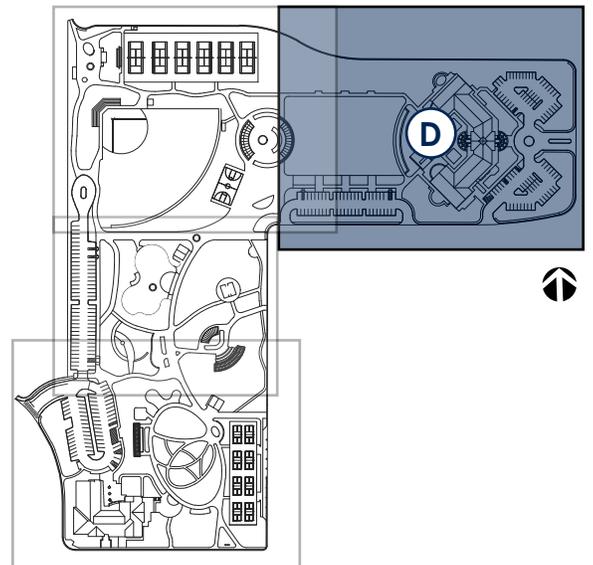


Image 4-13: Event Lawn



Figure 4-10: Final Concept - Zone D

- ① Quinlan Courtyard
- ② Quinlan Event Lawn
- ③ Perimeter Seating
- ④ Upgraded Parking Lots



KEY MAP

Perimeter Seating

Seating elements are recommended along the perimeter pathway that loops around the Quinlan event lawn. The proposed tree canopy lining the pathway will provide shade for visitors stopping to rest while traveling through the park's extensive pedestrian network. The additional seating opportunities are ideal for observing activities taking place on the Quinlan event lawn.

Upgraded Parking Lots

The existing parking lot along Alves Drive will be enhanced to improve circulation and accessibility to and within Memorial Park. The parking lot presently has one entrance at the center of its frontage with Alves Drive, resulting in congestion during peak visitation times. The park design proposes two points of egress on the west and east sides of the parking lot. This layout is expected to relieve congestion during events and improve pick-up and drop-off circulation. Lastly, this parking lot will be resurfaced and restriped to ensure safety and ease of use. The total number of parking stalls will not change (50). The number of accessible will increase from two to four, which will be evenly split between the northwestern and northeastern corners of the lot.

The final concept plan proposes minor landscaping improvements to the Quinlan Community Center parking lot planting areas, resurfacing, and restriping.

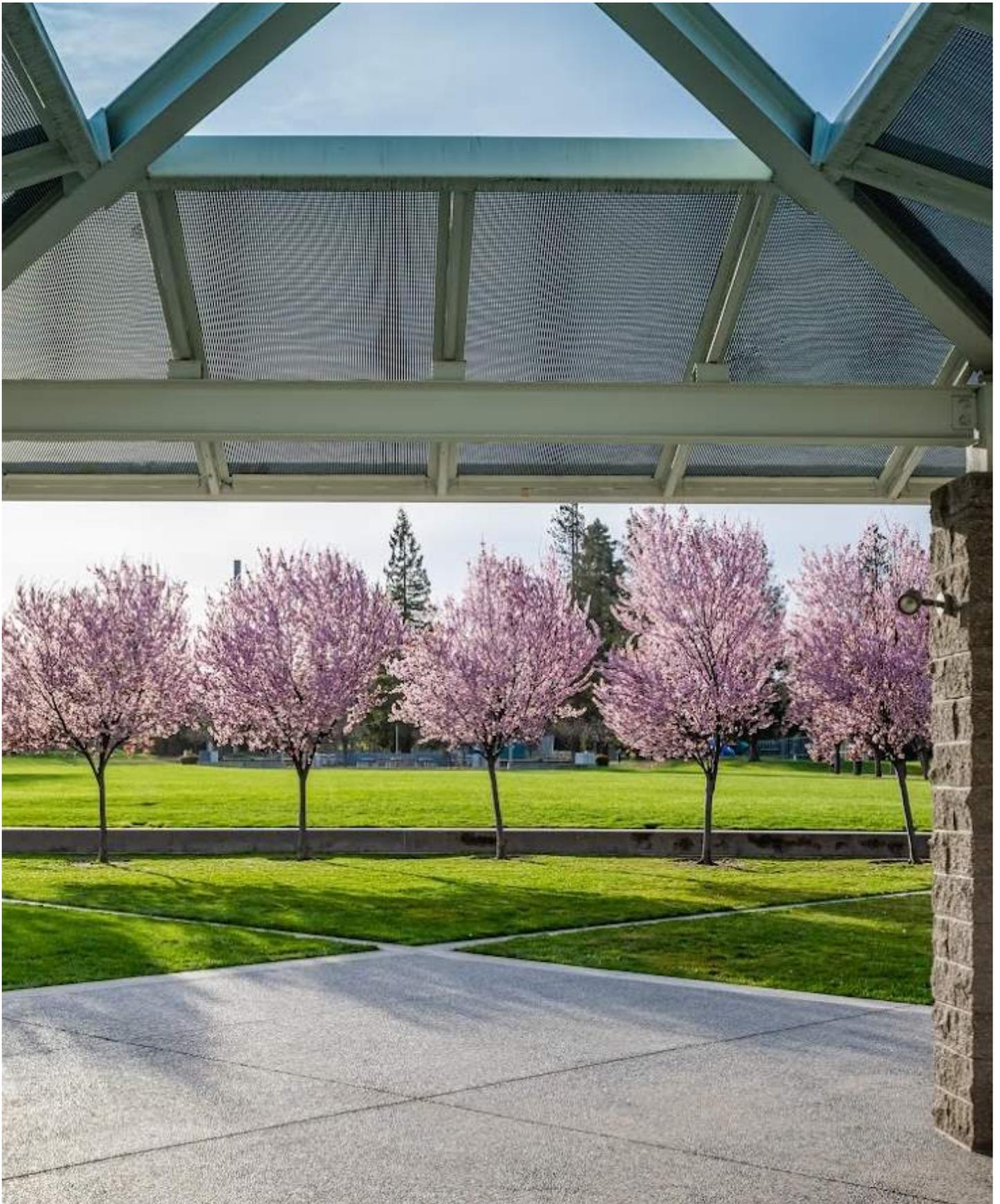


Image 4-15: Quinlan Courtyard

Festivals and Events

The final concept plan recommends accommodations for festivals, events, and other community gatherings that are expected to be held at Memorial Park for many years to come. During the design process, potential event space was studied and prioritized, to ensure that present and future events can be held safely in the park.

Figure 4-11 shows the regions of the park that are intended to host large gatherings, while the other areas are intended for individual enjoyment or small to medium group activities. The figure also shows the main promenade and primary pedestrian circulation routes, which conveniently connect all large event spaces. The festival and event areas are intended for performances, concerts, speeches, cultural festivals, public celebrations, civic events, and other gatherings that may include food and merchandise vendors or temporary structures like stages and canopies.

These open lawn areas are highly adaptable to different uses. When not hosting events, the festival and event areas could be used for lounging, picnicking, sunbathing, meditation, photography, painting, reading, and other forms of passive recreation. These areas could also be used for active recreation activities such as playing frisbee or catch, having a race, flying kites, yoga and stretching, and other athletic or team-building outdoor activities.

The Parking Study conducted for the Memorial Park Specific Plan observed parking capacity levels during the 2022 Bay Area Diwali Festival of Lights. The analysis found that existing on-street and off-street parking available to visitors was adequate, even during peak periods of the event (Appendix A). The analysis also noted that De Anza College to the south of the park is occasionally used for overflow parking during large events. This partnership with the neighboring college ensures that Memorial Park will continue to host large-scale community and regional events that are safe and easy to navigate to.



Image 4-16: Amphitheater (Existing)

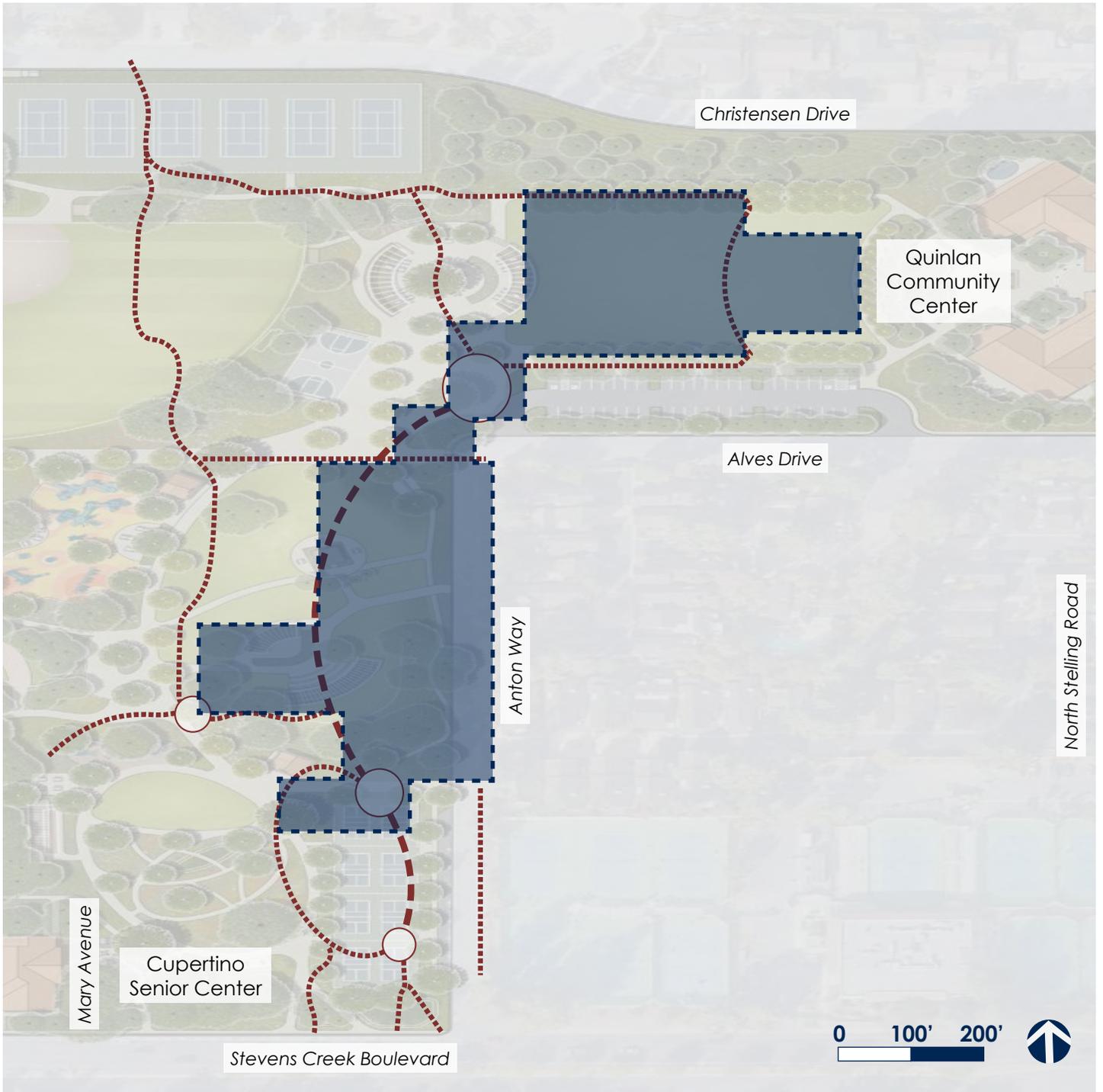


Figure 4-11: Festivals and Event Areas

-  Festivals and Events Area
-  Main Promenade
-  Primary Pedestrian Circulation
-  Arrival Node

Site Circulation

The final concept plan considers improvements to pedestrian, bicycle, and vehicle circulation to and within the park.

Pedestrian

The park design features a strategic network of multi-use paths to provide an enjoyable walking experience. Figure 4-14 shows the proposed pedestrian circulation network, including the main promenade as well as the primary and secondary pedestrian circulation routes. The hierarchy of pathways relates to the width of the path and the expected level of foot traffic. Pathways vary from 6 to 12 feet and may consist of concrete or pavers. Several arrival nodes, such as the event plaza, facilitate enjoyable arrival experiences that are key to guide visitor circulation and wayfinding.

The pathway network provides an accessible and direct connection to all park amenities, while also offering a meandering option for visitors desiring a prolonged walking experience. A raised crosswalk with high-visibility striping is recommended to replace the existing speed bump north of the Cupertino Senior Center parking lot. Raised crosswalks are flush with the height of the sidewalk to enhance the pedestrian experience, particularly for visitors with mobility devices. This feature also acts as a speed table for vehicular traffic calming and improving the visibility of pedestrians to reduce the risk of potential collisions.

Bicycle

Key components of the final concept plan are the proposed bicycle enhancements. New bicycle paths in Memorial Park would provide critical connections between segments of the existing and proposed City-wide bicycle network.

Two types of bicycle paths are proposed in the final concept plan: a Class I, 20-foot-wide bicycle/pedestrian separated path running west to east and a Class II 12-foot-wide bicycle/pedestrian shared path running north to south. The 20-foot separated path would consist of an 8-foot dedicated bicycle lane on the north side of the path and a 12-foot dedicated pedestrian lane on the south side, with crosswalk

striping at all pathway intersections. The 12-foot shared path would include 1-foot shoulders on each side of the path. Bollards, signage, striping, and other measures would be included in these multi-use paths to improve safety and reduce potential collisions.

Figure 4-14 notes the primary bicycle entrances and critical intersections while Figures 4-12 and 4-13 show key locations for safety striping and signage. Figure 4-13 further highlights how the raised crosswalk serves as a key connection to the Mary Avenue bikeway via bicycle lanes along the Cupertino Senior Center entrance road. Bicycle racks are recommended along multi-use paths and at park entrances, as well as signage recommending dismount along non-bicycle routes.

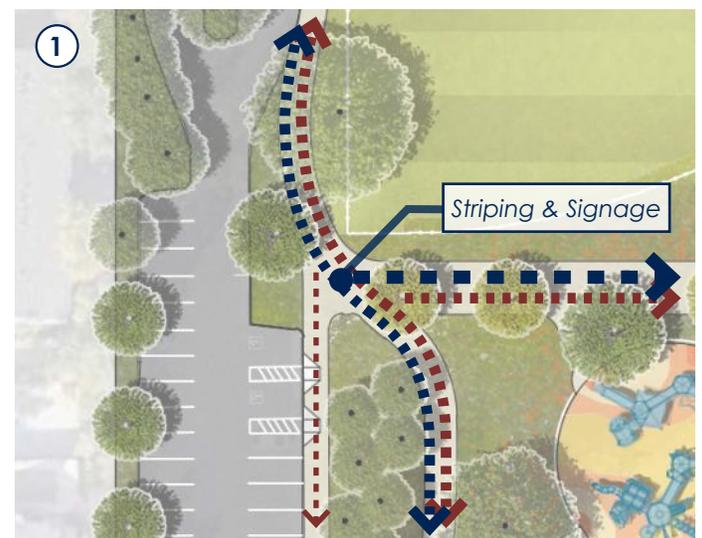


Figure 4-12: Enlargement of Critical Intersection (1)

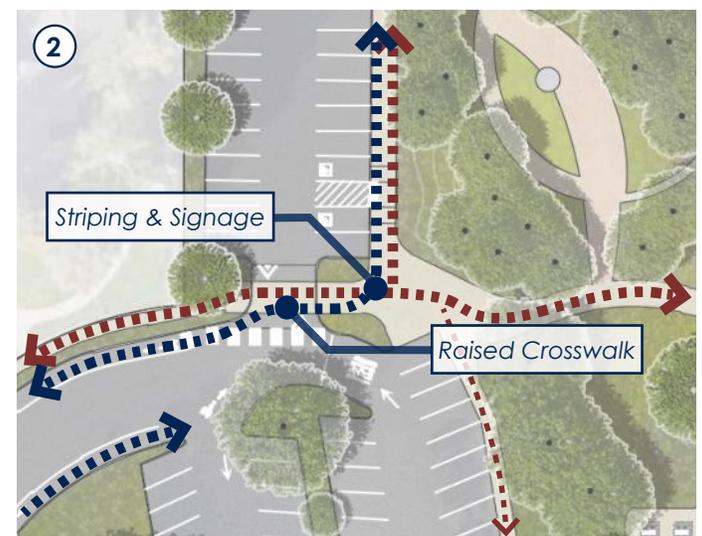


Figure 4-13: Enlargement of Critical Intersection (2)

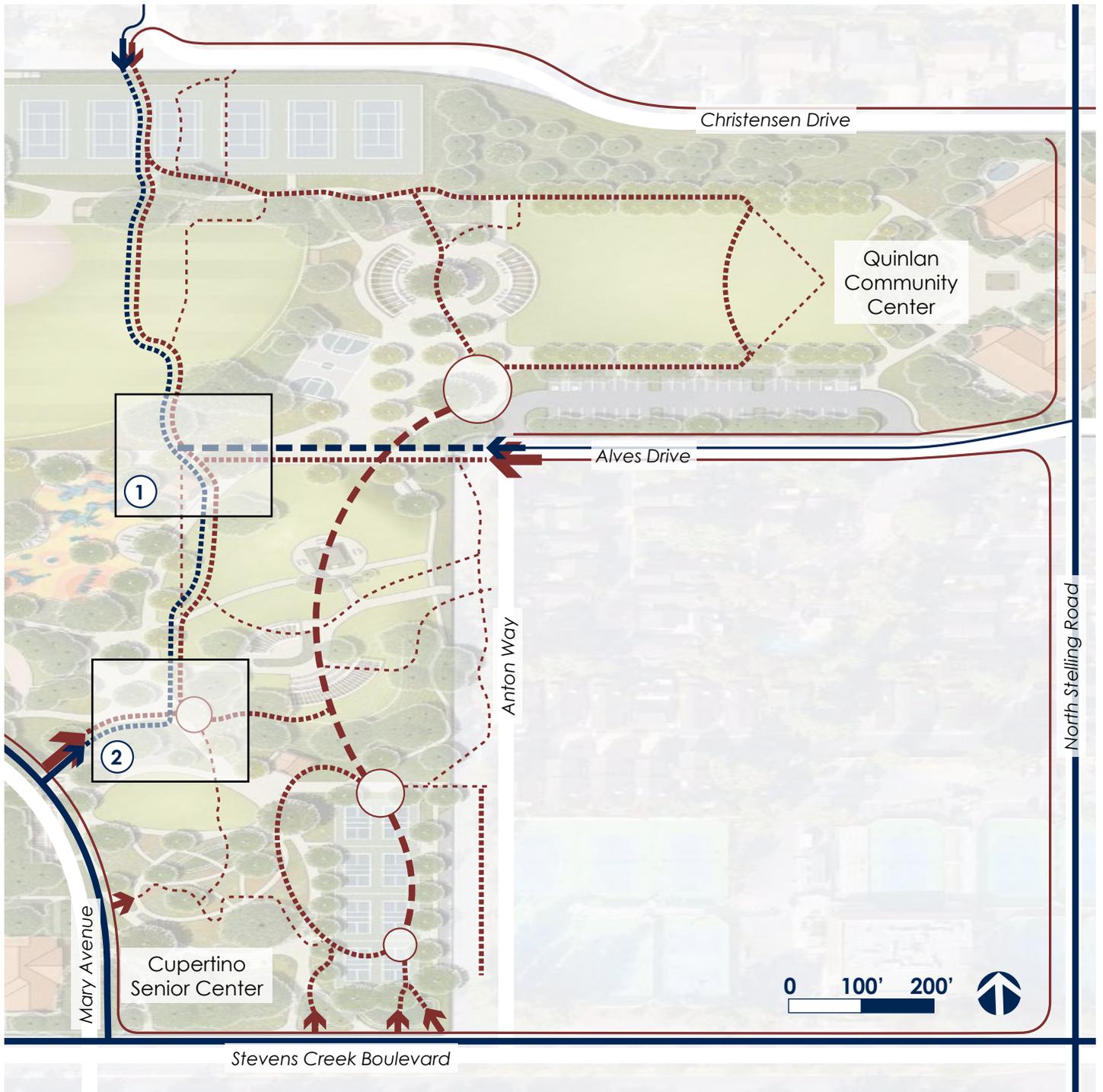


Figure 4-14: Pedestrian and Bicycle Circulation

- | | | | | | |
|--|----------------------------------|--|-----------------------------|--|-----------------------|
| | Main Promenade | | Bike/Ped Separated 20' Path | | Arrival Node |
| | Primary Pedestrian Circulation | | Bike/Ped Shared 12' Path | | Critical Intersection |
| | Secondary Pedestrian Circulation | | Planned Bicycle Network | | |
| | Existing Sidewalk | | Existing Bicycle Network | | |
| | Pedestrian Entrance | | Bicycle Entrance | | |

Vehicle

Figure 4-15 shows vehicular access improvements to Memorial Park as part of the final concept design. While there is no vehicle circulation for visitors inside the park, access points and circulation routes for maintenance and emergency vehicles were prioritized in the design.

Emergency Access

Well-planned emergency vehicle access requires careful consideration of pathways and infrastructure to accommodate the size and weight of ambulances, fire engines, and other first responders. Access points, as well as a turnaround area, were strategically placed in the final concept plan to ensure the safety and wellbeing of visitors and staff. These considerations allow emergency vehicles to navigate the park efficiently, especially during events with large crowds, stages, outdoor furniture, and other temporary event-related structures. Careful emergency access planning also preserves natural areas of the park that may provide habitat to the local ecosystem.

The event plaza adjacent to the basketball court is a key location for entry and turnaround of emergency vehicles. Aesthetic pavement colors and textures are recommended to accommodate the weight of the vehicles while maintaining an attractive public space.

Maintenance Access

Maintenance vehicles can also utilize emergency vehicle access points for regular park maintenance such as landscaping and trash removal, as well as upkeep of restrooms, pathways, playgrounds, picnic areas, and other amenities. A new maintenance access point is proposed along Anton Way north of the pickleball courts. This 15-foot pathway allows for City vehicles to safely enter the park for operational inspections, event preparation, and other activities to ensure Memorial Park remains safe, attractive, and functional.

Parking

The Parking Study conducted for the Memorial Park Specific Plan (Appendix A) found that the existing parking facilities are generally sufficient for day-to-

day and festival use. The final concept plan improves the quality of the existing parking lots while adding several unrestricted parking stalls for visitor convenience. These improvements are intended to enhance the arrival experience while alleviating congestion during peak visitation periods.

All parking lots in Memorial Park, as well as the roundabout adjacent to the softball field, are recommended for resurfacing with a new layer of asphalt concrete with subsequent restriping and ADA-compliant curb ramps. In the Cupertino Senior Center parking lot, new plantings are recommended in the center island and the adjacent planting areas. In the rectangular lots directly north, renovations to the planting areas and curbs would shift stall locations. Specifically, the planting areas adjacent to the existing speed bump would be widened while those to the north would become smaller. The existing trees would be replaced, as supported by the tree analysis conducted for this Specific Plan. The total number of parking stalls in this area will not change with the proposed improvements.

The existing parking lot along Alves Drive has a singular access point while the final concept plan proposes two access points to alleviate congestion. While the overall number of parking stalls would not change, the number of accessible stalls would increase from two to four.

The parking lot for the Quinlan Community Center is recommended for landscaping improvements to the parking islands, specifically replacing the existing trees that were identified as having low suitability for preservation.

Lastly, the final concept plan recommends nine parallel parking stalls along Anton Way adjacent to the pickleball courts. One accessible stall and eight unrestricted stalls would provide a convenient parking option for the southeast portion of the park.

As recommended in the parking study, other improvements may include supplemental wayfinding signs that clarify time and/or permit restrictions while directing visitors to additional parking facilities in the park.

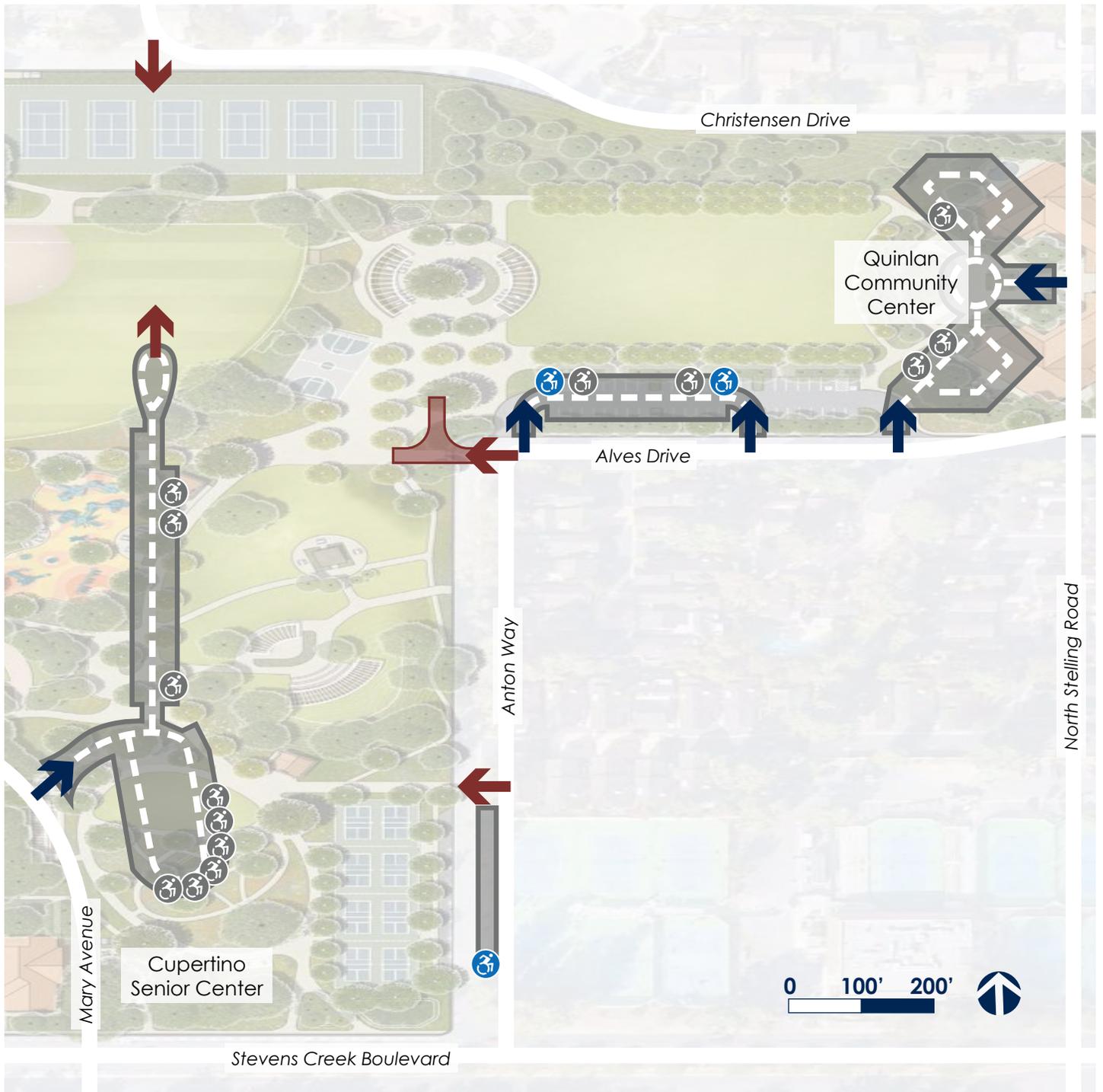


Figure 4-15: Vehicle Circulation

- | | | | |
|--|--------------------------------------|---|-----------------------------|
|  | Public Vehicle Access |  | Accessible Stall (Proposed) |
|  | Emergency/Maintenance Vehicle Access |  | Accessible Stall (Existing) |
|  | Emergency Vehicle Turnaround | | |
|  | Parking Areas and Drive Aises | | |

Trees and Landscape

The final concept recommends new planting areas, lawn areas, and trees. These landscaping elements aim to create a peaceful natural setting that provides shade, visual interest, and a cohesive aesthetic theme.

Landscape Zones

Lawn

As discussed previously, portions of the repurposed pond were recently converted to lawn area. The final concept plan proposes to shape the lawn areas strategically around the proposed and existing park amenities, complementing park features and providing room for events and passive enjoyment. The final concept plan proposes multi-use lawn space north of the passive garden walk and in the area surrounding the amphitheater, stage, and historic gazebo. The grass outfield of the softball field will be preserved. The Quinlan event lawn will be slightly reduced in size to accommodate the improvements to the perimeter, but overall will be preserved as an inviting park amenity and valuable community resource.

Planting Areas

Portions of the repurposed pond area and other non-landscaped zones are recommended for conversion to planting areas. Planting areas will prioritize native and climate-adapted species that have minimal maintenance and irrigation requirements. The landscaping should elevate the overall quality of the park by framing and softening the look of structures, delineating site functions, and providing screening and buffering from adjacent uses to ensure a visually appealing landscape design.

Remaining areas not suitable for planting or lawn conversion will be mulched. Natural mulch, typically consisting of organic wood chips, protects soil from erosion, suppresses weeds, and moderates temperature extremes.

Trees

Preserved Trees

Approximately 71% of the trees found at Memorial Park are preserved in the final concept plan. Figure 4-16 shows the existing trees to remain, all of which were identified as having moderate or high suitability for preservation in the Tree Inventory Report (Appendix B). High suitability trees are defined as trees with good health and structural stability that have the potential for longevity at the site. Moderate suitability trees are defined as trees with somewhat declining health and/or structural defects that can be abated with treatment. The tree will require more intense management and monitoring, and may have a shorter life span than those in the “high” category.

Of the 32 Japanese Flowering Cherry trees identified in the park, 17 will remain in place. Seven of the cherry trees will be relocated strategically, including five trees in the southeastern corner that will shift towards the park sign’s new location along Stevens Creek Boulevard, as well as the two Sister City cherry trees and their plaques that will shift to the historic gazebo area. Eight of the cherry trees will be removed due to their classification of having low suitability for preservation.

All Red Maple trees surrounding the Veterans Memorial will remain in place, as well as the Purpleleaf Plum trees that frame the Quinlan courtyard. The existing Coast Live Oaks along Stevens Creek Boulevard by the Cupertino Senior Center will be preserved in alignment with the Heart of the City Specific Plan, which recommends that this travel corridor feature informal arrangements of native trees (specifically Coast Live Oaks). The large Coast Live Oak that greets visitors entering from Mary Avenue would be preserved as well.

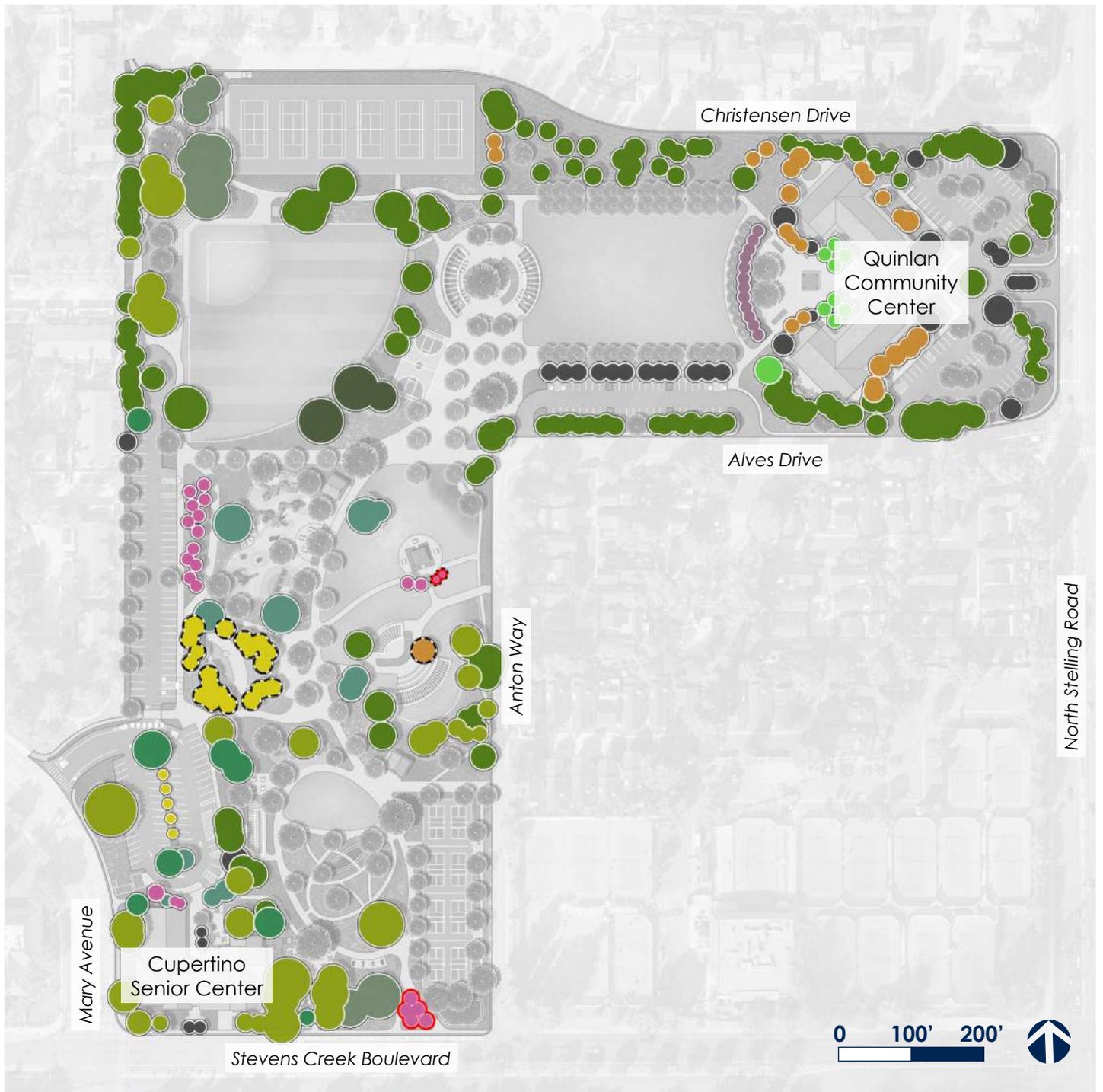


Figure 4-16: Proposed Tree Preservation

	Ash	<i>Fraxinus spp.</i>		Oak	<i>Quercus spp.</i>		Relocated
	Chinese Elm	<i>Ulmus parvifolia</i>		Pine	<i>Pinus spp.</i>		Memorial
	Chinese Pistache	<i>Pistacia chinensis</i>		Purpleleaf Plum	<i>Prunus cerasifera</i>		
	Coast Redwood	<i>Sequoia sempervierns</i>		Red Maple	<i>Acer rubrum</i>		
	Japanese Flowering Cherry	<i>Prunus serrulata</i>		Sycamore	<i>Platanus spp.</i>		
	Japanese Zelk	<i>Zelkova serrata</i>		Other			

Proposed Tree Removals

With the implementation of the Memorial Park Specific Plan, approximately 30% of the trees in the park would be planned for removal (Figure 4-17). Of these trees, approximately 60% were identified as having low suitability for preservation. Low suitability trees are defined as trees in poor health or with significant structural defects that cannot be mitigated. These trees are expected to continue to decline in health regardless of treatment. The species or individual tree may have undesirable characteristics for the park landscape and/or the tree is generally unsuited for this area. Many of these low suitability trees would be replaced with a new and healthier tree better suited for the region and park aesthetic.

The remaining trees would be removed to build new park amenities such as the pickleball courts and playgrounds, representing less than 15% of all moderate and high suitability trees in the park. Only nine trees that were found to have a high suitability for preservation would be removed as part of the final concept plan, which are related to the passive garden walk, the pickleball courts, parking lot upgrades, and one of the new restroom buildings.

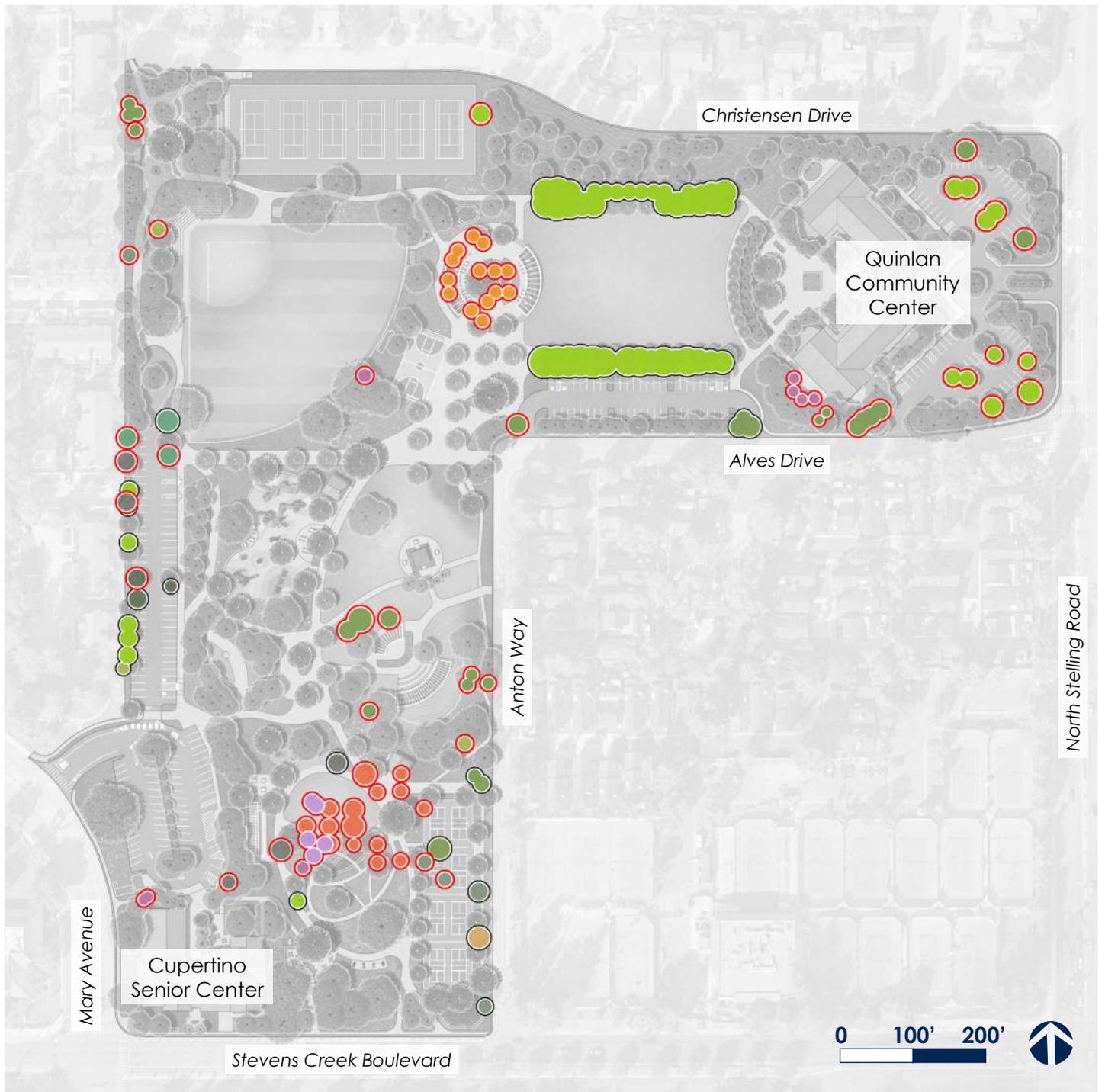


Figure 4-17: Proposed Tree Removals

- | | | | | | | | |
|--|-------------------|------------------------------|--|---------------------------|-------------------------|--|----------------------------------|
| | Black Walnut | <i>Juglans hindsii</i> | | Japanese Flowering Cherry | <i>Prunus serrulata</i> | | Low Suitability for Preservation |
| | Callery Pear | <i>Pyrus calleryana</i> | | Japanese Zelk | <i>Zelkova serrata</i> | | |
| | Chinese Pistache | <i>Pistacia chinensis</i> | | Oak | <i>Quercus spp.</i> | | |
| | Coast Redwood | <i>Sequoia sempervierns</i> | | Pine | <i>Pinus spp.</i> | | |
| | Hollywood Juniper | <i>Juniperus chinensis</i> | | Sycamore | <i>Platanus spp.</i> | | |
| | Honey Locust | <i>Gleditsia triacanthos</i> | | Other | | | Removal for Park Element |

Proposed Trees

The final concept plan proposes a variety of options for new trees at Memorial Park. These trees were placed strategically throughout the site, intending to provide shading, screening, buffering, or visual interest.

Figure 4-18 shows the locations of the proposed trees and their categories, outlined below in Table 4-1 to Table 4-3.

Playground Tree					
Common Name	Scientific Name	Maximum Height (ft)	Canopy Spread (ft)	WUCOLS	General Characteristics
Coast Live Oak	<i>Pinus canariensis</i>	80	20 - 35	Low	Evergreen, Columnar or Conical
Crape Myrtle	<i>Lagerstroemia</i> spp.	20 - 30	15 - 30	Low	Deciduous, Rounded
Drake Chinese Elm	<i>Ulmus parvifolia</i> 'Drake'	45	35 - 50	Low	Deciduous, Rounded
London Plane Tree	<i>Platanus x hispanica</i>	80	50 - 70	Moderate	Deciduous, Tough

Accent Tree					
Common Name	Scientific Name	Maximum Height (ft)	Canopy Spread (ft)	WUCOLS	General Characteristics
Armstrong Red Maple	<i>Acer rubrum</i> 'Armstrong'	60	15 - 25	Moderate	Deciduous, Columnar
Littleleaf Linden	<i>Tilia cordata</i>	50	15 - 30	Moderate	Deciduous, Rounded or Conical
Purple Leaf Plum*	<i>Prunus cerasifera</i>	25	15 - 20	Moderate	Deciduous, Rounded
Red Oak	<i>Quercus rubra</i>	80	50 - 70	Moderate	Deciduous, Rounded
Sour Gum	<i>Nyssa sylvatica</i>	50	20 - 30	Moderate	Deciduous, Rounded or Conical

* For Quinlan Community Center Courtyard only

Table 4-1: Proposed Tree Palette

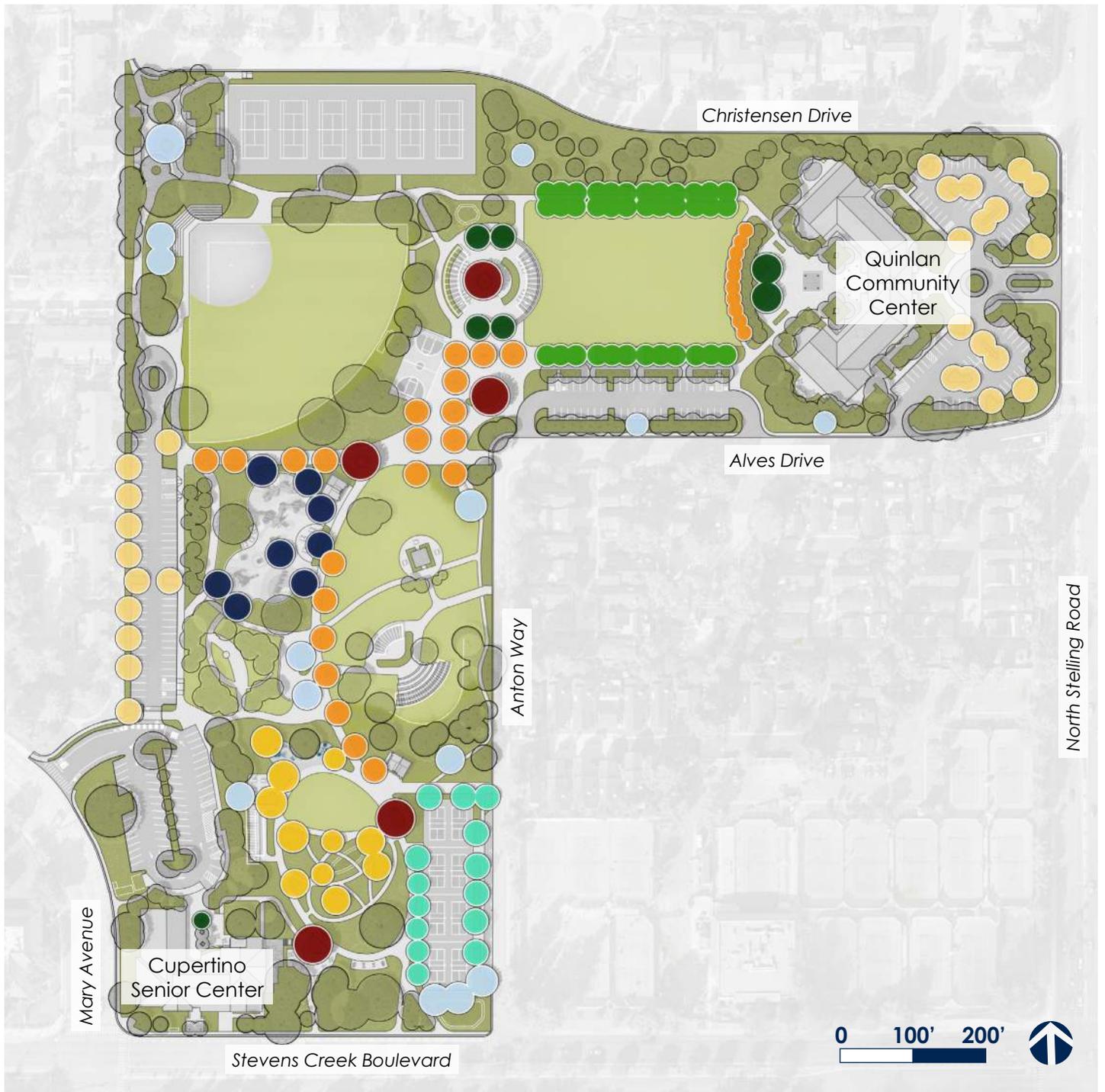


Figure 4-18: Proposed Trees and Landscaping

- | | | | |
|---------------------|------------------|-------------|-------------------------|
| Specimen Tree | Parking Lot Tree | Accent Tree | Lawn |
| Playground Tree | Plaza Tree | Allee Tree | Planting Area |
| Passive Garden Tree | Screen Tree | Buffer Tree | Existing Tree to Remain |

Specimen Tree					
Common Name	Scientific Name	Maximum Height (ft)	Canopy Spread (ft)	WUCOLS	General Characteristics
Cork Oak	<i>Quercus suber</i>	70	70	Low	Evergreen, Rounded
Sawtooth Zelkova	<i>Zelkova serrata</i>	70	50 - 65	Moderate	Deciduous, Rounded, Moderate to Fast Growing
Silk Tree	<i>Albizia julibrissin</i>	35	20	Low	Deciduous, Rounded or Vase, Fast Growing

Buffer Tree					
Common Name	Scientific Name	Maximum Height (ft)	Canopy Spread (ft)	WUCOLS	General Characteristics
Canary Island Pine	<i>Pinus canariensis</i>	80	20 - 35	Low	Evergreen, Columnar or Conical
Coast Live Oak	<i>Quercus agrifolia</i>	70	30 - 70	Low	Evergreen, Rounded
Deodar Cedar	<i>Cedrus deodora</i>	60	20 - 30	Moderate	Evergreen
Incense Cedar	<i>Calocedrus decurrens</i>	90	10 - 15	Moderate	Evergreen, Conical

Parking Lot Trees					
Common Name	Scientific Name	Maximum Height (ft)	Canopy Spread (ft)	WUCOLS	General Characteristics
Chinese Flame Elm	<i>Koelruteria bipinnatata</i>	40	15 - 30	Moderate	Deciduous, Rounded or Vase
Island Oak	<i>Quercus tomentella</i>	50	25 - 40	Low	Evergreen, Rounded, Moderate Growth Rate
Netleaf Oak	<i>Quercus rugosa</i>	60	20 - 40	Low	Evergreen, Oval/Round Topped, Slow Growing
Southern Live Oak	<i>Quercus virginiana</i>	70	60 - 100	Moderate	Deciduous, Rounded

Plaza Tree					
Common Name	Scientific Name	Maximum Height (ft)	Canopy Spread (ft)	WUCOLS	General Characteristics
Emerald Sunshine Elm	<i>Ulmus davidiana</i> var. <i>japonica</i> 'Emerald Sunshine'	35	15 - 25	Moderate	Deciduous, Rounded or Vase, Fast Growing
Sawleaf Zelkova	<i>Zelkova serrata</i>	70	50 - 65	Moderate	Deciduous, Rounded, Moderate to Fast Growing

Table 4-2: Proposed Tree Palette (continued)

Screen Tree					
Common Name	Scientific Name	Maximum Height (ft)	Canopy Spread (ft)	WUCOLS	General Characteristics
African Fern Pine	<i>Afrocarpus falcatus</i>	70	10 - 20	Moderate	Evergreen, Rounded
Kohuhu	<i>Pittosporum tenuifolium</i>	30	6 - 15	Moderate	Evergreen, Conical or Rounded
Marina Madrone	<i>Arbutus marina</i>	40	30	Low	Evergreen, Rounded
Saratoga Laurel	<i>Laurus 'Saratoga'</i>	40	15 - 30	Low	Evergreen, Conical or Rounded

Allee Tree					
Common Name	Scientific Name	Maximum Height (ft)	Canopy Spread (ft)	WUCOLS	General Characteristics
Columbia London Plane Tree	<i>Platanus x hispanica 'Columbia'</i>	80	30	Moderate	Deciduous, Conical
Frontier Chinese Elm	<i>Ulmus parvifolia 'Frontier'</i>	30	20	Low	Evergreen, Rounded/Weeping
Maidenhair Tree	<i>Ginkgo biloba</i>	70	25	Moderate	Deciduous, Conical
Pin Oak	<i>Quercus palustris</i>	70	30 - 40	Moderate	Deciduous, Conical

Passive Garden Tree					
Common Name	Scientific Name	Maximum Height (ft)	Canopy Spread (ft)	WUCOLS	General Characteristics
Bigleaf Maple	<i>Acer macrophyllum</i>	80	30 - 50	Moderate	Deciduous, Rounded
Coast Live Oak	<i>Quercus agrifolia</i>	70	30 - 70	Low	Evergreen, Rounded
Coast Silktassel	<i>Garrya elliptica</i>	15	8 - 12	Low	Evergreen, Rounded
Valley Oak	<i>Quercus lobata</i>	70	50	Low	Deciduous, Rounded
Western Redbud	<i>Cercis occidentalis</i>	25	10 - 20	Low	Deciduous, Rounded

Table 4-3: Proposed Tree Palette (continued)

This Page
Intentionally
Left Blank

— Chapter 5 —

Implementation

This Page
Intentionally
Left Blank

Phasing

The phasing process divides the overall project into distinct, manageable stages for implementation. Phasing ensures that the project remains adaptable, manageable, and achievable while providing tangible benefits to the community throughout the construction process.

The order and magnitude of construction phases is determined by the City of Cupertino based on several factors, including the availability of funds and overall priorities. Once funds are available to implement the design, careful attention should be given to how park elements are connected throughout the planning and construction phases.

Depending on the sequencing of construction, delaying certain improvements to a later phase may result in rebuilding, removing, or reworking certain improvements built in earlier phases. Careful consideration of the sequencing of construction must be made to minimize inflation of cost. It is strongly recommended to revisit the phasing strategy as construction documents are prepared.

The recommended phasing strategy for the Memorial Park Specific Plan is to be used for planning purposes and may change based on funding, community needs, and site conditions.

The Memorial Park Specific Plan recommends three implementation phases, as shown in Figure 5-1. The phases are staggered in order of the prioritized amenities by the community. Additionally, each phase is provided a suggested timeline. Phase 1 can be completed in 0 to 5 years, Phase 2 in 6 to 10 years, and Phase 3 in 11 to 15 years. All phasing and timelines are dependent upon available funding.

Phase 1

Phase 1 includes improvements and new amenities that were deemed high priority by the community. The construction time for this phase is 1 to 5 years.

Phase 1A

This initial phase focuses on the construction of the western edge. This area establishes the main circulation through the site, most critically the bicycle circulation routes that were identified in the 2016 Bicycle Transportation Plan. Improvements to this area include:

- Enhanced pedestrian and bicycle access
- All-abilities playground
- Restrooms
- Upgraded parking lot
- Improved topography around the Veterans Memorial
- Improved emergency vehicle access

Phase 1B

This secondary phase shifts focus to the southern edge of the park located on Stevens Creek Boulevard and across from De Anza College. In this area, active and passive recreation intermingle to create a multi-use, multi-generational space. Improvements to this area include:

- New site arrival
- New parking lot
- Upgraded restrooms
- Passive garden walk
- Pickleball courts
- Expanded Senior Center deck
- Fitness stations
- Bocce court
- Reservable picnic area
- Nature playground

Phase 2

Phase 2A

Phase 2A enhances the smaller event space located in the middle of Memorial Park. This phase includes the following improvements:

- Extended and upgraded amphitheater and stage
- Updated picnic area by the historic gazebo
- Enhanced open lawn space for small events

Phase 2B

Phase 2B focus on improvements to the active social area in the northwest corner of the park. Improvements to this area include:

- New enhanced arrival
- Reserverable picnic area
- Development of a full-size basketball court
- Enhanced softball field
- Enhanced tennis courts
- Upgraded restrooms

Phase 2C

Phase 2C improves the larger and main event space at Memorial Park. This area sits adjacent to the softball field and Quinlan Community Center. Improvements in this phase include:

- Enhanced event lawn space
- Upgraded Quinlan courtyard
- Upgraded parking lot

Phase 3

Phase 3, the final phase, focuses improvements on general enhancements around the Cupertino Senior Center and Quinlan Community Center and in their adjoining parking lots. These improvements were of low priority and include upgrades to the landscape and hardscape to better enhance visitor experience.

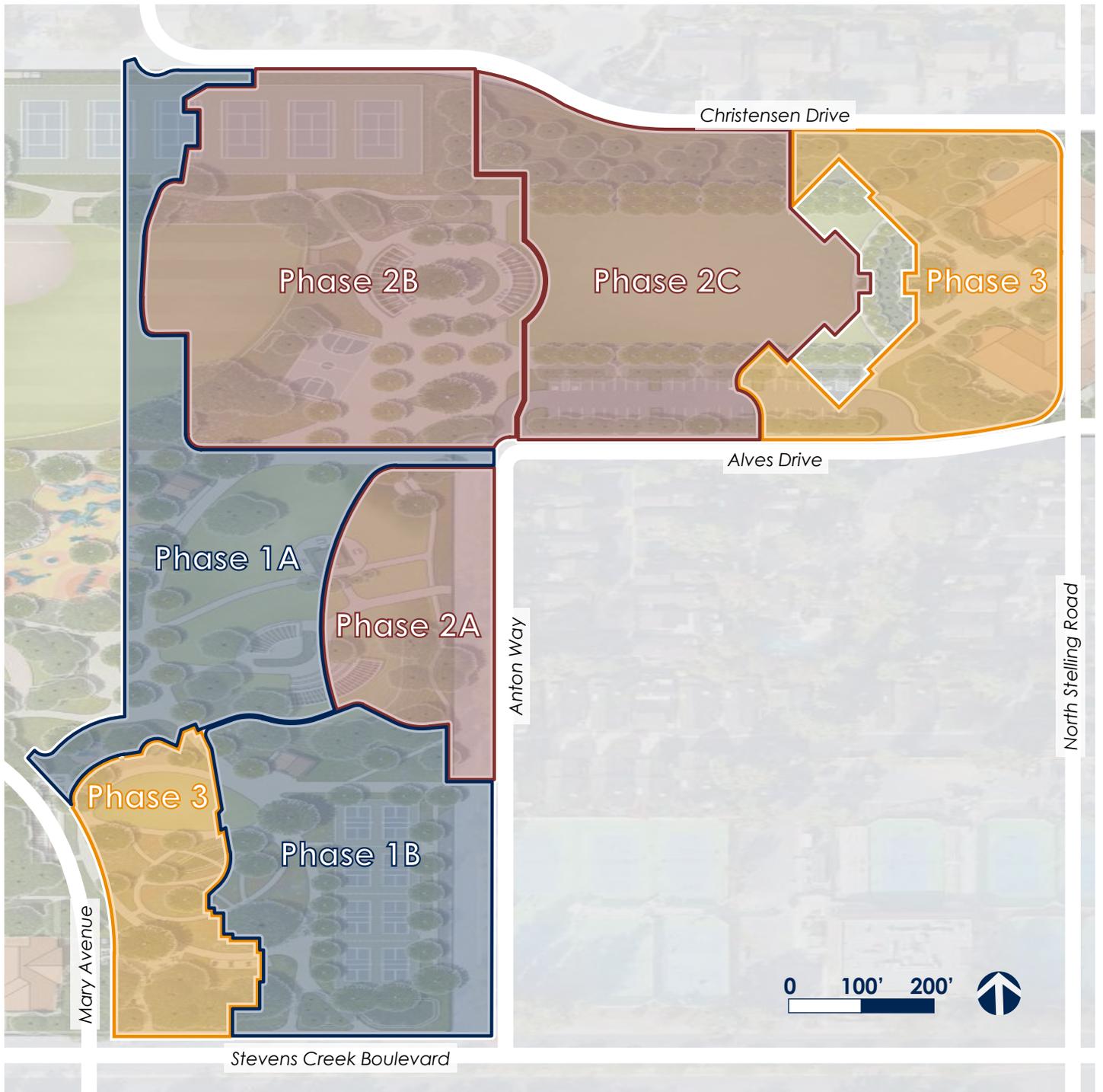


Figure 5-1: Phasing Plan

Costs

For each construction phase, a budget range was established. Cost data for materials and labor were referenced from recently constructed public parks and recent bids from contractors. These referenced projects reflect a similar marketplace, size, and scope. Current pricing information from suppliers for materials and furnishings were gathered as a source of information along with recent trends in construction costs. All costs established within the Specific Plan are calculated and adjusted to January 2024 price index factors. An annual compound escalation rate of 5% should be added per year from January 2024 to identify the total project cost. The escalation rate should be verified against the current Engineering News Record (ENR) for current escalation trends.

The Memorial Park Specific Plan proposes a conceptual level of design with a total project cost that includes typical industry breakdowns for direct construction (hard costs) and administration and permitting costs (soft costs). The project hard costs are generated based on the conceptual design, construction, and equipment procurement. Soft costs are based on the total hard costs amount. The purpose of these soft costs is to address contingencies, unknown design factors, design and engineering, permitting, and administration. The cost estimate assumes the project will be competitively bid on a fixed fee cost basis and assumes construction labor costs will be subject to prevailing wages.

The cost for developing the final concept plan in its entirety is estimated to be approximately \$83.7 million. Though the possibility exists that the cost of construction could come down, it is expected that costs will increase based on inflation rates and other market conditions. Delaying implementation of the plan may result in an increase in construction costs above this estimate.

Maintenance costs could include servicing the restrooms, lighting, furnishings, and landscape, as well as other maintenance tasks such as trash removal or the periodic compaction of the bocce court.

For budgeting and planning purposes, the Memorial Park Specific Plan breaks out the cost estimate by each construction phase (Table 5-1).

Phase	Subtotal
Phase 1A	\$20,312,626
Phase 1B	\$17,275,643
Phase 2A	\$11,892,443
Phase 2B	\$17,244,618
Phase 2C	\$12,549,359
Phase 3	\$4,399,489
Total Project Cost:	\$83,674,178

Table 5-1: Total Project Cost Estimate

COST ESTIMATE - Phase 1A

	Recommendation	Quantity	Unit	Unit Cost	Subtotal
1	Tree Protection	100	EA	\$1,500	\$150,000
2	Tree Demolition	17	EA	\$2,500	\$42,500
3	Erosion Control	1	LS	\$52,500	\$52,500
4	Traffic Control	1	LS	\$30,000	\$30,000
5	Construction Surveying	1	LS	\$90,000	\$90,000
6	Site Preparation and Demolition	150,000	SF	\$3	\$450,000
7	Site Utilities (Domestic Water, Sanitary Sewer, Storm Drain)	1	LS	\$500,000	\$500,000
8	Site Grading	150,000	SF	\$6	\$900,000
9	Stormwater Retention Area	1	LS	\$75,000	\$75,000
10	Site Electrical and Lighting	1	LS	\$200,000	\$200,000
11	Parking Lot and Drive Aisle	35,000	SF	\$28	\$980,000
12	Multi-Use Paths	50,000	SF	\$30	\$1,500,000
13	Planting and Irrigation	40,000	SF	\$18	\$720,000
14	New Trees	1	LS	\$40,000	\$40,000
15	Relocated Trees	2	EA	\$2,500	\$5,000
16	Picnic Areas and Site Furnishings	1	LS	\$150,000	\$150,000
17	All-Abilities Playground (Resilient Surfacing, Play Structures, Seat Walls)	1	LS	\$5,000,000	\$5,000,000
18	New Restrooms	1	EA	\$900,000	\$900,000
19	Upgraded Restroom	1	LS	\$500,000	\$500,000
20	Perimeter Conform	34,000	SF	\$15	\$510,000
	Direct Construction Cost (Subtotal)				\$11,785,000
21	Construction Contingency (10%)				\$1,178,500
22	Mobilization and General Condition (10.5%)				\$1,237,425
23	Bonding (1.5%)				\$176,775
24	Insurance (2%)				\$235,700
	Direct Construction Cost (Total)				\$14,613,400
25	Design and Unknown Factor Contingency (30%)				\$4,384,020
26	Design and Engineering (7%)				\$1,022,938
27	Permits and Fees (1%)				\$146,134
28	City Administration Fee (1%)				\$146,134
	Total Administration and Permitting Cost				\$5,699,226
	TOTAL PROJECT COST				\$20,312,626

Table 5-2: Phase 1A Cost Estimate

COST ESTIMATE - Phase 1B					
	Recommendation	Quantity	Unit	Unit Cost	Subtotal
1	Tree Protection	33	EA	\$1,500	\$49,500
2	Tree Demolition	31	EA	\$2,500	\$77,500
3	Erosion Control	1	LS	\$51,000	\$51,000
4	Traffic Control	1	LS	\$30,000	\$30,000
5	Construction Surveying	1	LS	\$85,000	\$85,000
6	Site Preparation and Demolition	146,000	SF	\$3	\$438,000
7	Site Utilities (Domestic Water, Sanitary Sewer, Storm Drain)	1	LS	\$700,000	\$700,000
8	Site Grading	146,000	SF	\$6	\$876,000
9	Stormwater Retention Area	1	LS	\$50,000	\$50,000
10	Site Electrical and Lighting	1	LS	\$200,000	\$200,000
11	New Parallel Parking	1	LS	\$90,000	\$90,000
12	Multi-Use Paths	35,000	SF	\$28	\$980,000
13	New Trees	1	LS	\$35,000	\$35,000
14	Relocated Trees	5	EA	\$25,000	\$125,000
15	Planting and Irrigation	80,000	SF	\$18	\$1,440,000
16	Lawn and Irrigation	8,000	SF	\$12	\$96,000
17	Expanded Senior Center Courtyard	2,000	SF	\$150	\$300,000
18	Picnic Areas and Site Furnishings	1	LS	\$250,000	\$250,000
19	Nature Playground	1	LS	\$1,500,000	\$1,500,000
20	Pickleball Court	8	EA	\$150,000	\$1,200,000
21	Bocce Court and Shade Structure	1	EA	\$250,000	\$250,000
22	Fitness Station	1	LS	\$300,000	\$300,000
23	New Restroom	1	EA	\$900,000	\$900,000
24	Perimeter Conform	18,000	SF	\$15	\$270,000
	Direct Construction Cost (Subtotal)				\$10,023,000
25	Construction Contingency (10%)				\$1,002,300
26	Mobilization and General Condition (10.5%)				\$1,052,415
27	Bonding (1.5%)				\$150,345
28	Insurance (2%)				\$200,460
	Direct Construction Cost (Total)				\$12,428,520
29	Design and Unknown Factor Contingency (30%)				\$3,728,556
30	Design and Engineering (7%)				\$869,996
31	Permits and Fees (1%)				\$124,285
32	City Administration Fee (1%)				\$124,285
	Total Administration and Permitting Cost				\$4,847,123
	TOTAL PROJECT COST				\$17,275,643

Table 5-3: Phase 1B Cost Estimate

COST ESTIMATE - Phase 2A

	Recommendation	Quantity	Unit	Unit Cost	Subtotal
1	Tree Protection	28	EA	\$1,500	\$42,000
2	Tree Demolition	6	EA	\$2,500	\$15,000
3	Erosion Control	1	LS	\$35,000	\$35,000
4	Traffic Control	1	LS	\$30,000.00	\$30,000
5	Construction Surveying	1	LS	\$45,000	\$45,000
6	Site Preparation and Demolition	78,000	SF	\$3	\$234,000
7	Site Utilities (Domestic Water, Sanitary Sewer, Storm Drain)	1	LS	\$130,000	\$130,000
8	Site Grading	78,000	SF	\$6	\$468,000
9	Stormwater Retention Area	1	LS	\$12,000	\$12,000
10	Site Electrical and Lighting	1	LS	\$200,000	\$200,000
11	Multi-Use Paths	9,000	SF	\$28	\$252,000
12	Lawn and Irrigation	47,000	SF	\$12	\$564,000
13	Planting and Irrigation	15,000	SF	\$18	\$270,000
14	New Trees	1	LS	\$12,000	\$12,000
15	Gazebo Picnic Area	5,000	SF	\$150	\$750,000
16	Upgraded Amphitheater and Stage	1	LS	\$3,500,000	\$3,500,000
17	Perimeter Conform	13,000	SF	\$15	\$195,000
	Direct Construction Cost (Subtotal)				\$6,754,000
18	Construction Contingency (10%)				\$675,000
19	Mobilization and General Condition (10.5%)				\$709,170
20	Bonding (1.5%)				\$101,310
21	Insurance (2%)				\$135,080
	Direct Construction Cost (Total)				\$8,374,960
22	Design and Unknown Factor Contingency (30%)				\$2,512,488
23	Design and Engineering (10%)				\$837,496
24	Permits and Fees (1%)				\$83,750
25	City Administration Fee (1%)				\$83,750
	Total Administration and Permitting Cost				\$3,517,483
	TOTAL PROJECT COST				\$11,892,443

Table 5-4: Phase 2A Cost Estimate

COST ESTIMATE - Phase 2B					
Recommendation	Quantity	Unit	Unit Cost	Subtotal	
1 Tree Protection	36	EA	\$1,500	\$54,000	
2 Tree Demolition	16	EA	\$2,500	\$40,000	
3 Erosion Control	1	LS	\$80,000	\$80,000	
4 Traffic Control	1	LS	\$30,000	\$30,000	
5 Construction Surveying	1	LS	\$135,000	\$135,000	
6 Site Preparation and Demolition	235,000	SF	\$3	\$705,000	
7 Site Utilities (Domestic Water, Sanitary Sewer, Storm Drain)	1	LS	\$450,000	\$450,000	
8 Site Grading	235,000	SF	\$6	\$1,410,000	
9 Stormwater Retention Area	1	LS	\$8,000	\$8,000	
10 Site Electrical and Lighting	1	LS	\$200,000	\$200,000	
11 Multi-Use Paths	36,000	SF	\$28	\$1,008,000	
12 Planting and Irrigation	75,000	SF	\$18	\$1,350,000	
13 New Trees	1	LS	\$20,000	\$20,000	
14 Softball Lighting Upgrades and Control Panel	1	LS	\$650,000	\$650,000	
15 Softball Amphitheater	1	LS	\$275,000	\$275,000	
16 Tennis Court Amphitheater	1	LS	\$80,000	\$80,000	
17 Tennis Court Striping Removal	1	LS	\$10,000	\$10,000	
18 Picnic Areas and Site Furnishing	1	LS	\$200,000	\$200,000	
19 Reservable Picnic Area (Site Furnishing, Shade Structures)	1	LS	\$2,500,000	\$2,500,000	
20 Basketball Court (Paving, Striping, Goals)	1	LS	\$100,000	\$100,000	
21 Upgraded Restroom	1	LS	\$400,000	\$400,000	
22 Perimeter Conform	20,000	SF	\$15	\$300,000	
Direct Construction Cost (Subtotal)				\$10,005,000	
23 Construction Contingency (10%)				\$1,000,000	
24 Mobilization and General Condition (10.5%)				\$1,050,525	
25 Bonding (1.5%)				\$150,075	
26 Insurance (2%)				\$200,100	
Direct Construction Cost (Total)				\$12,406,200	
27 Design and Unknown Factor Contingency (30%)				\$3,721,860	
28 Design and Engineering (7%)				\$868,434	
29 Permits and Fees (1%)				\$124,062	
30 City Administration Fee (1%)				\$124,062	
Total Administration and Permitting Cost				\$4,838,418	
TOTAL PROJECT COST				\$17,244,618	

Table 5-5: Phase 2B Cost Estimate

COST ESTIMATE - Phase 2C

	Recommendation	Quantity	Unit	Unit Cost	Subtotal
1	Tree Protection	77	EA	\$1,500	\$115,500
2	Tree Demolition	40	EA	\$2,500	\$100,000
3	Erosion Control	1	LS	\$58,000	\$58,000
4	Traffic Control	1	LS	\$30,000	\$30,000
5	Construction Surveying	1	LS	\$100,000	\$100,000
6	Site Preparation and Demolition	168,000	SF	\$3	\$504,000
7	Site Utilities (Domestic Water, Sanitary Sewer, Storm Drain)	1	LS	\$300,000	\$300,000
8	Site Grading	168,000	SF	\$6	\$1,008,000
9	Stormwater Retention Area	1	LS	\$35,000	\$35,000
10	Site Electrical and Lighting	1	LS	\$200,000	\$200,000
11	Alves Parking Lot Update	1	LS	\$400,000	\$400,000
12	Alves Drive Parking Stall Striping	1	LS	\$10,000	\$10,000
13	Multi-Use Paths	16,300	SF	\$28	\$456,400
14	Planting and Irrigation	68,000	SF	\$18	\$1,224,000
15	New Trees	1	LS	\$50,000	\$50,000
16	Lawn and Irrigation	20,000	SF	\$12	\$240,000
17	Quinlan Courtyard	13,000	SF	\$150	\$1,950,000
18	Picnic Areas and Site Furnishings	1	LS	\$200,000	\$200,000
19	Perimeter Conform	20,000	SF	\$15	\$300,000
	Direct Construction Cost (Subtotal)				\$7,280,900
20	Construction Contingency (10%)				\$728,090
21	Mobilization and General Condition (10.5%)				\$764,495
22	Bonding (1.5%)				\$109,214
23	Insurance (2%)				\$145,618
	Direct Construction Cost (Total)				\$9,028,316
24	Design and Unknown Factor Contingency (30%)				\$2,708,495
25	Design and Engineering (7%)				\$631,982
26	Permits and Fees (1%)				\$90,283
27	City Administration Fee (1%)				\$90,283
	Total Administration and Permitting Cost				\$3,521,043
	TOTAL PROJECT COST				\$12,549,359

Table 5-6: Phase 2C Cost Estimate

COST ESTIMATE - Phase 3					
	Recommendation	Quantity	Unit	Unit Cost	Subtotal
1	Tree Protection	121	EA	\$1,500	\$181,500
2	Tree Demolition	24	EA	\$2,500	\$60,000
3	Erosion Control	1	LS	\$30,000	\$30,000
4	Traffic Control	1	LS	\$10,000	\$10,000
5	Construction Surveying	1	LS	\$15,000	\$15,000
6	Site Preparation and Demolition	112,000	SF	\$3	\$336,000
7	Senior Center Parking Lot Resurfacing	21,000	SF	\$15	\$315,000
8	Quinlan Parking Lot Resurfacing	40,000	SF	\$15	\$600,000
9	Planting and Irrigation	55,000	SF	\$18	\$990,000
10	New Trees	1	LS	\$15,000	\$15,000
	Direct Construction Cost (Subtotal)				\$2,552,500
11	Construction Contingency (10%)				\$255,250
12	Mobilization and General Condition (10.5%)				\$268,013
13	Bonding (1.5%)				\$38,288
14	Insurance (2%)				\$51,050
	Direct Construction Cost (Total)				\$3,165,100
15	Design and Unknown Factor Contingency (30%)				\$949,530
16	Design and Engineering (7%)				\$221,557
17	Permits and Fees (1%)				\$31,651
18	City Administration Fee (1%)				\$31,651
	Total Administration and Permitting Cost				\$1,234,389
	TOTAL PROJECT COST				\$4,399,489

Table 5-7: Phase 3 Cost Estimate

Funding

The implementation of the Memorial Park Specific Plan will be contingent on funding availability. Funding will be required for both capital improvements as well as the associated ongoing maintenance costs. For a general summary of existing and additional funding sources, please view Appendix G of the Cupertino Parks and Recreation System Master Plan. Potential funding sources to support the implementation of the Memorial Park Specific Plan are discussed below.

Community Facilities District

A funding tool to generate capital for park projects is a Mello-Roos community facilities district (CFD). A CFD is a special tax district that aids in financing public infrastructure improvements through imposing a tax on property within a geographic area. A CFD special tax could fund a substantial amount of capital costs depending on the “boundary” or number of property owners included in the CFD area. The tax continues until bonds are paid off and then reduced to maintain investment. According to the City of Cupertino Parks and Recreation System Master Plan, the City has no existing CFDs.

Grant Funding

Grants in recent decades have provided substantial opportunities for cities to invest more in their parks. Funding from grants can range from local to national sources and can include public agencies such as the California Department of Parks and Recreation, as well as private and non-profit organizations like the National Recreation and Park Association (NRPA). California grant programs such as the Per Capita Program, the Recreational Infrastructure Revenue Enhancement (RIRE) Program (allocated to Santa Clara County), and other statewide park programs could be other potential funding opportunities to achieve the vision of the Memorial Park Specific Plan. Grants will require dedicated staff support as they require specific project reporting protocols. Grants should be mainly considered a capital funding source.

Other Funding Options

Additional funding opportunities for the City to consider include Special Assessment taxes, taking advantage of local sales tax measures to garner revenue from local retail transactions, parcel taxes that can offer funds for both capital and operations, or other Mello-Roos special taxes appropriate for this project such as Enhanced Infrastructure Finance Districts (EIFD).

Partnerships, sponsorships, and amenity naming rights are opportunities to build relationships with the community while simultaneously building capital for park improvements. Situated in the heart of Silicon Valley and visited by various members of the Cupertino community, there is a high opportunity for the City to partner with local companies, sports leagues, institutions, and organizations to help fund the improvements at Memorial Park. Oftentimes donations may also be directed toward the project from these invested stakeholders.

Environmental Review

In accordance with the California Environmental Quality Act (CEQA), an Initial Study/Addendum was prepared for the Memorial Park Specific Plan. The Initial Study/Addendum evaluates the environmental impacts that might reasonably be anticipated to result from implementation of the proposed project.

The Initial Study/Addendum tiers from the City of Cupertino Parks and Recreation System Master Plan Initial Study/Mitigated Negative Declaration (adopted October 2019, State Clearinghouse [SCH] #2019109066).

Section 15162(a) of the CEQA Guidelines states that when an Environmental Impact Report (EIR) has been certified or a Negative Declaration adopted for a project, no subsequent EIR or Negative Declaration is needed unless there are substantial changes to the scope, environmental circumstances, or information available for a given project.

Section 15164(b) of the CEQA Guidelines states that an Addendum may be prepared if only minor technical changes or additions are necessary or none of the conditions described in Section 15162(a) calling for preparation of a subsequent EIR or Negative Declaration have occurred.

Based on the analysis completed in the Initial Study/Addendum, the City has determined that the project would not result in new or substantially more severe significant impacts than previously disclosed in the 2019 Initial Study/Mitigated Negative Declaration. Therefore, a subsequent EIR or Negative Declaration would not be required for the project and an Addendum has been prepared in accordance with CEQA Guidelines Section 15164.

The Initial Study/Addendum includes a project description with anticipated construction phasing, a conformity analysis documenting the project's consistency with the prior environmental review completed for the Parks and Recreation System Master Plan, and information sourced from relevant, project-specific technical analyses.

Please see the Phase I Environmental Site Assessment (Appendix E) and the Geotechnical Evaluation (Appendix F) for supporting information.

MEMORIAL PARK SPECIFIC PLAN



CUPERTINO

revitalize
Memorial Park

CITY OF CUPERTINO
PARKS AND RECREATION SYSTEM MASTER PLAN
INITIAL STUDY -
MITIGATED NEGATIVE DECLARATION
ADDENDUM

APPENDICES B - F



Tree Inventory Report

Memorial Park Cupertino, CA

PREPARED FOR:
David J. Powers & Associates, Inc.
1871 The Alameda, Suite 200
San Jose, CA 95126

PREPARED BY:
HortScience | Bartlett Consulting
2250 Ninth St. Suite 112
Berkeley, CA 94710

November, 2022



Tree Inventory Report

Memorial Park
Cupertino, CA

Table of Contents

	Page
Introduction and Overview	1
Assessment Methods	1
Description of Trees	2
Suitability for Preservation	9
Tree Preservation Guidelines	11

List of Tables

Table 1. Tree condition and frequency of occurrence	3
Table 2. Tree suitability for preservation	10

Attachments

Tree Inventory Map

Tree Assessment Form

Tree Inventory Report

Memorial Park
Cupertino, CA

Introduction and Overview

David J. Powers & Associates, Inc. in conjunction with Gates+Associates are developing a Master Plan for Memorial Park in Cupertino, CA. HortScience | Bartlett Consulting (Divisions of The F.A. The Bartlett Expert Tree Company) was asked to prepare a **Tree Inventory Report** for trees at this location to assist with planning and future development.

This report provides the following information:

1. An assessment of the health and structural condition of the trees within the park's boundary area based on a visual inspection from the ground.
2. Preliminary guidelines for tree preservation during the design, construction, and maintenance phases of development.

Assessment Methods

Trees were assessed on September 2, 14, and 28, 2022. Tree assessment included trees with diameters of 4 inches or greater located within the boundaries provided by the client. The assessment procedure consisted of the following steps:

1. Identifying the tree species.
2. Tagging trees and recording locations on a map.
3. Measuring the trunk diameter at a point 54 inches above grade.
4. Evaluating the health and structural condition using a scale of 1 – 5:
 - 5** - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.
 - 4** - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.
 - 3** - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.
 - 2** - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.
 - 1** - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.
5. Rating the suitability for preservation as “high”, “moderate” or “low”. Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.

High: Trees with good health and structural stability that have the potential for longevity at the site.

Moderate: Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'high' category.

Low: Trees in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

Description of Trees

Five hundred sixty (560) trees representing thirty-four species were assessed (Table 1). Overall, 357 trees were in good condition, 148 were in fair condition, 53 were in poor condition, and two were dead. In general species were ornamental, non-native and commonly observed in the region. While coast redwood, coast live oak, and western sycamore are native to the area, trees were not indigenous to the site. Trees #340, 370 and 371 were located off-site but were included because their canopy overhung the western park boundary. Descriptions of each tree can be found in the **Tree Assessment Form** and approximate locations are shown on the **Tree Inventory Map** (see *Attachments*).

Memorial Park is a 28-acre public park with open grass fields, sports courts, pedestrian pathways, playground, amphitheater, picnic areas, and other public amenities including Quinlan Community Center and Cupertino Sports Center. The landscape varied from irrigated turf with lush redwoods to dry non-irrigated hillsides.



Photo 1. (above) Redwood #445 was growing in irrigated turf and was in good condition with a full healthy crown.

Photo 2. (right) Redwoods #360 – 364 (pictured left to right) were water stressed and had sparse crowns.

Coast redwood was the most common species with 191 trees (34% of the population). One hundred eleven (111) trees were in good condition (58%) with a full healthy crown. The remaining redwoods (42%) were in fair (63 trees) and poor (15 trees) condition, and trees #399 and 429 were dead. Age and size ranged from young to mature and from 5 to 60 inches in diameter. In general, the trees in good condition were growing in irrigated turf (PPhoto 1). Many of the trees in fair and poor condition were suffering from drought stress with moderate to extreme canopy dieback (PPhoto 2). Coast redwoods are not drought tolerant and will show signs of water stress if supplemental irrigation is not provided. Redwoods in fair condition may recover from drought if adequate irrigation is applied.



**Table 1: Tree condition and frequency of occurrence.
Memorial Park. Cupertino, CA.**

Common Name	Scientific Name	Condition				Total
		Dead (0)	Poor (1-2)	Fair (3)	Good (4-5)	
Red maple	<i>Acer rubrum</i>	-	-	-	19	19
African fern-pine	<i>Afrocarpus falcatus</i>	-	-	11	9	20
Silk tree	<i>Albizia julibrissin</i>	-	-	-	3	3
Blue atlas cedar	<i>Cedrus atlantica</i> 'Glauca'	-	-	-	1	1
Deodar cedar	<i>Cedrus deodara</i>	-	-	3	18	21
Red ironbark	<i>Eucalyptus sideroxylon</i>	-	-	1	-	1
Raywood ash	<i>Fraxinus angustifolia</i> 'Raywood'	-	-	1	4	5
Evergreen ash	<i>Fraxinus uhdei</i>	-	-	-	8	8
Honey locust	<i>Gleditsia triacanthos</i>	-	7	7	-	14
Leyland cypress	<i>x Hesperotropis leylandii</i>	-	-	1	-	1
California black walnut	<i>Juglans hindsii</i>	-	14	2	-	16
Hollywood juniper	<i>Juniperus chinensis</i> 'Kaizuka'	-	2	3	-	5
Crape myrtle	<i>Lagerstroemia indica</i>	-	-	-	2	2
Crabapple	<i>Malus sylvestris</i>	-	-	1	-	1
Photinia	<i>Photinia fraseri</i>	-	-	2	-	2
Canary Island pine	<i>Pinus canariensis</i>	-	-	2	22	24
Italian stone pine	<i>Pinus pinea</i>	-	-	8	3	11
Monterey pine	<i>Pinus radiata</i>	-	1	-	-	1
Scot's pine	<i>Pinus sylvestris</i>	-	2	2	-	4
Chinese pistache	<i>Pistacia chinensis</i>	-	-	4	21	25
Tobira	<i>Pittosporum tobira</i>	-	-	2	-	2
Western sycamore	<i>Platanus racemosa</i>	-	-	1	3	4
London plane	<i>Platanus x hispanica</i>	-	-	1	6	7
Purpleleaf plum	<i>Prunus cerasifera</i>	-	-	-	12	12
Jap. flowering cherry	<i>Prunus serrulata</i>	-	7	1	18	26
Callery pear	<i>Pyrus calleryana</i>	-	-	14	46	60
Evergreen pear	<i>Pyrus kawakamii</i>	-	2	8	2	12
Coast live oak	<i>Quercus agrifolia</i>	-	-	6	32	38
Holly oak	<i>Quercus ilex</i>	-	-	-	1	1
Southern live oak	<i>Quercus virginiana</i>	-	2	1	2	5
Coast redwood	<i>Sequoia sempervirens</i>	2	15	63	111	191
Chinese elm	<i>Ulmus parvifolia</i>	-	-	2	9	11
Mexican fan palm	<i>Washingtonia robusta</i>	-	-	-	1	1
Sawleaf zelkova	<i>Zelkova serrata</i>	-	1	1	4	6
Total		2	53	148	357	560

Callery pear was the next most common species with 60 trees representing 10% of the population. Trees were in good (46 trees) and fair (14) condition. Most of the pears (40 trees) were located along the perimeter of a grassy field with the remainder in parking lot planting strips and scattered throughout the park. Pears were young to semi-mature in development with an average diameter of 14 inches.

Thirty-two of 38 coast live oaks were in good condition and six trees were fair. Age and size ranged from young to mature with diameters from 7 to 59 inches. Tree #338 was the largest and most mature of the oaks. It had a full healthy crown and areas of decay on the trunk and branches (Photo 3).



Photo 3. (right) Coast live oak #338 was a striking mature tree. Despite areas of decay in the trunk and branches, it had a full healthy crown.



Japanese flowering cherries comprised approximately 4% of the population (26 trees). Trees were young with an average diameter of four inches. The cherries were in good (18 trees) and poor (7 trees) condition with tree #331 in fair. Many of the cherries had marginal leaf burn from a period of recent high temperatures (Photo 4).

Photo 4. A recent period of high temperatures caused leaf burn in many of the Japanese flowering cherries (tree #274).

Of 26 Chinese pistaches, 21 were in good condition with four in fair condition. Trees were young to semi-mature in development with an average diameter of seven inches. In general, trees had good structure and a full round crown.

Most (91%) of the 24 Canary Island pines were in good condition (22 trees), with two in fair condition. Age and size ranged from young to mature with diameter from 8 to 28 inches. Trees had good structure and upright columnar form typical of the species.



Photo 5. (above) African fern-pines #102 – 104 (pictured left to right) were located around Quinlan Community Center. Tree #104 had a slightly chlorotic but full crown, while trees #102 & 103 had thinner crowns.

Twenty-one (21) deodar cedars were located around the Sports Center tennis courts. Trees were young to semi-mature in development. Size ranged from four to 26 inches in diameter. Most of the cedars were in good condition (18 trees) with three trees in fair condition.

African fern-pines comprised approximately 3% of the population (20 trees). Half (10 trees) were located around Quinlan Community Center and half (10 trees) were located in the Sports Center parking lot (Photo 5). Trees were young to semi-mature with an average diameter of 14 inches. Nine (9) trees were in good condition with 11 trees fair.

Nineteen (19) red maples were located around the Veteran's Memorial. The maples were young with an average diameter of eight inches. All trees were in good condition with a full healthy crown.

Sixteen (16) California black walnuts were located around the playground. Most (14 trees) were in poor condition with moderate to severe twig and branch dieback. Two trees were in fair condition (Photo 6). Age and size ranged from semi-mature to mature with diameter from 12 to 38 inches.

Honey locusts (14 trees) were located around a group picnic area. Trees were young with an average diameter of seven inches. Half (7 trees) were in fair condition and half (7 trees) were in poor condition with extensive trunk wounds and basal decay.



Photo 6. California black walnut #449 was in poor condition with significant twig and branch dieback.

Purpleleaf plums (12 trees) were in a semi-circle west of the Community Center building. The plums were in good condition with a full healthy crown. Trees were young in development with an average diameter of six inches.

Twelve (12) evergreen pears were present. Trees were young to semi-mature, and diameter ranged from five to 14 inches. Most pears were in fair (8 trees) condition with two trees in fair and poor condition respectively.



Italian stone pines were in fair (8 trees) and good (3 trees) condition. Trees were semi-mature to mature in development with an average trunk diameter of 25 inches. Seven pines had large codominant stems. Tree #421 had large heavy lateral branches that extended over the baseball field's bleachers (Photo 7).

Photo 7. Italian stone pine #421 was a mature tree with codominant trunks and large lateral branches that hung over the baseball bleachers.

Eleven (11) Chinese elms were located around the west entrance to the Community Center and along Anton Way. Trees were in good (9 trees) and fair (2 trees) condition. The young trees had an average trunk diameter of six inches.

Evergreen ashes were in good (8 trees) condition with a vigorous full crown (Photo 8). Trees were semi-mature to mature in development with diameters ranging from 14 to 38 inches. Ashes were located around the newly filled-in pond (6 trees) and adjacent to the playground (2 trees).

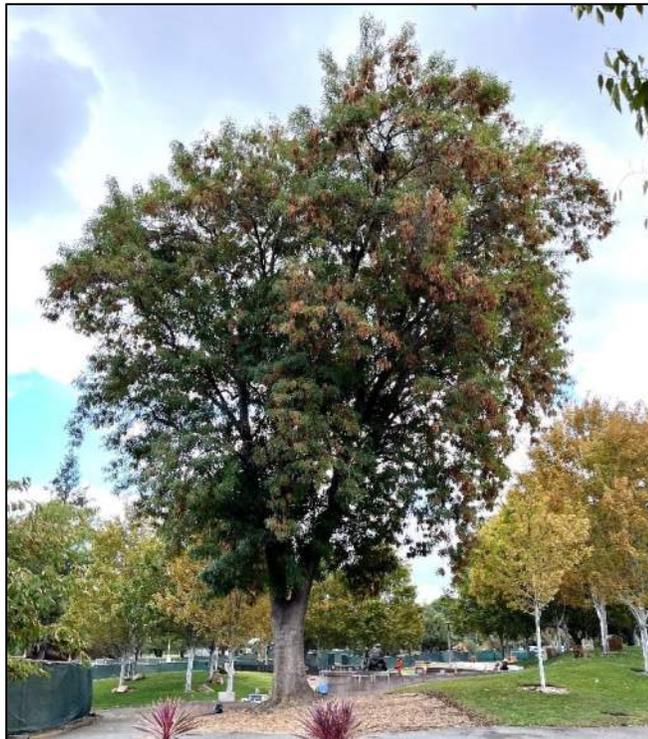


Photo 8. Evergreen ash #276 was in good condition and had a full vigorous crown.

Six of seven London planes were in good condition with a full healthy crown. Tree #479 was fair condition with a slightly sparse crown. Trees were semi-mature in development with an average diameter of 14 inches.

Four (4) sawleaf zelkova were in good condition, tree #262 was fair, and tree #345 was poor. Trees were semi-mature to mature in development with diameters ranging from 13 to 25 inches. Multiple branch attachments arose between 5 and 8 feet on the trees. Tree #263 was an especially beautiful tree with a dense wide-spreading crown (Photo 9).

Photo 9. (right) Sawleaf zelkova #263 was a striking tree with a dense wide-spreading crown.



Photo 10. Western sycamore #353 was growing in a parking lot planter. It had a thin sinuous central leader and large surface roots.

Hollywood junipers were in fair (3 trees) and poor (2 trees) condition. The average trunk diameter was 13 inches. Trees were small in stature with an average height of 13 feet.

Four (4) Raywood ash were in good condition with a full healthy crown. Tree #309 was fair with dieback on the north side. Age and size ranged from young to semi-mature and from 4 to 11 inches in diameter.

Southern live oaks (5 trees) were located along Stevens Creek Boulevard. Trees were in good (2 trees) and poor (2 trees) condition, and tree #504 was fair. Oaks were young to semi-mature with an average diameter of 10 inches.

Scot's pines (4 trees) were located along Anton Way. The average diameter was 10 inches. Trees were in fair (2 trees) and poor (2 trees) condition and were water stressed with small to significant needle dieback.

Four (4) western sycamore were growing in parking lot planters. Age and size ranged from young to semi-mature and from seven to 24 inches in diameter. Three (3) trees were in good condition with a fully healthy crown. Tree #353 was fair with a thin sinuous central leader. The sycamores had large surface roots typical of unsuitable soil conditions (Photo 10).

Three (3) silk trees were growing in a parking lot planting strip. Trees were in good condition with a full healthy crown. They were young with an average diameter of seven inches (Photo 11).



Photo 11. Silk trees #19 – 21 (pictured right to left) were good young trees with a dense vigorous crown.

The remaining species were represented by two trees or fewer:

- Blue Atlas cedar #521 measured 12 inches in diameter and was in good condition.
- Crabapple #299 was in fair condition with basal and root decay. It was 12 inches in diameter.
- Crape myrtles #322 and 323 were young and in good condition.
- Holly oak #546 was in good condition with a fully healthy crown. It was semi-mature with multiple stems arising from the base.
- Leyland cypress #119 was in fair condition with small twig and branch dieback. It was semi-mature and measured 21 inches in diameter.
- Mexican fan palm #380 was mature in development. It was in good condition with a full healthy crown.
- Monterey pine #370 was in poor condition with significant twig and branch dieback. It was semi-mature with a diameter of 17 inches.
- Photinias #348 and 350 were in fair condition. The young trees had an average diameter of 5 inches.
- Red ironbark #530 was mature in development with a diameter of 31 inches. The tree was in fair condition with a history of branch failures.

- Tobiras #351 and 352 were in fair condition. The young trees had a diameter of 7 inches.

The City of Cupertino protects private trees that meet certain criterion (Chapter 14.18.050), and all public trees (Chapter 14.12). According to City Ordinance 14.12, *public tree* is defined as park trees and street trees collectively; and *park trees* are defined as all woody vegetation in public parks owned by the City, or to which the public has access as a park. Based on this definition, all trees in Memorial Park are *Protected*.

Additionally, City Ordinance Chapter 14.18.050 protects *Heritage* trees in all zoning districts. Heritage trees have an identification tag on them which designates their status (Chapter 14.18.090). Based on this designation, no tree in Memorial Park has *Heritage* status.

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment and perform well in the landscape. Our goal is to identify trees that have the potential for long-term health, structural stability, and longevity within the proposed development.

Evaluation of suitability for preservation considers several factors:

- **Tree health**
Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees. For example, coast redwoods with a full healthy crown will tolerate impacts from construction better than redwoods that are drought stressed.
- **Structural integrity**
Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely. For example, honey locust #238 had extensive trunk wounds and basal decay and had low suitability for preservation.
- **Species response**
There is a wide variation in the response of individual species to construction impacts and changes in the environment. Coast redwood, Canary Island pine, and coast live oak are tolerant of root severance and general construction impacts while California black walnut is intolerant. Callery pear and Chinese pistache are moderate in response.
- **Tree age and longevity**
Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young to semi-mature coast live oaks would be better able to generate new tissue and to respond to change than mature oak #338.
- **Invasiveness**
Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (<http://www.cal-ipc.org/paf/>) lists species identified as being invasive. Cupertino is part of the Central West Floristic

Province. Of the assessed species, Mexican fan palm is moderately invasive and purpleleaf plum has limited invasiveness.

Each tree was rated for suitability for preservation based upon its age, health, structural condition, and ability to safely coexist within a development environment (Table 2). We consider trees with high suitability for preservation to be the best candidates for preservation. We do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

**Table 2: Tree suitability for preservation
Memorial Park. Cupertino, CA**

High Trees in this category had good health and structural stability that have the potential for longevity at the site. Two hundred ninety-three (293) trees had high suitability for preservation: 114 coast redwoods, 34 coast live oaks, 24 Chinese pistaches, 19 red maples, 13 Japanese flowering cherries, 12 purpleleaf plums, African fern-pines #16, 17, 52, 56, 65, and 102 – 104; evergreen ashes #176, 382 – 386, 447, and 448; London planes #297, 298, 314, 329, 337, and 339; western sycamores #354 – 357; Callery pears #305 and 537, Chinese elms #488 and 489, crape myrtles #322 and 323, evergreen pears #315 and 534, Italian stone pine #484, sawleaf zelkova #261 and 263, Leyland cypress #119, Mexican fan palm #380, and Raywood ash #336.

Moderate Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring and may have shorter lifespans than those in the “high” category. One hundred seventy-two (172) trees had moderate suitability for preservation: 58 coast redwoods, 47 Callery pears, 10 African fern-pines, 10 Italian stone pines; Chinese elms #57 – 64 and 73; evergreen pears #341 – 343, 346, 347, and 349; Japanese flowering cherries #332, 375, 376, 485, and 486; sawleaf zelkovas #262, 275, and 344; silk trees #19 – 21; coast live oaks #434 and 442; Scot’s pines #469 and 487; Chinese pistache #12, London plane #479, and tobira #351.

Low Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas. Ninety-five (95) trees had low suitability for preservation: 19 coast redwoods, 16 California black walnuts, 14 honey locusts, 11 Callery pears, Japanese flowering cherries #69 – 72, 260, 300, 330, and 331; Hollywood junipers #473 - 475, 477, and 478; evergreen pears #547 – 550; African fern-pines #556 and 558; coast live oaks #369 and 441; photinias #348 and 350; Scots’ pines #467 and 468; crabapple #299, Monterey pine #370, Raywood ash #309, sawleaf zelkova #345, tobira #352, and western sycamore #353.

Tree Preservation Guidelines

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees depends on the amount of excavation and grading, care with which demolition is undertaken, and construction methods. Coordinating any construction activity inside the **TREE PROTECTION ZONE** can minimize these impacts.

The following recommendations will help reduce impacts to trees from development and maintain and improve their health and vitality through the clearing, grading and construction phases.

Tree Protection Zone

1. **A TREE PROTECTION ZONE** shall be identified for each tree to be preserved on the Tree Protection Plan prepared by the project arborist.
 - a. Fence all trees to be retained to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link with posts sunk into the ground or equivalent as approved by the City.
 - b. Fences must be installed prior to beginning demolition and must remain until construction is complete.
 - c. No grading, excavation, construction, or storage or dumping of materials shall occur within the **TREE PROTECTION ZONE**.
 - d. No underground services including utilities, sub-drains, water, or sewer shall be placed in the **TREE PROTECTION ZONE**.

Design recommendations

1. Plot accurate locations of all trees to be preserved on all project plans. Identify the **TREE PROTECTION ZONE** for each tree. Focus on preserving trees that have high suitability for preservation.
2. Plan for tree preservation by designing adequate space around trees to be preserved. This is the **TREE PROTECTION ZONE**: No grading, excavation, construction, or storage of materials should occur within that zone. Route underground services including utilities, sub-drains, water, or sewer around the **TREE PROTECTION ZONE**. For design purposes, the **TREE PROTECTION ZONE** trees shall be defined as the tree dripline.
3. Consider the vertical clearance requirements near trees during design. Avoid designs that would require pruning more than 20% of a tree's canopy.
4. All plans affecting trees shall be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to, demolition plans, grading plans, drainage plans, utility plans, and landscape and irrigation plans.
5. **Tree Preservation Guidelines** prepared by the Consulting Arborist, which include specifications for tree protection during demolition and construction, should be included on all plans.
6. Do not lime the subsoil within 50' of any tree. Lime is toxic to tree roots.
7. As trees withdraw water from the soil, expansive soils may shrink within the root area. Therefore, foundations, footings, and pavements on expansive soils near trees should be designed to withstand differential displacement.

Pre-demolition and pre-construction treatments and recommendations

1. The demolition and construction superintendents shall meet with the Consulting Arborist before beginning work to review all work procedures, access routes, storage areas, and tree protection measures.
2. Fence all trees to be retained to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing or grading. Fences shall be 6 ft. chain link with posts sunk into the ground or equivalent as approved by the City.
3. Fences are to remain until all grading and construction is completed.
4. Tree(s) to be removed that have branches extending into the canopy of tree(s) or located within the **TREE PROTECTION ZONE** of tree(s) to remain shall be removed by a Certified Arborist or Certified Tree Worker and not by the demolition contractor. The Certified Arborist or Certified Tree Worker shall remove the trees in a manner that causes no damage to the tree(s) and understory to remain. Stumps shall be ground below grade.

Summary

Five hundred sixty (560) trees representing thirty-four species were assessed. Coast redwood was the most common species with 191 trees (34% of the population). Tree condition varied by species. Overall, 357 trees were in good condition, 148 were in fair condition, 53 were in poor condition, and two were dead. Trees age ranged from young to mature in development. Tree size ranged from 4 inches to 60 inches in diameter with an average of 17 inches.

In general, trees that are the best candidates for preservation are those in good condition with good to moderate suitability for preservation (354 trees). Trees in poor health with low suitability for preservation (55 trees) should be considered for removal. If trees are to be retained, it is imperative to provide sufficient irrigation to relieve the current water-stress of the coast redwoods.

Maintenance of impacted trees

Preserved trees will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. Inspect trees annually and following major storms to identify conditions requiring treatment to manage risk associated with tree failure.

Our procedures included assessing trees for observable defects in structure. This is not to say that trees without significant defects will not fail. Failure of apparently defect-free trees does occur, especially during storm events. Wind forces, for example, can exceed the strength of defect-free wood causing branches and trunks to break. Wind forces coupled with rain can saturate soils, reducing their ability to hold roots, and blow over defect-free trees. Although we cannot predict all failures, identifying those trees with observable defects is a critical component of enhancing public safety.

Furthermore, trees change over time. Our inspections represent the condition of the tree at the time of inspection. As trees age, the likelihood of failure of branches or entire trees increases. Annual tree inspections are recommended to identify changes to tree health and structure. In addition, trees should be inspected after storms of unusual severity to evaluate damage and structural changes. Initiating these inspections is the responsibility of the client and/or tree owner.

HortScience | Bartlett Consulting

A handwritten signature in black ink that reads "BWong". The letters are cursive and somewhat stylized.

Brenda Wong
Consulting Arborist and Urban Forester
ISA Certified Arborist WE12933A
ISA Tree Risk Assessment Qualified

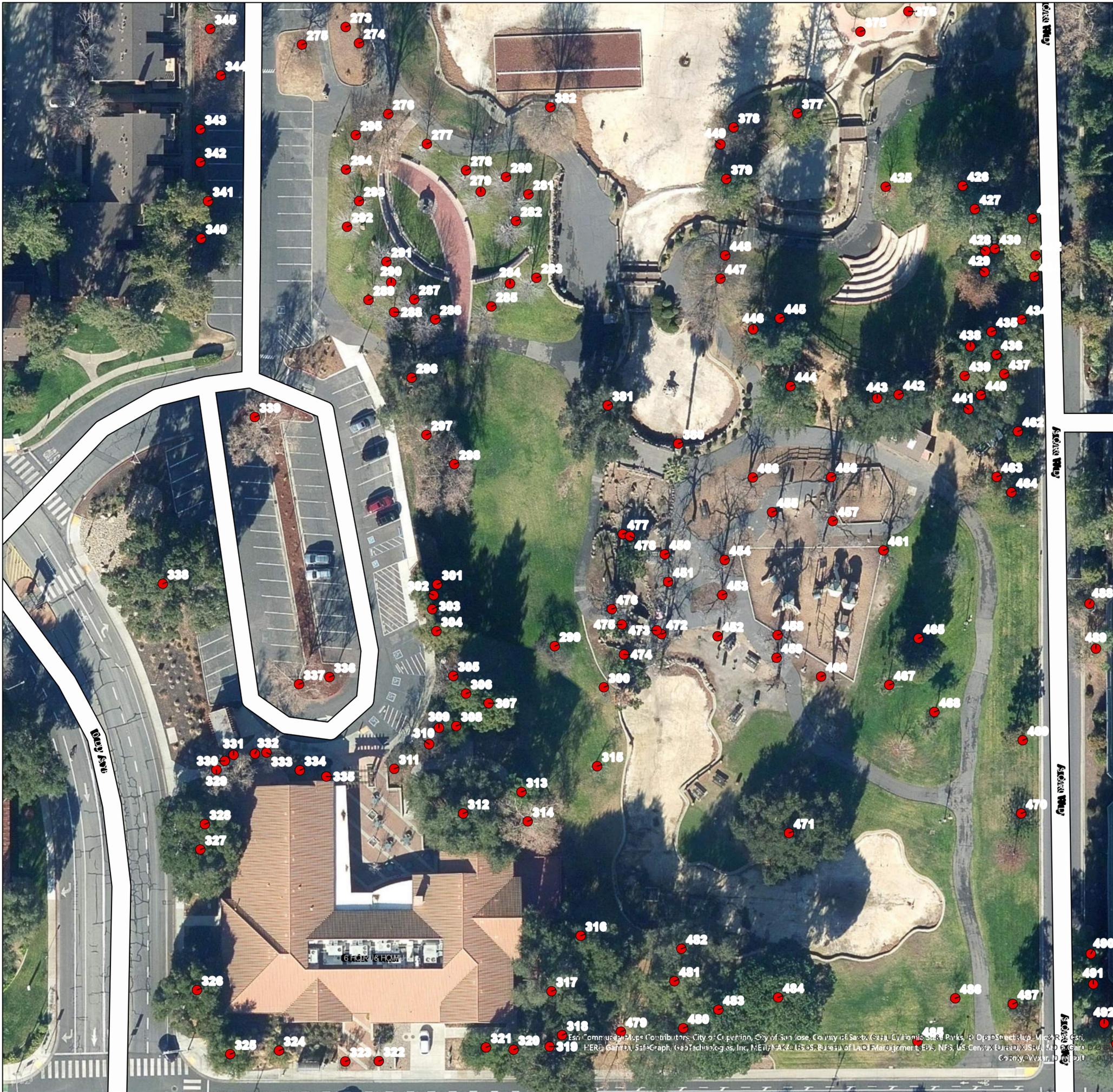


Attachments

Tree Inventory Map

Tree Assessment Form



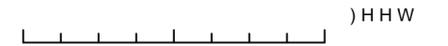


7UHH , QYHQWRU

0HPRULDO 3DUN
&XSHUWLQR &\$

3UHSDUHG)RU
'DYLG - 3RZHUV
\$VVRFLDWHV ,QF
7KH \$ODPHGD 6XLWH
6DQ -RVH &\$

2FWREHU



● 7UHHV

1RWHV
%DVHPDS SURYLGHG E\ (65,
7UHH ORFDWLRQV DUH DSSUR[LPDW



11 QWK 6WUHHW 6XLW
%HUNHOH\ &DOLIRUQLD

3KRQH
)D[

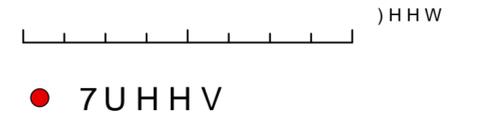


7UHH , QYHQWRUV

0HPRULDO 3DUN
&XSHUWLQR &\$

3UHSDUHG)RU
'DYLG - 3RZHUV
\$VVRFLDWHV ,QF
7KH \$ODPHGD 6XLWH
6DQ -RVH &\$

2FWREHU



1RWHV
%DVHPDS SURYLGHG E\ (65,
7UHH ORFDWLRQV DUH DSSUR[LPDW



Esri Community Maps Contributors, City of Cupertino, City of San Jose, County of Santa Clara, California State Parks, © OpenStreetMap, Microsoft, Esri, © 2014
H (5 GarDUP L Cap 6DIH CUDS Ks, INHR7HF 60R QOR 4LH, 6QF Ma 0(7mer) \$6\$ N86*6er% XUHX IRI /DQG 0DQDU JHPHQW (35 136 86 &HQ XV %XHQX 66 \$ 6DQWD &0DUD
&RQWV 0DIDU 0LFURVRIW

11LQWK 6WUHHW 6XLW
%HUNHOH\ &DOLIRUQLD
3KRQH
)D[

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
1	Callery pear	20	Yes	3	25	45	Moderate	Surface roots; poor structure; multiple attachments @ 6'; 25.
2	Coast redwood	25	Yes	3	70	22	High	Surface roots; good upright form & structure; small leaf dieback.
3	Coast redwood	22	Yes	3	70	24	High	Surface roots; good upright form & structure; small leaf dieback.
4	Coast redwood	23	Yes	3	70	24	High	Surface roots; good upright form & structure; small leaf dieback.
5	Coast redwood	22	Yes	2	70	24	Low	Surface roots; good upright form & structure; significant canopy dieback.
6	Coast redwood	21	Yes	3	70	25	High	Surface roots; good upright form & structure; small leaf dieback.
7	Coast redwood	25	Yes	3	70	26	High	Surface roots; good upright form & structure; small leaf dieback.
8	Coast redwood	24	Yes	3	70	26	High	Surface roots; good upright form & structure; small leaf dieback.
9	Coast redwood	24	Yes	3	70	26	High	Surface roots; good upright form & structure; small leaf dieback.
10	Callery pear	18	Yes	3	25	28	Moderate	Surface roots; poor structure; multiple attachments @ 6'.
11	Coast redwood	11	Yes	4	30	18	Moderate	Surface roots; good upright form & structure; small leaf dieback.
12	Chinese pistache	8	Yes	4	20	30	Moderate	Large surface roots; good structure; full healthy crown.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
13	Chinese pistache	7	Yes	4	15	28	High	Large surface roots; good structure; full healthy crown.
14	Chinese pistache	6	Yes	4	15	20	High	Multiple attachments @ 6'; full healthy crown.
15	African fern-pine	15	Yes	3	30	25	Moderate	Multiple attachments @ 6'; chlorotic crown; good form & structure.
16	African fern-pine	14	Yes	3	30	25	High	Multiple attachments @ 6'; good form & structure; small twig dieback.
17	African fern-pine	22	Yes	4	40	36	High	Multiple attachments @ 6'; good form & structure; full healthy crown.
18	Coast redwood	22	Yes	4	40	28	High	Good upright form & structure; full healthy crown.
19	Silk tree	6	Yes	4	12	14	Moderate	Multiple attachments @ 6'; healthy crown.
20	Silk tree	7	Yes	4	12	24	Moderate	Multiple attachments @ 6'; healthy crown.
21	Silk tree	8	Yes	4	12	20	Moderate	Multiple attachments @ 6'; full healthy crown.
22	Callery pear	15	Yes	4	20	36	Moderate	Surface roots; poor structure; multiple attachments @ 6'.
23	Callery pear	18	Yes	4	25	40	Moderate	Surface roots; poor structure; multiple attachments @ 6'; healthy crown.
24	Coast redwood	17	Yes	3	40	20	High	Surface roots; good upright form & structure; small twig & leaf dieback.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
25	Coast redwood	23	Yes	3	40	25	Low	Surface roots; dead central leader; otherwise healthy crown.
26	Coast redwood	24	Yes	4	60	30	High	Group of 5; surface roots; good upright form & structure; full healthy crown.
27	Coast redwood	25	Yes	4	60	22	High	Group of 5; surface roots; good upright form & structure; full healthy crown.
28	Coast redwood	22	Yes	4	60	24	High	Group of 5; good upright form & structure; full healthy crown.
29	Coast redwood	28	Yes	5	60	30	High	Good upright form & structure; full healthy canopy.
29	Coast redwood	25	Yes	4	65	28	High	Group of 5; good upright form & structure; small top dieback; otherwise full healthy crown.
30	Coast redwood	23	Yes	5	60	24	High	Good upright form & structure; full healthy canopy.
30	Coast redwood	28	Yes	4	65	34	High	Group of 5; good upright form & structure; full healthy crown.
31	Callery pear	8	Yes	4	15	12	Low	5' parking lot planter; surface roots; poor structure; multiple attachments @ 6'; healthy crown.
32	Callery pear	10	Yes	4	15	18	Low	5' parking lot planter; surface roots; poor structure; multiple attachments @ 6'; healthy crown.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
33	Callery pear	11	Yes	4	20	28	Low	5' parking lot planter; surface roots; poor structure; multiple attachments @ 6'; healthy crown.
34	Callery pear	10	Yes	3	20	25	Low	5' parking lot planter; poor structure; multiple attachments @ 6'; sparse crown.
35	Chinese pistache	7	Yes	4	15	30	High	Surface roots; good structure; full healthy crown.
36	Chinese pistache	7	Yes	4	20	15	High	Surface roots; suppressed; small twig dieback.
37	Coast redwood	5	Yes	4	15	14	High	Surface circling roots; good upright form & structure; full healthy canopy.
38	Coast redwood	26	Yes	4	65	26	High	Group of 4; good upright form & structure; full healthy canopy.
39	Coast redwood	18	Yes	4	50	22	High	Group of 4; surface roots; good upright form & structure; full healthy canopy.
40	Coast redwood	27	Yes	4	65	30	High	Group of 4; surface roots; good upright form & structure; full healthy canopy.
41	Coast redwood	24	Yes	4	65	28	High	Group of 4; surface roots; good upright form & structure; small top dieback; otherwise full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
42	Coast redwood	26	Yes	4	65	30	High	Group of 8; surface roots; good upright form & structure; full healthy canopy.
43	Coast redwood	31	Yes	4	65	30	High	Group of 8; surface roots; good upright form & structure; full healthy canopy.
44	Coast redwood	29	Yes	4	65	32	High	Group of 8; surface roots; good upright form & structure; full healthy canopy.
45	Coast redwood	25	Yes	4	65	28	High	Group of 8; surface roots; good upright form & structure; full healthy canopy.
46	Coast redwood	24	Yes	4	65	28	High	Group of 8; surface roots; good upright form & structure; full healthy canopy.
47	Coast redwood	26	Yes	4	65	32	High	Group of 8; surface roots; good upright form & structure; full healthy canopy.
48	Coast redwood	25	Yes	4	65	30	High	Group of 8; surface roots; good upright form & structure; full healthy canopy.
49	Chinese pistache	6	Yes	4	15	26	High	Surface roots; suppressed; good structure; small twig dieback.
50	Chinese pistache	8	Yes	4	15	30	High	Surface roots; codominant trunks @ 6'; small twig dieback.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
51	Chinese pistache	5	Yes	4	15	25	High	Surface roots; multiple attachments @ 6'; full healthy crown.
52	African fern-pine	18	Yes	4	35	28	High	Multiple attachments @ 6'; narrow attachments; full healthy canopy.
53	Chinese pistache	6	Yes	3	15	18	High	Surface roots; multiple attachments @ 5'; suppressed.
54	Chinese pistache	5	Yes	3	15	20	High	Surface roots; multiple attachments @ 6'; suppressed.
55	Chinese pistache	8	Yes	4	20	22	High	Surface roots; codominant trunks @ 7'; healthy crown.
56	African fern-pine	15	Yes	4	35	32	High	Multiple attachments @ 6'; narrow attachments; full slightly chlorotic canopy.
57	Chinese elm	4	Yes	3	12	18	Moderate	Codominant trunks @ 5'; small twig dieback.
58	Chinese elm	5	Yes	3	12	18	Moderate	Codominant trunks @ 5'; small twig dieback.
59	Chinese elm	7	Yes	4	15	26	Moderate	Multiple attachments @ 6'; healthy crown.
60	Chinese elm	6	Yes	4	15	20	Moderate	Multiple attachments @ 6'; healthy crown.
61	Chinese elm	7	Yes	4	15	25	Moderate	Multiple attachments @ 6'; healthy crown.
62	Chinese elm	5	Yes	4	12	24	Moderate	Codominant trunks @ 5'; healthy crown.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
63	Chinese elm	6	Yes	4	12	20	Moderate	Codominant trunks @ 5'; small twig dieback.
64	Chinese elm	6	Yes	4	12	25	Moderate	Multiple attachments @ 6'; small twig dieback.
65	African fern-pine	16	Yes	4	25	24	High	Surface roots; multiple attachments @ 5'; full crown.
66	Chinese pistache	9	Yes	4	20	22	High	Large surface roots; codominant trunks @ 6'; full crown.
67	Chinese pistache	7	Yes	3	15	22	High	Large surface roots; codominant trunks @ 6'; small twig dieback.
68	African fern-pine	16	Yes	3	25	26	Moderate	Surface roots; multiple attachments @ 5'; narrow unions; slightly chlorotic crown.
69	Japanese flowering cherry	5	Yes	2	10	12	Low	Multiple attachments @ 3'; significant branch dieback.
70	Japanese flowering cherry	4	Yes	2	10	8	Low	Codominant trunks @ 3'; significant branch dieback.
71	Japanese flowering cherry	4	Yes	2	10	6	Low	Codominant trunks @ 3'; significant branch dieback.
72	Japanese flowering cherry	4	Yes	2	10	6	Low	Codominant trunks @ 3'; significant branch dieback.
73	Chinese elm	6	Yes	4	15	24	Moderate	Multiple attachments @ 6'; healthy crown.
74	Coast redwood	27	Yes	4	70	28	High	Good upright form & structure; full healthy crown.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
75	Coast redwood	22	Yes	4	70	24	High	Surface roots; good upright form & structure; full healthy crown.
76	Coast redwood	24	Yes	4	70	28	High	Surface roots; good upright form & structure; full healthy crown.
77	Coast redwood	24	Yes	4	70	40	High	Surface roots; good upright form & structure; full healthy crown.
78	Coast redwood	24	Yes	4	70	28	High	Surface roots; good upright form & structure; full healthy crown.
79	Coast redwood	23	Yes	4	70	20	High	Surface roots; good upright form & structure; full healthy crown.
80	Coast redwood	19	Yes	3	70	20	High	Surface roots; good upright form & structure; moderate leaf discoloration.
81	Coast redwood	17	Yes	3	70	20	High	Surface roots; good upright form & structure; small leaf discoloration/dieback.
82	Coast redwood	23	Yes	3	70	22	High	Surface roots; good upright form & structure; small leaf discoloration/dieback.
83	Coast redwood	22	Yes	2	70	24	Low	Mostly dead.
84	Coast redwood	24	Yes	2	70	24	Low	Severe canopy dieback.
85	Coast redwood	27	Yes	3	70	22	Moderate	Good form & structure; moderate canopy dieback.
86	Coast redwood	22	Yes	3	70	22	Moderate	Good upright form & structure; moderate canopy dieback.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
87	Coast redwood	23	Yes	3	70	26	Moderate	Good upright form & structure; moderate canopy dieback.
88	Coast redwood	22	Yes	3	70	26	Moderate	Good upright form & structure; small canopy dieback.
89	Coast redwood	17	Yes	2	70	20	Low	Good upright form & structure; moderate canopy dieback.
90	Coast redwood	21	Yes	2	70	24	Low	Good upright form & structure; moderate canopy dieback.
91	Coast redwood	17	Yes	2	70	24	Low	Good upright form & structure; significant canopy dieback.
92	Coast redwood	22	Yes	3	70	28	Moderate	Good upright form & structure; moderate canopy dieback.
93	Coast redwood	19	Yes	2	70	20	Low	Good upright form & structure; moderate canopy dieback.
94	Coast redwood	23	Yes	3	70	28	Moderate	Good upright form & structure; moderate canopy dieback.
95	Coast redwood	17	Yes	3	70	22	Moderate	Good upright form & structure; top dieback & moderate canopy dieback.
96	Chinese pistache	6	Yes	4	25	15	High	Multiple attachments @ 6'; suppressed; healthy crown.
97	Chinese pistache	8	Yes	4	25	26	High	Codominant trunks @ 6'; surface roots; suppressed; healthy crown.
98	Chinese pistache	8	Yes	4	20	28	High	Multiple attachments @ 6'; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
99	Chinese pistache	6	Yes	3	30	15	High	Codominant trunks @ 7'; slight trunk lean; small twig dieback.
100	Chinese pistache	11	Yes	4	25	38	High	Codominant trunks @ 6'; full healthy canopy.
101	Chinese pistache	7	Yes	4	20	30	High	Codominant trunks @ 6'; full healthy canopy.
102	African fern-pine	15	Yes	3	30	30	High	Multiple attachments @ 7'; full slightly chlorotic canopy.
103	African fern-pine	15	Yes	3	25	30	High	Multiple attachments @ 4'; sparse canopy; moderate twig dieback.
104	African fern-pine	18	Yes	3	40	34	High	Multiple attachments @ 6'; sparse canopy; moderate twig dieback.
105	Callery pear	7	Yes	3	12	12	Low	Parking lot planting strip; multiple attachments @ 6'; poor structure; sparse canopy.
106	Callery pear	7	Yes	3	15	18	Low	Parking lot planting strip; multiple attachments @ 6'; poor structure; healthy canopy.
107	Callery pear	9	Yes	3	15	16	Low	Parking lot planting strip; multiple attachments @ 6'; poor structure; healthy canopy.
108	Callery pear	20	Yes	4	30	40	Moderate	Multiple attachments @ 7'; poor structure; full healthy canopy.
109	Coast redwood	26	Yes	4	60	24	High	Group of 8; good upright form & structure; full healthy crown.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
110	Coast redwood	25	Yes	4	70	25	High	Group of 8; good upright form & structure; full healthy crown.
111	Coast redwood	25	Yes	4	70	30	High	Group of 8; good upright form & structure; full healthy crown.
112	Coast redwood	25	Yes	4	70	28	High	Group of 8; good upright form & structure; full healthy crown.
113	Coast redwood	24	Yes	3	70	28	High	Group of 8; good upright form & structure; top dieback otherwise full healthy crown.
114	Coast redwood	24	Yes	3	70	28	High	Group of 8; good upright form & structure; top dieback otherwise full healthy crown.
115	Callery pear	14	Yes	3	25	18	Low	Multiple attachments @ 7'; poor structure; slight trunk lean; suppressed.
116	Coast redwood	26	Yes	4	70	30	High	Group of 8; good upright form & structure; full healthy crown.
117	Coast redwood	29	Yes	4	70	28	High	Group of 8; good upright form & structure; full healthy crown.
118	Callery pear	17	Yes	3	30	30	Low	Multiple attachments @ 7'; poor structure; slight trunk lean.
119	Leyland cypress	21	Yes	3	35	30	High	Surface roots; small branch flagging & leaf dieback; poor structure.
120	Callery pear	13	Yes	3	30	25	Low	Surface roots; multiple attachments @ 8'; poor structure.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
121	Coast redwood	26	Yes	3	60	28	Moderate	Group of 7; good upright form & structure; small twig dieback.
122	Coast redwood	19	Yes	3	60	28	Moderate	Group of 7; good upright form & structure; small twig dieback.
122	Coast redwood	21	Yes	3	60	26	Moderate	Group of 7; good upright form & structure; sparse canopy.
124	Coast redwood	20	Yes	3	60	26	Moderate	Group of 7; good upright form & structure; moderate twig & leaf dieback.
125	Coast redwood	22	Yes	3	60	26	High	Group of 7; good upright form & structure; moderate twig & leaf dieback.
126	Coast redwood	22	Yes	3	60	24	Moderate	Group of 7; good upright form & structure; moderate twig & leaf dieback.
127	Coast redwood	25	Yes	3	60	28	Moderate	Group of 7; good upright form & structure; moderate twig & leaf dieback.
128	Coast redwood	24	Yes	5	60	28	High	Good upright form & structure; full healthy canopy.
131	Coast redwood	25	Yes	5	60	28	High	Good upright form & structure; full healthy canopy; displacing hardscape.
132	Coast redwood	18	Yes	5	50	28	High	Good upright form & structure; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
133	Coast redwood	17	Yes	5	50	26	High	Good upright form & structure; full healthy canopy.
134	Coast redwood	18	Yes	5	50	22	High	Good upright form & structure; full healthy canopy.
135	Coast redwood	17	Yes	5	50	20	High	Good upright form & structure; full healthy canopy.
136	Coast redwood	17	Yes	5	50	22	High	Good upright form & structure; full healthy canopy.
137	Coast redwood	15	Yes	5	50	20	High	Good upright form & structure; full healthy canopy.
138	Coast redwood	16	Yes	5	50	20	High	Good upright form & structure; full healthy canopy.
139	Coast redwood	18	Yes	5	50	20	High	Good upright form & structure; full healthy canopy.
140	Coast redwood	18	Yes	5	50	22	High	Good upright form & structure; full healthy canopy.
141	Coast redwood	18	Yes	5	50	22	High	Good upright form & structure; full healthy canopy.
142	Coast redwood	16	Yes	5	50	20	High	Good upright form & structure; full healthy canopy.
143	Coast redwood	15	Yes	5	50	20	High	Good upright form & structure; full healthy canopy.
144	Coast redwood	18	Yes	5	50	20	High	Good upright form & structure; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
145	Coast redwood	16	Yes	5	50	18	High	Surface root; good upright form & structure; full healthy canopy.
146	Coast redwood	17	Yes	5	50	18	High	Good upright form & structure; full healthy canopy.
147	Coast redwood	22	Yes	5	50	18	High	Good upright form & structure; full healthy canopy; displacing hardscape.
148	Coast redwood	24	Yes	5	50	28	High	Good upright form & structure; full healthy canopy.
149	Coast redwood	18	Yes	2	50	18	Low	Good upright form & structure; sparse canopy; significant dieback.
150	Coast redwood	26	Yes	4	60	22	High	Good upright form & structure; small twig dieback.
151	Coast redwood	29	Yes	4	60	24	High	Good upright form & structure; roots displacing sidewalk; small growing space 4'; small twig dieback.
152	Coast redwood	21	Yes	4	60	22	High	Surface roots; good upright form & structure; small twig dieback.
153	Coast redwood	24	Yes	4	60	22	High	Good upright form & structure; multiple attachments; small twig dieback.
154	Callery pear	22	Yes	4	35	25	Moderate	Surface roots; multiple attachments @ 6'; full healthy canopy.
155	Callery pear	18	Yes	4	35	25	Moderate	Surface roots; multiple attachments @ 6'; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
156	Callery pear	14	Yes	4	35	25	Moderate	Surface roots; multiple attachments @ 6'; full healthy canopy.
157	Callery pear	17	Yes	4	35	30	Moderate	Surface roots; multiple attachments @ 6'; history of branch failure.
158	Callery pear	18	Yes	4	35	30	Moderate	Surface roots; multiple attachments @ 6'; healthy canopy.
159	Callery pear	18	Yes	4	35	30	Moderate	Surface roots; multiple attachments @ 6'; history of branch failure.
160	Callery pear	18	Yes	4	35	25	Moderate	Surface roots; multiple attachments @ 6'; healthy canopy.
161	Callery pear	15	Yes	4	35	25	Moderate	Surface roots; multiple attachments @ 6'; healthy canopy.
162	Callery pear	15	Yes	4	35	25	Moderate	Surface roots; multiple attachments @ 6'; healthy canopy.
163	Callery pear	18	Yes	4	35	30	Moderate	Surface roots; multiple attachments @ 6'; healthy canopy.
164	Callery pear	17	Yes	4	35	30	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.
165	Callery pear	16	Yes	4	35	25	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.
166	Callery pear	11	Yes	3	35	22	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; suppressed.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
167	Callery pear	15	Yes	4	35	25	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions.
168	Callery pear	17	Yes	4	35	25	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.
169	Purpleleaf plum	5	Yes	4	18	12	High	Multiple attachments @ 5'; full healthy canopy.
170	Purpleleaf plum	6	Yes	4	18	20	High	Small surface roots; multiple attachments @ 5'; full healthy canopy.
171	Purpleleaf plum	6	Yes	4	18	16	High	Small surface roots; multiple attachments @ 5'; full healthy canopy.
172	Purpleleaf plum	6	Yes	4	18	20	High	Small surface roots; multiple attachments @ 5'; full healthy canopy.
173	Purpleleaf plum	6	Yes	4	18	16	High	Small surface roots; multiple attachments @ 5'; full healthy canopy.
174	Purpleleaf plum	7	Yes	4	18	18	High	Small surface roots; multiple attachments @ 5'; full healthy canopy.
175	Purpleleaf plum	6	Yes	4	18	18	High	Small surface roots; small trunk wound; multiple attachments @ 6'; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
176	Purpleleaf plum	7	Yes	4	18	14	High	Small surface roots; multiple attachments @ 6'; narrow branch union; full healthy canopy.
177	Purpleleaf plum	7	Yes	4	18	14	High	Small surface roots; multiple attachments @ 6'; narrow branch unions; full healthy canopy.
178	Purpleleaf plum	7	Yes	4	18	16	High	Small surface roots; multiple attachments @ 6'; narrow branch unions; full healthy canopy.
179	Purpleleaf plum	6	Yes	4	18	12	High	Small surface roots; multiple attachments @ 6'; narrow branch unions; full healthy canopy.
180	Purpleleaf plum	7	Yes	4	18	14	High	Small surface roots; multiple attachments @ 6'; narrow branch unions; full healthy canopy.
181	Chinese pistache	14	Yes	5	20	34	High	Surface roots; good structure; multiple attachments @ 6'; full healthy canopy.
182	Chinese pistache	10	Yes	4	20	25	High	Surface roots; good structure; multiple attachments @ 6'; small twig & branch dieback.
183	Coast redwood	16	Yes	4	40	10	High	Surface roots; good upright form & structure; full healthy canopy.
184	Coast redwood	30	Yes	5	65	24	High	Surface roots; good upright form & structure; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
185	Coast redwood	30	Yes	5	65	25	High	Surface roots; good upright form & structure; full healthy canopy.
186	Coast redwood	30	Yes	5	65	25	High	Surface roots; good upright form & structure; full healthy canopy.
187	Coast redwood	30	Yes	5	65	24	High	Surface roots; good upright form & structure; full healthy canopy.
188	Coast redwood	15	Yes	4	45	16	High	Surface roots; good upright form & structure; small twig & branch dieback.
189	Coast redwood	26	Yes	5	65	22	High	Surface roots; good upright form & structure; full healthy canopy.
190	Coast redwood	31	Yes	5	65	25	High	Surface roots; good upright form & structure; full healthy canopy.
191	Coast redwood	29	Yes	5	65	26	High	Surface roots; good upright form & structure; full healthy canopy.
192	Coast redwood	25	Yes	5	65	28	High	Surface roots; good upright form & structure; full healthy canopy.
193	Coast redwood	30	Yes	5	65	28	High	Surface roots; good upright form & structure; full healthy canopy.
194	Coast redwood	23	Yes	5	65	24	High	Surface roots; good upright form & structure; full healthy canopy.
195	Coast redwood	20	Yes	5	55	22	High	Surface roots; good upright form & structure; full healthy canopy.
196	Coast redwood	13	Yes	5	45	20	High	Surface roots; good upright form & structure; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
197	Coast redwood	25	Yes	5	65	26	High	Surface roots; good upright form & structure; full healthy canopy.
198	Coast redwood	27	Yes	5	65	30	High	Surface roots; good upright form & structure; full healthy canopy.
199	Coast redwood	23	Yes	3	65	26	High	Surface roots; good upright form & structure; small twig & branch top dieback.
200	Coast redwood	23	Yes	5	65	28	High	Surface roots; good upright form & structure; full healthy canopy.
201	Coast redwood	24	Yes	5	65	28	High	Surface roots; good upright form & structure; full healthy canopy.
202	Gallery pear	9,5	Yes	3	25	25	Low	Surface roots; codominant trunks @ base & 6'; fire blight.
203	Chinese pistache	8	Yes	5	20	20	High	Surface roots; good form & structure; multiple attachments @ 6'; full healthy canopy.
204	Chinese pistache	7	Yes	5	20	10	High	Surface roots; good form & structure; multiple attachments @ 6'; full healthy canopy.
205	Coast redwood	22	Yes	5	65	28	High	Surface roots; good upright form & structure; full healthy canopy.
206	Coast redwood	26	Yes	5	65	22	High	Surface roots; good upright form & structure; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
207	Callery pear	18	Yes	4	35	30	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; history of branch failure; healthy canopy.
208	Callery pear	16	Yes	4	35	25	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
209	Callery pear	13	Yes	4	35	25	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
210	Callery pear	17	Yes	4	35	30	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
211	Callery pear	12	Yes	3	35	22	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; sparse canopy.
212	Callery pear	13	Yes	4	35	24	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
213	Callery pear	17	Yes	4	35	26	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
214	Callery pear	14	Yes	4	35	26	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
215	Callery pear	17	Yes	4	35	28	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
216	Callery pear	18	Yes	4	40	30	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
217	Callery pear	17	Yes	4	40	30	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
218	Callery pear	17	Yes	4	40	30	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
219	Callery pear	16	Yes	4	40	30	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
220	Callery pear	17	Yes	4	40	30	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
221	Callery pear	18	Yes	4	40	24	Moderate	Surface roots; slight trunk lean S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
222	Callery pear	17	Yes	4	40	20	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
223	Callery pear	14	Yes	4	40	18	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.
224	Callery pear	14	Yes	4	40	18	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.
225	Callery pear	11	Yes	3	40	18	Moderate	Surface roots; slight trunk lean SW.; codominant trunks @ 7'; narrow branch union.
226	Callery pear	15	Yes	4	40	22	Moderate	Surface roots; slight trunk leans S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
227	Callery pear	15	Yes	4	40	26	Moderate	Surface roots; slight trunk leans S.; multiple attachments @ 6'; narrow branch unions; healthy canopy.
228	Callery pear	15	Yes	4	40	28	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.
229	Callery pear	14	Yes	4	40	20	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.
230	Callery pear	15	Yes	4	40	18	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel-lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
231	Callery pear	15	Yes	4	40	20	Moderate	Surface roots; multiple attachments @ 6'; narrow branch unions; healthy canopy.
232	Honey locust	8	Yes	3	12	20	Low	Codominant trunks @ 6'; poor structure; small twig dieback.
233	Honey locust	7	Yes	3	12	20	Low	Small trunk wound; multiple attachments @ 5'; poor structure; small twig dieback.
234	Honey locust	8	Yes	3	12	20	Low	Codominant trunks @ 6'; poor branch structure; small twig dieback.
235	Honey locust	8	Yes	2	12	15	Low	Multiple attachments @ 5'; poor structure; significant twig & branch dieback.
236	Honey locust	7	Yes	3	12	14	Low	Multiple attachments @ 5'; poor structure; small twig & branch dieback.
237	Honey locust	9	Yes	3	12	18	Low	Multiple attachments @ 5'; poor structure; moderate twig & branch dieback.
238	Honey locust	8	Yes	2	12	14	Low	Codominant trunks @ 5'; extensive trunk wounds; basal decay.
239	Honey locust	8	Yes	2	12	12	Low	Codominant trunks @ 5'; extensive trunk wounds; basal decay.
240	Honey locust	7	Yes	2	12	12	Low	Codominant trunks @ 5'; extensive trunk wounds; basal decay.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
241	Honey locust	7	Yes	2	12	16	Low	Multiple attachments @ 5'; extensive trunk wounds; basal decay.
242	Honey locust	5	Yes	3	12	10	Low	Multiple attachments @ 5'; small trunk wounds; sparse canopy.
243	Honey locust	8	Yes	3	12	16	Low	Multiple attachments @ 5'; small trunk wounds; sparse canopy.
244	Honey locust	6	Yes	1	12	10	Low	Multiple attachments @ 5'; extensive trunk wounds & dieback.
245	Honey locust	8	Yes	2	12	14	Low	Multiple attachments @ 5'; extensive trunk wounds.
246	Coast redwood	12	Yes	4	35	18	High	Good upright form & structure; full healthy canopy; water-stressed.
247	Coast redwood	14	Yes	4	35	20	High	Good upright form & structure; full healthy canopy.
248	Coast redwood	16	Yes	4	35	20	High	Good upright form & structure; full healthy canopy.
249	Coast redwood	46	Yes	3	85	36	High	Surface roots; good upright form & structure; sparse canopy W.
250	Coast redwood	47	Yes	5	85	40	High	Surface roots; good upright form & structure; full healthy canopy.
251	Coast redwood	25	Yes	5	85	32	High	Surface roots; good upright form & structure; full healthy canopy.
252	Coast redwood	27	Yes	3	85	30	Moderate	Surface roots; good upright form & structure; sparse twiggy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
253	Coast redwood	54	Yes	3	85	60	Moderate	Surface roots; good upright form & structure; sparse twiggy canopy.
254	Coast redwood	42	Yes	4	85	40	High	Surface roots; good upright form & structure; thin upper canopy.
255	Coast redwood	43	Yes	3	85	36	Moderate	Surface roots; codominant in upper canopy; sparse canopy.
256	Coast redwood	43	Yes	4	85	34	Moderate	Surface roots; good upright form & structure; healthy canopy.
257	Coast redwood	19	Yes	4	45	24	Moderate	Surface roots; good upright form & structure; healthy canopy.
258	Coast redwood	5	Yes	4	15	12	High	Good young tree.
259	Coast redwood	15	Yes	4	30	18	High	Good upright form & structure; thin canopy.
260	Japanese flowering cherry	8	Yes	2	10	14	Low	Multiple attachments @ 5'; root decay; suppressed.
261	Sawleaf zelkova	15	Yes	5	35	32	High	Surface roots; multiple attachments @ 5'; full healthy canopy.
262	Sawleaf zelkova	25	Yes	3	45	60	Moderate	Surface roots; multiple attachments @ 6'; small twig & branch dieback; <i>Ganoderma</i> fruiting body on N.
263	Sawleaf zelkova	21	Yes	5	45	60	High	Surface roots; multiple attachments @ 6'; full healthy canopy.
264	Japanese flowering cherry	5	Yes	5	10	20	High	Multiple attachments @ 4'; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
265	Japanese flowering cherry	5	Yes	4	10	16	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
266	Japanese flowering cherry	4	Yes	4	10	14	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
267	Japanese flowering cherry	5	Yes	4	10	16	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
268	Japanese flowering cherry	4	Yes	4	10	14	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
269	Japanese flowering cherry	4	Yes	4	10	14	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
270	Japanese flowering cherry	5	Yes	4	10	16	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
271	Japanese flowering cherry	4	Yes	4	10	14	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
272	Japanese flowering cherry	4	Yes	4	10	10	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
273	Japanese flowering cherry	4	Yes	4	10	12	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
274	Japanese flowering cherry	4	Yes	4	10	14	High	Multiple attachments @ 4'; full canopy; small leaf margin burn.
275	Sawleaf zelkova	13	Yes	4	25	24	Moderate	Surface roots; multiple attachments @ 6'; small twig dieback; water-stressed.
276	Evergreen ash	32	Yes	5	60	42	High	Surface roots; codominant trunks @ 8'; full dense crown.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
277	Red maple	7	Yes	5	30	20	High	Multiple attachments @ 5'; full healthy canopy.
278	Red maple	8	Yes	5	30	22	High	Surface roots; multiple attachments @ 5'; full healthy canopy.
279	Red maple	9	Yes	5	30	22	High	Surface roots; multiple attachments @ 5'; full healthy canopy.
280	Red maple	9	Yes	5	30	22	High	Surface roots; multiple attachments @ 5'; full healthy canopy.
281	Red maple	7	Yes	5	30	22	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
282	Red maple	9	Yes	5	30	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
283	Red maple	10	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
284	Red maple	10	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
285	Red maple	9	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
286	Red maple	10	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
287	Red maple	9	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
288	Red maple	8	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
289	Red maple	9	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
290	Red maple	8	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
291	Red maple	9	Yes	5	35	26	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
292	Red maple	10	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
293	Red maple	10	Yes	5	35	24	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
294	Red maple	7	Yes	5	35	20	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
295	Red maple	4	Yes	5	35	10	High	Surface roots; multiple attachments @ 5'; narrow unions; full healthy canopy.
296	Coast live oak	27	Yes	5	35	56	High	Surface roots; good upright form & structure; multiple attachments @ 6'; full healthy canopy.
297	London plane	12	Yes	4	40	30	High	Surface roots; good upright form & structure; codominant trunks @ 8'; healthy canopy.
298	London plane	18	Yes	5	45	40	High	Surface roots; good upright form & structure; multiple attachments @ 8'; healthy canopy.
299	Crabapple	12	Yes	3	15	24	Low	Basal & root decay; multiple attachments @ 5'.
300	Japanese flowering cherry	6	Yes	2	12	18	Low	Basal & root decay; significant twig & branch dieback.
301	Coast redwood	33	Yes	4	65	30	High	Surface roots; good upright form & structure; full healthy canopy.
302	Coast redwood	26	Yes	4	65	30	High	Surface roots; good upright form & structure; full healthy canopy.
303	Coast redwood	24	Yes	4	65	30	High	Surface roots; good upright form & structure; thin upper canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
304	Coast redwood	29	Yes	4	65	34	High	Surface roots; good upright form & structure; full healthy canopy.
305	Callery pear	17	Yes	4	45	20	High	Surface roots; multiple attachments @ 6'; narrow branch unions.
306	Coast redwood	22	Yes	4	55	25	High	Surface roots; good upright form & structure; small twig dieback.
307	Coast redwood	31	Yes	5	65	33	High	Surface roots; good upright form & structure; full healthy canopy.
308	Coast live oak	10	Yes	5	35	20	High	Surface roots; codominant trunks @ 7'; full healthy canopy.
309	Raywood ash	4	Yes	3	20	8	Low	Surface roots; multiple attachments @ 6'; canopy dead on N.
310	Raywood ash	9	Yes	4	35	18	Moderate	Surface roots; multiple attachments @ 6'; healthy canopy.
311	Raywood ash	11	Yes	4	35	20	Moderate	Surface roots; multiple attachments @ 6'; healthy canopy.
312	Coast live oak	37	Yes	5	55	64	High	Multiple attachments @ 10'; large lateral on W.; healthy canopy.
313	Coast redwood	22	Yes	5	65	24	High	Good upright form & structure; full healthy canopy; roots cut for new sidewalk.
314	London plane	14	Yes	5	60	30	High	Good upright form & structure; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
315	Evergreen pear	7	Yes	3	12	10	High	Trunk lean; multiple attachments @ 5'; narrow branch unions; sparse canopy.
316	Coast live oak	36	Yes	5	55	60	High	Multiple attachments @ 10'; large lateral on W.; healthy canopy.
317	Coast live oak	25	Yes	5	55	45	High	Codominant trunks @ 15'; healthy canopy.
318	Coast live oak	19	Yes	5	55	24	High	Multiple attachments @ 10'; healthy canopy.
319	Coast live oak	29	Yes	5	55	50	High	Multiple attachments @ 5'; branches extend over sidewalk & road; healthy canopy.
320	Coast live oak	12	Yes	4	30	15	High	Trunk leans W.; old trunk wound; multiple attachments @ 10' healthy canopy.
321	Coast live oak	10	Yes	5	20	20	High	Trunk leans W.; multiple attachments @ 5'; healthy canopy.
322	Crape myrtle	4	Yes	5	12	10	High	Good young tree.
323	Crape myrtle	4	Yes	5	12	10	High	Good young tree.
324	Coast live oak	8	Yes	5	15	18	High	Good young tree.
325	Coast live oak	13	Yes	5	30	28	High	Surface roots; multiple attachments @ 8'; healthy canopy; branches extend over sidewalk.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
326	Coast live oak	25	Yes	5	35	50	High	Surface roots; multiple attachments @ 8'; healthy canopy; history of branch failure; branches extend over sidewalk & road.
327	Coast live oak	18	Yes	5	35	22	High	Multiple attachments @ 8'; trunk leans E.; healthy canopy.
328	Coast live oak	37	Yes	5	55	54	High	Codominant trunks @ 5'; healthy canopy.
329	London plane	13	Yes	5	55	28	High	Good upright form & structure; healthy canopy.
330	Japanese flowering cherry	5	Yes	2	8	10	Low	Large trunk wound; no central leader.
331	Japanese flowering cherry	5	Yes	3	10	10	Low	Surface roots; trunk wound; small twig dieback.
332	Japanese flowering cherry	5	Yes	4	10	16	Moderate	Multiple attachments @ 2'; small twig dieback.
333	Raywood ash	9	Yes	4	30	22	Moderate	Multiple attachments @ 6'; narrow branch unions; full healthy canopy.
334	Japanese flowering cherry	6	Yes	5	12	14	High	Surface roots; codominant trunks @ 3'; full healthy canopy.
335	Japanese flowering cherry	5	Yes	5	12	12	High	Surface roots; multiple attachments @ 3'; full healthy canopy.
336	Raywood ash	8	Yes	4	35	22	High	Surface roots; multiple attachments @ 8'; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
337	London plane	15	Yes	5	50	34	High	Multiple attachments @ 10'; full healthy canopy.
338	Coast live oak	59	Yes	3	65	80	High	Cabled; large trunk cavity; multiple attachments @ a 10'; branch decay @ old pruning wounds; wide spreading canopy; healthy canopy.
339	London plane	16	Yes	5	55	52	High	Codominant trunks @ 10'; good upright form & structure; full healthy canopy.
340	Coast live oak	24	Yes	4	40	28	High	Off-site ; canopy extends over property 28'; trunk leaning against fence; small twig dieback.
341	Evergreen pear	10	Yes	4	15	19	Moderate	Trunk leans E. over parking lot; codominant trunks @ 6'; suppressed.
342	Evergreen pear	7	Yes	3	12	16	Moderate	Codominant trunks @ 5'; sparse canopy.
343	Evergreen pear	8	Yes	3	12	18	Moderate	Codominant trunks @ 5'; sparse canopy.
344	Sawleaf zelkova	17	Yes	4	35	48	Moderate	Surface roots; multiple attachments @ 8'; small twig dieback; water-stressed.
345	Sawleaf zelkova	17	Yes	2	35	22	Low	Surface roots; multiple attachments @ 8'; large sections of bark separating; water-stressed; significant branch dieback.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
346	Evergreen pear	14	Yes	3	30	35	Moderate	Codominant trunks @ 6'; multiple attachments; small trunk wound; small twig dieback.
347	Evergreen pear	8	Yes	3	20	20	Moderate	Codominant trunks @ 8'; poor structure; small twig dieback.
348	Photinia	4	Yes	3	20	8	Low	Codominant trunks @ 5'; significant twig dieback.
349	Evergreen pear	5	Yes	3	15	12	Moderate	Codominant trunks @ 5'; small twig dieback.
350	Photinia	6	Yes	3	25	14	Low	Topped; small resprouts; small twig dieback.
351	Tobira	7	Yes	3	20	16	Moderate	Multiple attachments @ 6'; small twig dieback.
352	Tobira	7	Yes	3	20	20	Low	Trunk sweeps upright from base; multiple attachments @ 6'; no central leader; small twig dieback.
353	Western sycamore	11	Yes	3	35	26	Low	Large surface roots; codominant trunks @ 10'; thin sinuous central leader.
354	Western sycamore	24	Yes	5	65	45	High	Large surface roots; full healthy canopy.
355	Coast redwood	60	Yes	5	90	66	High	Good upright form & structure; full healthy canopy.
356	Western sycamore	10	Yes	5	40	22	High	Surface roots; sinuous central leader; healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
357	Western sycamore	7	Yes	5	40	15	High	Sinuous central leader; healthy canopy.
358	Coast redwood	21	Yes	3	65	32	Moderate	Good upright form & structure; water-stressed; thin canopy.
359	Coast redwood	49	Yes	3	80	40	Moderate	Codominant trunks high in crown; water-stressed; thin canopy.
360	Coast redwood	32	Yes	3	65	40	Moderate	Codominant trunks high in crown; water-stressed; thin canopy.
361	Coast redwood	21	Yes	3	70	32	Moderate	Good upright form & structure; water-stressed; thin canopy.
362	Coast redwood	24	Yes	3	55	26	Moderate	No central leader; water-stressed; thin canopy.
363	Coast redwood	23	Yes	3	65	26	Moderate	Good upright form & structure; water-stressed; thin canopy.
364	Coast redwood	20	Yes	3	60	20	Moderate	Good upright form & structure; water-stressed; thin canopy.
365	Coast redwood	19	Yes	3	65	20	Moderate	Good upright form & structure; water-stressed; thin canopy.
366	Coast live oak	24	Yes	4	60	52	High	Codominant trunks @ 8'; small twig dieback, otherwise health canopy.
367	Coast live oak	30	Yes	5	65	65	High	Surface roots; Multiple large attachments @ 8'; small twig dieback otherwise health canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
368	Coast live oak	25	Yes	5	65	60	High	Surface roots; Multiple large attachments @ 8'; small twig dieback otherwise health canopy.
369	Coast live oak	32	Yes	3	65	56	Low	Surface roots; Multiple large attachments @ 8'; bring activity in trunk; significant twig & branch dieback.
370	Monterey pine	17	Yes	2	60	12	Low	Off-site; tagged on fence; significant twig & branch dieback; history of branch failures.
371	Coast live oak	7	Yes	4	30	15	High	Off-site; tagged on fence; trunk will grow into chain link; full healthy canopy.
372	Coast redwood	27	Yes	3	85	28	Moderate	Good upright form & structure; water-stressed; thin canopy.
373	Coast redwood	39	Yes	3	85	28	Moderate	Codominant trunks @ 2'; water-stressed; thin canopy.
374	Coast redwood	41,19	Yes	3	85	38	Moderate	Water-stressed; thin canopy.
375	Japanese flowering cherry	5	Yes	4	10	16	Moderate	Multiple attachments @ 4'; full canopy; margin burn on entire crown.
376	Japanese flowering cherry	5	Yes	4	10	16	Moderate	Multiple attachments @ 4'; full canopy; margin burn on entire crown.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel-lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
377	Coast redwood	21,17,14	Yes	2	45	34	Low	Multiple attachments @ base; water-stressed; compact soil; sparse canopy.
378	Coast redwood	29	Yes	2	60	30	Low	Good upright form & structure; water-stressed; compact soil; sparse canopy.
379	Coast redwood	36	Yes	3	60	34	Moderate	Good upright form & structure; water-stressed; compact soil; sparse canopy.
380	Mexican fan palm	18	Yes	5	60	10	High	40' of brown trunk; healthy crown.
381	Coast live oak	22,17	Yes	4	55	50	High	Codominant trunks @ 2'; healthy canopy.
382	Evergreen ash	27	Yes	5	55	38	High	Multiple attachments @ a 7'; branches fused; full healthy canopy.
383	Evergreen ash	38	Yes	4	70	64	High	Multiple attachments @ a 10'; narrow branch unions; small twig dieback, otherwise full healthy canopy.
384	Evergreen ash	25	Yes	4	50	50	High	Multiple attachments @ a 10'; small twig dieback, otherwise full healthy canopy.
385	Evergreen ash	16	Yes	4	50	46	High	Codominant trunks @ 10'; small twig dieback, otherwise full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
386	Evergreen ash	14	Yes	4	50	32	High	Codominant trunks @ 10'; small twig dieback, otherwise full healthy canopy.
387	Coast redwood	36	Yes	3	85	45	Moderate	Good upright form & structure; water-stressed; thin canopy.
388	Coast redwood	27	Yes	3	85	36	Moderate	Good upright form & structure; water-stressed; thin canopy.
389	Coast redwood	15	Yes	3	85	24	Moderate	Good upright form & structure; water-stressed; thin canopy.
390	Coast redwood	32	Yes	3	85	44	Moderate	Good upright form & structure; water-stressed; thin canopy.
391	Coast redwood	12	Yes	3	75	16	Moderate	Good upright form & structure; water-stressed; thin canopy.
392	Coast redwood	18	Yes	3	85	26	Moderate	Good upright form & structure; water-stressed; thin canopy.
393	Coast redwood	25,12	Yes	3	85	26	Moderate	Good upright form & structure; water-stressed; codominant trunks @ 3'; thin canopy.
394	Coast redwood	26	Yes	3	55	30	Moderate	Good upright form & structure; water-stressed; thin canopy.
395	Coast redwood	7	Yes	2	25	14	Low	Good upright form & structure; water-stressed; dead central leader; thin canopy.
396	Coast redwood	21	Yes	3	65	24	High	Good upright form & structure; water-stressed; slightly thin canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
397	Coast redwood	19	Yes	2	55	20	Low	Good upright form & structure; water-stressed; thin canopy.
398	Coast redwood	16	Yes	3	40	22	Low	Good upright form & structure; water-stressed; thin canopy.
399	Coast redwood	11	Yes	0	55	12	Low	Dead.
400	Coast redwood	29,29	Yes	4	85	34	High	Root zone had been scraped; broken roots; codominant trunks @ 2'; healthy canopy.
401	Coast redwood	28	Yes	3	85	40	High	Root zone had been scraped; broken roots; codominant trunks @ 2'; water-stressed; moderate tip dieback.
402	Coast redwood	11	Yes	4	25	20	Moderate	Good upright form & structure; water-stressed; small tip dieback.
403	Coast redwood	7	Yes	4	25	10	Moderate	Good upright form & structure; water-stressed; small tip dieback.
404	Coast redwood	8	Yes	4	20	10	Moderate	Good upright form & structure; water-stressed; small tip dieback.
405	Coast redwood	8	Yes	4	25	10	Moderate	Good upright form & structure; water-stressed; small tip dieback.
406	Coast redwood	11	Yes	4	25	12	Moderate	Good upright form & structure; water-stressed; small tip dieback.
407	Coast redwood	5	Yes	4	20	8	Moderate	Good upright form & structure; water-stressed; good young tree.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
408	Coast redwood	5	Yes	4	20	12	Moderate	Good upright form & structure; water-stressed; trunk curves @ 8'; codominant trunks @ 8'.
409	Coast redwood	6	Yes	4	20	12	Moderate	Water-stressed; good young tree; codominant trunks @ 15'.
410	Coast redwood	8	Yes	4	15	12	Moderate	Water-stressed; good young tree.
411	Coast redwood	8	Yes	4	15	14	Moderate	Water-stressed; good young tree.
412	Coast redwood	9	Yes	4	15	16	Moderate	Water-stressed; good young tree.
413	Italian stone pine	22	Yes	4	35	26	Moderate	Codominant trunks @ 7'; trunk curves E.; full healthy canopy.
414	Italian stone pine	16	Yes	3	35	22	Moderate	Multiple attachments @ 10'; sparse canopy.
415	Italian stone pine	16	Yes	3	35	26	Moderate	Surface roots; growing on top of bathroom structure; trunk curves S.; thin canopy.
416	Italian stone pine	11	Yes	3	25	24	Moderate	Surface roots; canopy raised to 15'; trunk curves S.; suppressed on N.
417	Italian stone pine	24	Yes	3	35	36	Moderate	Surface roots; codominant trunks @ 6'; full healthy canopy.
418	Italian stone pine	29	Yes	3	40	44	Moderate	Surface roots; codominant trunks @ 10'; full healthy canopy.
419	Italian stone pine	21	Yes	3	40	26	Moderate	Surface roots; trunk turns W. @ 20'; suppressed on N.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
420	Italian stone pine	34	Yes	3	40	50	Moderate	Surface roots; codominant trunks @ 8'; canopy raised to 25'; healthy canopy.
421	Italian stone pine	36	Yes	3	50	55	Moderate	Surface roots; codominant trunks @ 8'; heavy laterals over baseball bleachers; asymmetric canopy; roots displacing concrete; healthy canopy.
422	Coast live oak	22	Yes	4	45	40	High	Good upright form & structure; surface roots; only tree growing on mound; multiple attachments @ 8'; moderate twig dieback.
423	Coast live oak	17	Yes	4	35	30	High	Good upright form & structure; surface roots; growing in tree well; multiple attachments @ 7'; small twig dieback.
424	Coast live oak	20	Yes	4	45	44	High	Good upright form & structure; surface roots; growing on slight slope; multiple attachments @ 8'; full healthy canopy.
425	Chinese pistache	8	Yes	4	25	28	High	Good upright form & structure; surface roots; multiple attachments @ 6'; full healthy canopy.
426	Coast live oak	29	Yes	4	50	50	High	Surface roots; suppressed on S.; asymmetric crown; codominant trunks @ 10'; healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel-lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
427	Coast redwood	33	Yes	4	80	30	High	Surface roots; codominant high in canopy; thin upper canopy.
428	Coast live oak	20	Yes	4	35	35	High	Surface roots; slight trunk lean S.; multiple attachments @ 6 & 10'; full healthy canopy.
429	Coast redwood	20,15	Yes	0	55	35	Low	Dead.
430	Coast redwood	9	Yes	1	25	18	Low	All but dead.
431	Coast redwood	31	Yes	3	85	40	Moderate	Surface roots; good upright form & structure; thin canopy; less than 1' from road.
432	Coast redwood	15	Yes	3	50	24	Moderate	Surface roots; good upright form & structure; thin canopy; 4' from road.
433	Coast redwood	11	Yes	2	35	16	Low	Surface roots; good upright form & structure; thin canopy; 4' from road; water-stressed; significant dieback.
434	Coast live oak	29	Yes	4	40	55	Moderate	Surface roots; codominant trunks @ 6'; branches hang E. over road; healthy canopy.
435	Coast redwood	15	Yes	3	50	20	Moderate	Good upright form & structure; water-stressed; thin canopy.
436	Coast redwood	19	Yes	3	65	20	Moderate	Good upright form & structure; water-stressed; thin canopy.
437	Coast live oak	16	Yes	3	40	30	High	Trunk bows S.; water-stressed; suppressed on N.; healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
438	Coast redwood	32	Yes	4	80	30	Moderate	Good upright form & structure; water-stressed; small tip dieback; codominant high in canopy.
439	Coast live oak	13	Yes	4	35	20	High	Asymmetric crown; heavy on W.; suppressed on E.; healthy new growth.
440	Coast live oak	27	Yes	4	45	40	High	Multiple attachments @ 10; good upright form & structure; healthy canopy.
441	Coast live oak	8	Yes	3	10	16	Low	Codominant trunks @ 2'; small understory tree.
442	Coast live oak	25	Yes	4	50	34	Moderate	Surface roots; codominant trunks @ 6'; full healthy canopy; retaining wall on S. side; roots growing under wall.
443	Coast live oak	23	Yes	4	30	34	High	Surface roots; multiple attachments @ 6'; suppressed on NE.; otherwise healthy canopy.
444	Coast redwood	34	Yes	4	70	38	High	Good upright form & structure; water-stressed; sparse upper canopy; otherwise healthy crown.
445	Coast redwood	43	Yes	4	85	36	High	Surface roots; good upright form & structure; healthy canopy.
446	Coast redwood	18	Yes	2	60	20	Low	Surface roots; water-stressed; significant dieback.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
447	Evergreen ash	23	Yes	4	65	44	High	Surface roots; multiple attachments @ 10'; suppressed on N.; otherwise healthy canopy.
448	Evergreen ash	24	Yes	4	65	44	High	Surface roots; multiple attachments @ 10'; vigorous healthy canopy.
449	California black walnut	22	Yes	2	30	26	Low	Significant twig & branch dieback; central leader dead.
450	California black walnut	28	Yes	2	20	18	Low	Severe twig & branch dieback.
451	California black walnut	19	Yes	2	20	20	Low	Severe twig & branch dieback; trunk decay.
452	California black walnut	12	Yes	1	12	15	Low	All but dead.
453	California black walnut	20	Yes	2	25	28	Low	Codominant trunks @ 5'; significant twig & branch dieback; trunk decay.
454	California black walnut	18	Yes	2	25	28	Low	Significant twig & branch dieback; leaders dead.
455	California black walnut	18	Yes	2	25	26	Low	Codominant trunks @ 5'; significant twig & branch dieback; trunk decay.
456	California black walnut	31	Yes	2	30	26	Low	Significant twig & branch dieback; dead central leader; trunk decay.
457	California black walnut	32	Yes	2	30	34	Low	Codominant trunks @ 5'; significant twig & branch dieback; trunk decay.
458	California black walnut	26	Yes	3	35	38	Low	Codominant trunks @ 5'; moderate twig & branch dieback.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel-lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
459	California black walnut	22	Yes	2	30	20	Low	Codominant trunks @ 10'; significant twig & branch dieback; main stems dead.
460	California black walnut	26	Yes	2	25	16	Low	Codominant trunks @ 5'; large trunk wound; significant twig & branch dieback; leaders dead.
461	California black walnut	25	Yes	2	25	12	Low	Multiple attachments @ 8'; significant twig & branch dieback; leaders dead.
462	Coast redwood	20	Yes	3	55	22	Moderate	7' from street; good upright form & structure; water-stressed; tip dieback.
463	Coast redwood	12	Yes	3	45	20	Moderate	Good upright form & structure; water-stressed; moderate tip dieback.
464	Coast redwood	20	Yes	3	50	24	Moderate	Good upright form & structure; water-stressed; moderate tip dieback.
465	Coast redwood	31	Yes	4	70	32	High	Good upright form & structure; full healthy canopy.
466	California black walnut	16,15	Yes	2	20	25	Low	Codominant trunks @ 5'; significant twig & branch dieback; trunk decay.
467	Scot's pine	7	Yes	2	20	16	Low	Surface roots; canopy raised to 8'; significant twig & branch dieback; thin canopy.
468	Scot's pine	8	Yes	2	15	16	Low	Surface roots; canopy raised to 8'; significant twig & branch dieback; thin canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
469	Scot's pine	14	Yes	3	25	22	Moderate	Trunk leans N.; asymmetric crown; multiple attachments; small needle dieback.
470	Chinese pistache	8	Yes	5	20	26	High	Multiple attachments @ 7'; full healthy canopy.
471	Coast live oak	43	Yes	5	45	65	High	Good form & structure; multiple attachments @ 8'; full healthy canopy.
472	California black walnut	30	Yes	3	35	34	Low	Codominant trunks @ 8'; moderate twig & branch dieback; ground squirrel holes @ base.
473	Hollywood juniper	12	Yes	3	8	10	Low	Multiple attachments @ 1'; suppressed; small understory tree.
474	Hollywood juniper	10	Yes	2	12	8	Low	No central leader; small crown; multiple branches removed.
475	Hollywood juniper	7,7,5	Yes	2	15	18	Low	Dead central leader; poor structure; vase-shape; small dieback.
476	California black walnut	38	Yes	2	35	34	Low	Multiple attachments @ 6'; significant twig & branch dieback; trunk decay.
477	Hollywood juniper	15	Yes	3	12	15	Low	Multiple attachments @ 6"; washed out @ base; low wide crown.
478	Hollywood juniper	15	Yes	3	12	15	Low	Multiple attachments @ 6"; washed out @ base; low wide crown.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
479	London plane	13	Yes	3	35	30	Moderate	Multiple attachments @ 6'; suppressed on N.; branches extend over sidewalk; sparse canopy.
480	Coast live oak	31	Yes	3	35	60	High	Basal decay; multiple attachments @ 6'; suppressed on W.; branches extend over sidewalk; sparse canopy.
481	Coast live oak	24	Yes	4	40	65	High	Good upright form & structure; multiple attachments @ 15'; foliage mostly in upper crown.
482	Coast live oak	23	Yes	3	40	42	High	Good upright form & structure; multiple attachments @ 10'; sparse canopy; trunk leans slightly N.
483	Italian stone pine	33	Yes	4	50	35	Moderate	Codominant trunks @ 8'; canopy lifted to 25'; trunk leans slightly W.; healthy canopy.
484	Italian stone pine	36	Yes	4	55	65	High	Codominant trunks @ 6'; canopy lifted to 25+'; full healthy canopy.
485	Japanese flowering cherry	4	Yes	4	8	14	Moderate	Good young tree; healthy canopy.
486	Japanese flowering cherry	5	Yes	4	10	18	Moderate	Good young tree; margin burn on entire crown.
487	Scot's pine	12	Yes	3	25	22	Moderate	Water-stressed; canopy lifted to 10'; multiple attachments; small needle dieback.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
488	Chinese elm	11	Yes	4	25	40	High	Multiple attachments @ 7'; small twig & branch dieback.
489	Chinese elm	8	Yes	4	20	26	High	Multiple attachments @ 8'; good young tree.
490	Canary Island pine	19,17	Yes	4	70	28	High	Codominant trunks @ 3'; full healthy canopy; 4' from street.
491	Canary Island pine	20	Yes	4	70	28	High	Good upright form & structure; full healthy canopy; 3' from street.
492	Canary Island pine	19	Yes	4	70	26	High	Good upright form & structure; full healthy canopy.
493	Deodar cedar	17	Yes	4	50	28	High	Trunk leans slightly S.; branches overhang sidewalk & street; full healthy canopy.
494	Canary Island pine	16	Yes	3	65	22	Low	Suppressed on N.; significant dieback on N.; asymmetric canopy.
495	Canary Island pine	14	Yes	3	65	20	Moderate	Good upright form & structure; moderate twig & branch dieback.
496	Canary Island pine	27	Yes	5	85	40	High	Good upright form & structure; full healthy canopy; branches extend over street.
497	Deodar cedar	15	Yes	4	55	30	High	Good upright form & structure; suppressed on S.; otherwise healthy canopy.
498	Deodar cedar	23	Yes	3	60	36	High	Good upright form & structure; suppressed on W.; sparse canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel-lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
499	Southern live oak	4	Yes	4	10	6	Moderate	Multiple attachments @ 6'; suppressed N & W.; sparse canopy.
500	Southern live oak	7	Yes	2	12	17	Low	Multiple attachments @ 6'; extensive trunk decay; full healthy canopy.
501	Canary Island pine	28	Yes	4	75	40	Moderate	Good upright form & structure; full healthy canopy; 5' from sidewalk; branches extend over street; history of branch failure.
502	Deodar cedar	22	Yes	4	65	46	High	Codominant trunks high in crown; suppressed on S.; full healthy canopy.
503	Canary Island pine	27	Yes	5	85	44	High	Good upright form & structure; branches extend over street; full healthy canopy.
504	Southern live oak	17	Yes	3	30	40	High	Multiple attachments @ 8'; small twig & branch dieback; branches extend over street.
505	Deodar cedar	24	Yes	3	40	46	High	Multiple attachments @ 10'; trunk leans slightly S.; sparse canopy; branches extend over street.
506	Deodar cedar	26	Yes	3	40	46	High	Multiple attachments @ 10'; candelabra form; sparse canopy; branches extend over street.
507	Southern live oak	13	Yes	1	25	24	Low	All but dead.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
508	Southern live oak	13	Yes	4	35	26	High	Multiple attachments @ 8'; small twig dieback; branches extend over street.
509	Deodar cedar	26	Yes	4	45	42	High	Multiple attachments @ 8'; slight candelabra form; healthy canopy; branches extend over street.
510	Canary Island pine	21	Yes	5	70	44	High	Canopy lifted to 20'; full healthy canopy.
511	Canary Island pine	22	Yes	5	70	36	High	Canopy lifted to 20'; suppressed on S.; otherwise full healthy canopy.
512	Canary Island pine	20	Yes	5	70	20	High	Canopy lifted to 20'; suppressed on W.; codominant trunks high in crown; full healthy canopy.
513	Canary Island pine	23	Yes	5	70	30	High	Canopy lifted to 25'; suppressed on W.; full healthy canopy.
514	Deodar cedar	12	Yes	4	30	24	High	Trunk wound on W.; full healthy canopy.
515	Deodar cedar	13	Yes	5	30	30	High	Multiple attachments @ 6'; full healthy canopy.
516	Deodar cedar	18	Yes	5	30	32	High	Multiple attachments @ 5'; candelabra form; full healthy canopy.
517	Deodar cedar	7,4	Yes	5	20	16	High	Codominant trunks @ base; good young tree.
518	Deodar cedar	4	Yes	4	15	10	Moderate	Suppressed understory tree, healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
519	Deodar cedar	15	Yes	4	30	32	Moderate	Multiple attachments @ 6'; trunk leans E.; candelabra form; healthy canopy.
520	Deodar cedar	4	Yes	4	20	14	Moderate	Suppressed understory tree; healthy canopy.
521	Blue atlas cedar	12	Yes	4	30	26	High	Multiple attachments @ 7'; full healthy canopy.
522	Deodar cedar	14	Yes	5	35	30	High	Multiple attachments @ 5'; good upright form & structure, full healthy canopy.
523	Deodar cedar	17	Yes	5	40	26	High	Multiple attachments @ 6'; good upright form & structure, full healthy canopy.
524	Deodar cedar	15	Yes	5	40	30	High	Multiple attachments @ 5'; candelabra form; full healthy canopy.
525	Deodar cedar	13	Yes	5	40	26	High	Multiple attachments @ 5'; good upright form & structure; full healthy canopy.
526	Deodar cedar	17	Yes	5	40	34	High	Multiple attachments @ 6'; good upright form & structure; full healthy canopy.
527	Deodar cedar	11	Yes	5	35	20	High	Multiple attachments @ 5'; good upright form & structure; full healthy canopy.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel-lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
528	Canary Island pine	21	Yes	5	60	28	High	Multiple attachments @ 10'; good upright form & structure; suppressed on W.; otherwise full healthy canopy; codominant high in crown.
529	Canary Island pine	22	Yes	4	60	32	High	Multiple attachments @ 10'; good upright form & structure; suppressed on E.; otherwise full healthy canopy; codominant trunks high in crown.
530	Red ironbark	31	Yes	3	60	40	Low	Multiple attachments @ 8'; narrow branch unions; history of branch failure.
531	Canary Island pine	17	Yes	4	45	28	Moderate	Codominant trunks @ 8'; trunk 3' from wall & 4' from parking lot; full healthy canopy.
532	Canary Island pine	23	Yes	4	60	38	Moderate	Displacing hardscape; trunk 3' from wall & 4' from parking lot; full healthy canopy.
533	Canary Island pine	27	Yes	4	60	32	Moderate	Multiple attachments @ 10'; trunk 3' from wall & 5' from parking lot; full healthy canopy.
534	Evergreen pear	9	Yes	4	15	22	High	Multiple attachments @ 6'; good young tree; trunk 4' from wall & 5' from parking lot.
535	Canary Island pine	8	Yes	5	30	10	High	Good young tree.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel-lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
536	Callery pear	20	Yes	3	35	32	Moderate	Multiple attachments @ 7'; history of branch failure; small twig dieback; branches extend over parking lot.
537	Callery pear	4	Yes	5	10	8	High	Good young tree.
538	Canary Island pine	19	Yes	4	45	22	High	Canopy lifted to 20'; full healthy canopy.
539	African fern-pine	14	Yes	4	25	24	Moderate	Multiple attachments @ 5'; trunk 1' from tennis courts; 3' from curb; chlorotic leaves.
540	African fern-pine	14	Yes	4	25	20	Moderate	Multiple attachments @ 5'; trunk 1' from tennis courts; 3' from curb; full healthy canopy.
541	African fern-pine	14	Yes	4	30	22	Moderate	Multiple attachments @ 8'; slightly chlorotic leaves; full canopy.
542	African fern-pine	15	Yes	4	30	30	Moderate	Multiple attachments @ 4'; narrow branch unions; small twig dieback; trunk 1' from tennis courts & 1' from curb.
543	African fern-pine	8	Yes	3	20	10	Moderate	Topped; multiple attachments small crown; trunk 1' from tennis courts & 1' from curb.
544	African fern-pine	14	Yes	3	25	24	Moderate	Topped; multiple attachments @ 5'; narrow branch unions; trunk 4' from tennis courts & 3' from curb.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
545	African fern-pine	10	Yes	3	25	18	Moderate	Topped; multiple attachments @ 8'; narrow columnar form; small crown; trunk 1' from tennis courts & 1' from curb.
546	Holly oak	5,4,4	Yes	4	15	22	High	Multiple attachments @ base; 2' from tennis courts; full healthy canopy.
547	Evergreen pear	7	Yes	2	12	8	Low	Suppressed understory tree; small canopy.
548	Evergreen pear	5	Yes	2	12	8	Low	Suppressed understory tree; small canopy.
549	Evergreen pear	6,6	Yes	3	10	12	Low	Codominant trunks @ 2'; sparse canopy.
550	Evergreen pear	6	Yes	3	15	14	Low	Suppressed understory tree; sparse canopy.
551	Canary Island pine	13	Yes	4	40	24	High	Good upright form & structure; canopy lifted to 15'; full healthy canopy.
552	Callery pear	6	Yes	4	30	16	Moderate	Codominant trunks @ 5'; suppressed on N.; otherwise healthy canopy.
553	Canary Island pine	15	Yes	4	65	22	Moderate	Good upright form & structure; canopy lifted to 20'; small twig dieback.
554	Canary Island pine	28	Yes	4	75	36	Moderate	Good upright form & structure; canopy lifted to 20'; small twig dieback.

Tree Assessment

Memorial Park
Cupertino CA
October 2022

TREE No.	SPECIES	TRUNK DIAMETER (in.)	PRO-TECTED TREE ?	CONDITION 0=dead 5=excel- lent	CANOPY SPREAD (est. feet)	TREE HEIGHT (est. feet)	SUITABILITY for PRESERVATION	COMMENTS
555	Canary Island pine	25	Yes	4	70	38	High	Good upright form & structure; canopy lifted to 20'; full healthy canopy.
556	African fern-pine	13	Yes	3	15	14	Low	Multiple attachments @ 6'; topped; 4' planting strip; sparse canopy.
557	African fern-pine	15	Yes	4	30	26	Moderate	Multiple attachments @ 7'; 4' planting strip; full healthy canopy.
558	African fern-pine	13	Yes	3	20	16	Low	Multiple attachments @ 6'; topped; 4' planting strip; sparse canopy.
559	Canary Island pine	18	Yes	4	70	33	High	Good upright form & structure; full healthy canopy.
560	Deodar cedar	25	Yes	4	70	40	High	Candelabra form; suppressed on W.; otherwise healthy canopy.

Geotechnical Evaluation
Memorial Park
21121 Stevens Creek Boulevard
Cupertino, California

Gates + Associates

1655 N. Main Street, Suite 365 | Walnut Creek, California 94596

November 3, 2022 | Project No. 404269001



Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Geotechnical Evaluation
Memorial Park
21121 Stevens Creek Boulevard
Cupertino, California

Mr. Michael Freitag
Gates + Associates
1655 N. Main Street, Suite 365 | Walnut Creek, California 94596

November 3, 2022 | Project No. 404269001

Ransom H. Hennefer, PE, GE
Principal Engineer

TBG/RHgyr



November 3, 2022

CONTENTS

1	INTRODUCTION	1
2	SCOPE OF SERVICES	1
3	SITE DESCRIPTION AND BACKGROUND	1
4	PROJECT DESCRIPTION	2
5	SUBSURFACE EVALUATION AND LABORATORY TESTING	2
6	GEOLOGIC AND SUBSURFACE CONDITIONS	3
6.1	Regional Geologic Setting	3
6.2	Site Geology	3
6.3	Subsurface Conditions	3
6.3.1	Alluvium	3
6.4	Groundwater	4
7	GEOTECHNICAL CONSIDERATIONS	4
7.1	Seismic Hazards	4
7.1.1	Historical Seismicity	4
7.1.2	Faulting and Ground Surface Rupture	4
7.1.3	Strong Ground Motion	5
7.1.4	Liquefaction and Strain Softening	5
7.1.5	Ground Subsidence	6
7.1.6	Lateral Spread	6
7.1.7	Seismic Slope Stability	6
7.2	Expansive Soil	6
7.3	Static Settlement	6
7.4	Excavation Characteristics	7
7.5	Corrosive/Deleterious Soil	7
8	CONCLUSIONS	7
9	RECOMMENDATIONS	8
9.1	Seismic Design Criteria	8
9.2	Earthwork Recommendations	9
9.2.1	Pre-Construction Conference	9
9.2.2	Site Preparation	9

9.2.3	Observation and Removals	10
9.2.4	Material Recommendations	10
9.2.5	Subgrade Preparation	11
9.2.6	Fill Placement and Compaction	12
9.2.7	Temporary Excavations and Shoring	13
9.2.8	Utility Trenches	14
9.3	Foundations	15
9.3.1	Spread Footings	15
9.3.2	Slabs-on-Grade	16
9.3.3	Drilled Piers for Minor Structures	16
9.4	Pavements and Flatwork	17
9.4.1	Asphalt Pavement	17
9.5	Concrete Placement	18
9.6	Review of Construction Plans	18
9.7	Construction Observation and Testing	19
10	LIMITATIONS	19
11	REFERENCES	21

TABLES

1	California Building Code Seismic Design Criteria	9
2	Recommended Material Requirements	11
3	Subgrade Preparation Recommendations	11
4	Fill Placement and Compaction Recommendations	12
5	OSHA Material Classifications and Allowable Slopes	13
6	Recommended Bearing Design Parameters for Footings	15
7	Asphalt Concrete Pavement Sections	18

FIGURES

1	Site Location
2	Boring and Test Locations
3	Fault Locations and Earthquake Epicenters
4	Regional Geology
5	Seismic Hazard Zone

APPENDICES

A – Boring Logs

B – Laboratory Testing

C – Corrosivity Testing (CERCO Analytical)

1 INTRODUCTION

In accordance with your request and authorization, we have performed a geotechnical evaluation for the Memorial Park Project located at 21121 Stevens Creek Boulevard in Cupertino, California (Figure 1). The purpose of our study was to assess the geotechnical conditions at the site and provide recommendations for the design and construction of the proposed improvements.

2 SCOPE OF SERVICES

The services we performed included the following:

- Review of pertinent background data, including aerial photographs and published geologic, seismic, and soils maps and literature.
- A site reconnaissance to observe the general site conditions and to mark the proposed locations for subsurface exploration.
- Coordination with Underground Service Alert (USA) to locate and mark underground utilities in the vicinity of the subsurface exploration locations.
- Subcontract a private underground utility survey to further check the exploration locations for underground utility conflicts.
- Procurement of an encroachment permit from the City of Cupertino's Department of Public Works.
- Subsurface exploration consisting of seventeen (17) exploratory borings advanced up to 15 feet below existing grade. A representative of Ninyo & Moore logged the subsurface conditions exposed in the borings and collected bulk and relatively undisturbed soil samples for laboratory tests. The borings were backfilled with cement grout, in compliance with the Santa Clara Valley Water District regulations. Drill cuttings were off hauled from the site.
- Laboratory testing of selected soil samples to evaluate the geotechnical properties of the subsurface materials including in-situ soil moisture content and density, soil gradation, Atterberg limits, expansion index, R-value, and soil corrosivity.
- Data compilation and engineering analysis of the information obtained from our background review, subsurface evaluation, and laboratory testing.
- Preparation of this geotechnical report presenting our findings and conclusions regarding the subsurface conditions encountered at the project site, and our geotechnical recommendations for the design and construction of the proposed improvements.

3 SITE DESCRIPTION AND BACKGROUND

The project site is located at 21121 Stevens Creek Boulevard in Cupertino, California (Figure 1). The site is an "L" shaped lot that is bounded to the north by Christensen Drive, to the east by North Stelling Road and Anton Way, to the west by residential properties, and to the south Stevens Creek Boulevard and Alves Drive. Memorial Park is the largest and most well-used park in Cupertino. The 22-acre site includes lawns, a gazebo, an amphitheater, a lighted softball field,

and six lighted tennis courts. Memorial Park houses the Cupertino Veterans Memorial which honors local veterans, and is adjacent to the Cupertino Senior Center, Quinlan Community Center, and Cupertino Sports Center. The site is relatively flat and lies at elevations of approximately between 286 to 296 feet above mean sea level (Google Earth, 2022).

4 PROJECT DESCRIPTION

Based on documents provided by the city (City of Cupertino, 2022), the plan for the park is the following. The ponds at the site are in the process of being removed. The City has also identified improvements required for the amphitheater. The Memorial Park Specific Plan will determine how to best meet the future recreation, community gathering, event, and green space needs of citizens through enhancement of the park, following the findings and recommendations of the City's Parks and Recreation System Master Plan. The Master Plan's vision for the park highlights expansion of the civic event space and community hub experiences by providing a unifying focus to the surrounding existing City facilities, and by enhancing natural site features.

5 SUBSURFACE EVALUATION AND LABORATORY TESTING

Our field exploration included a site reconnaissance and subsurface exploration of the project site. The subsurface exploration was conducted on August 24 and September 19, 2022 and consisted of seventeen (17) exploratory borings. The locations of the borings are presented on Figure 2. Prior to commencing the subsurface investigation, USA was notified for field marking of existing utilities and a private utility survey was conducted to further assess and locate any utilities that may conflict with the exploration locations.

The borings were advanced to depths of up to approximately 15 feet below the existing grade with a truck-mounted drill rig equipped with hollow-stem augers. A representative of Ninyo & Moore logged the subsurface conditions exposed in the borings and collected bulk and relatively undisturbed soil samples from the borings. The materials encountered in the borings were classified and logged in accordance with the Unified Soil Classification System (USCS). The samples were then transported to our geotechnical laboratory for testing. The borings were backfilled with cement grout and capped off with soil cuttings in accordance with Santa Clara Valley Water District requirements. Detailed logs of the borings are presented in Appendix A.

Laboratory testing of soil samples recovered from the borings included in-situ soil moisture content and density, soil gradation, Atterberg limits, expansion index, R-value, and soil corrosivity. The results of the in-place moisture content and dry density tests are shown on the boring logs in Appendix A. The results of the other laboratory tests, excluding the corrosivity testing, are

presented in Appendix B. The results and findings of the corrosivity evaluation are provided in Appendix C.

6 GEOLOGIC AND SUBSURFACE CONDITIONS

6.1 Regional Geologic Setting

The site is located in the southwestern portion of Santa Clara Valley, which is part of the Coast Ranges geomorphic province of California. The Coast Ranges are comprised of several mountain ranges and structural valleys formed by tectonic processes commonly found around the Circum-Pacific belt. Basement rocks have been sheared, faulted, metamorphosed, and uplifted, and are separated by thick blankets of Cretaceous and Cenozoic sediments that fill structural valleys and line continental margins. The San Francisco Bay Area has several mountain ranges that trend northwest, parallel to major strike-slip faults such as the San Andreas, Hayward, and Calaveras (Figure 3). Major tectonic activity associated with these and other faults within this regional tectonic framework consists primarily of right-lateral, strike-slip movement.

6.2 Site Geology

A regional geologic map by Dibblee and Minch (2007) indicates that the site is underlain by Holocene age surficial sediments. Dibblee and Minch describe this unit as alluvial sand, silt, and gravel deposited in the upper part of the alluvial fans formed along the foothills of the Santa Cruz Mountains. A map of the regional geology is presented as Figure 4.

6.3 Subsurface Conditions

The following section provides a generalized description of the materials encountered during our subsurface evaluation at the project site. More detailed descriptions are presented on the boring logs in Appendix A.

6.3.1 Alluvium

Alluvium was encountered in all of the borings to the depths explored. The alluvium encountered in the borings generally consisted of light brown to dark brown, dry to wet, loose to very dense, poorly graded gravel, well-graded gravel with clay and sand, clayey gravel, clayey sand; and dark brown to reddish brown, moist, very stiff to hard, lean clay and silty clay.

6.4 Groundwater

Groundwater was not encountered during our subsurface exploration. However, groundwater may rise to a higher level due to the relatively low seepage rate in clay and the limited time for observation. Fluctuations in the groundwater level may occur due to seasonal precipitation, variations in topography or subsurface hydrogeologic conditions, or as a result of changes to nearby irrigation practices or groundwater pumping. In addition, seeps may be encountered at elevations above the historic high groundwater levels due to perched groundwater conditions, leaking pipes, preferential drainage, or other factors not evident at the time of our exploration. Regional studies by the California Geological Survey (CGS, 2002a) indicate that the depth to historic high groundwater is approximately 50 feet below the ground surface.

7 GEOTECHNICAL CONSIDERATIONS

This study considered a number of potential issues relevant to the proposed construction on the subject site, including seismic hazards, expansive soils, static settlement, excavation characteristics, and soil corrosivity. These issues are discussed in the following subsections.

7.1 Seismic Hazards

The seismic hazards considered in this study include the potential for ground rupture due to faulting, seismic ground shaking, liquefaction, and seismic slope stability. These potential hazards are discussed in the following subsections.

7.1.1 Historical Seismicity

The site is located in a seismically active region. Figure 3 presents the location of the site relative to the epicenters of historic earthquakes with magnitudes of 5.0 or more from 1800 to 2000. Records of historic ground effects related to seismic activity (e.g. liquefaction, sand boils, lateral spreading, ground cracking) compiled by Knudsen et al. (2000), indicate that ground effects related to historic seismic activity have not been reported for the site.

7.1.2 Faulting and Ground Surface Rupture

In response to hazards associated with ground rupture, or surface displacement, the State of California enacted the Alquist-Priolo Earthquake Fault Zoning Act (AP Act) in 1972, which regulates development of structures for human occupancy in areas within active fault zones. The AP Act requires that the State Geologist delineate zones along active faults where evaluation of the potential for ground rupture is required. As defined by the California

Geological Survey (CGS, 2018), active faults are faults that have caused surface displacement within Holocene time, or within approximately the last 11,700 years.

The site is not located within an Alquist-Priolo Earthquake Fault Zone established by the State Geologist (CGS, 2018). The closest active fault and rupture hazard zone is the Monte Vista Shannon 2011 CFM located about 1.5 miles northwest of the site.

Based on our review of the referenced geologic maps, known active faults are not mapped on the site and the site is not located within a fault-rupture hazard zone. Therefore, the probability of damage from surface fault rupture is considered to be low.

7.1.3 Strong Ground Motion

Based on historic activity, the potential for future strong ground motion at the site is considered significant. Seismic design criteria to address ground shaking are provided in Section 9.1. The peak ground acceleration (PGA) associated with the Maximum Considered Earthquake Geometric Mean (MCE_G) was calculated in accordance with the American Society of Civil Engineers (ASCE) 7-16 Standard and the 2019 California Building Code (CBC). The MCE_G peak ground acceleration with adjustment for site class effects (PGA_M) was calculated as 1.018g using the USGS seismic design tool (SEAOCC & OSHPD, 2020) that yielded a mapped MCE_G peak ground acceleration of 0.848g for the site and a site coefficient (F_{PGA}) of 1.2 for Site Class D – Default and Risk Category II.

7.1.4 Liquefaction and Strain Softening

The site is not located within a liquefaction hazard zone (Figure 5) as established by the California Geological Survey (CGS, 2002b). In addition, regional studies of liquefaction susceptibility by the U.S. Geological Survey (Knudsen et al., 2000; and Witter et al., 2006) indicate that the site has a low susceptibility to liquefaction during a moderate to large magnitude earthquake on a nearby fault. Additionally, we did not encounter groundwater to the depths explored, which also indicates that the site has a low susceptibility to liquefaction. As such, we do not regard seismically induced strain softening, liquefaction induced reduction in bearing capacity, sand-boil-induced ground subsidence, or lateral spreading as design considerations for the project.

7.1.5 Ground Subsidence

Sand boils that occur when liquefied, near-surface soil escapes to the ground surface, can result in ground subsidence due to a loss of material that is in addition to dynamic settlement. We do not anticipate liquefaction at the site and as such, we do not anticipate sand boils and related ground subsidence at the site.

7.1.6 Lateral Spread

In addition to vertical displacements, seismic ground shaking can induce horizontal displacements as surficial soil deposits spread laterally by floating atop liquefied subsurface layers. Lateral spread can occur on sloping ground or on flat ground adjacent to an exposed face. The nearest exposed face slope is Stevens Creek, located approximately 1 mile from the western portion of the site. Based on the site location and our liquefaction analysis, we do not anticipate that lateral spreading will occur near the proposed improvements following a significant seismic event.

7.1.7 Seismic Slope Stability

The site and surrounding area are relatively flat and the site is not within a seismic hazard zone for earthquake-induced landslides as mapped by the state geologist (CGS, 2002b).

7.2 Expansive Soil

Some clay minerals undergo volume changes upon wetting or drying. Unsaturated soil containing those minerals will shrink/swell with the removal/addition of water. The heaving pressures associated with this expansion can damage structures and flatwork. Laboratory testing was performed on a sample of the near-surface soil to evaluate the expansion index. The tests were performed in accordance with American Society of Testing and Materials (ASTM) Standard D 4829 (Expansion Index). The results of our laboratory test indicate that the expansion indices of the samples tested were between 6 to 25. These results are indicative of a very low to low expansion characteristic.

7.3 Static Settlement

Based on documents provided, we understand that the sustained loads for the proposed structures are expected to be relatively light. We anticipate, therefore, that the total static settlement of drilled pier foundations due to sustained loads will be less than ½ inch, provided the recommendations presented in this report are followed.

7.4 Excavation Characteristics

We anticipate that the proposed project will involve excavations of up to 15 feet in depth for installation of drilled pier foundations for light poles, shed structures, and play equipment. The soil encountered during our subsurface exploration over this interval generally consisted of firm to stiff clay and medium dense to dense sand and gravel with cobbles. We anticipate that heavy earthmoving equipment in good working condition should be able to make the proposed excavations. Near-vertical cuts or drilled shafts in these materials should not be considered stable. Recommendations for excavation stabilization are presented in Section 9.2.8. Excavations are not anticipated to extend below or near historic groundwater levels.

7.5 Corrosive/Deleterious Soil

Corrosivity analysis was performed by CERCO Analytical, Inc. of Concord, California on samples of the near-surface soil from boring B-6a. As reported by CERCO Analytical, the samples were determined to be corrosive based on resistivity test results. CERCO Analytical's report (see Appendix C) included the following recommendation: "All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion." Please refer to the CERCO Analytical report included in Appendix C for more information regarding their test results and brief evaluation.

8 CONCLUSIONS

Based on our review of the referenced background data, site reconnaissance, subsurface evaluation, and laboratory testing, it is our opinion that the proposed construction is feasible from a geotechnical standpoint. Geotechnical considerations include the following:

- The subsurface conditions encountered during our exploration generally consisted of light brown to dark brown, dry to wet, loose to very dense, poorly graded gravel, well-graded gravel with clay and sand, clayey gravel, clayey sand; and dark brown to reddish brown, moist, very stiff to hard, lean clay and silty clay.
- Groundwater was not encountered during our subsurface exploration. Variations in the groundwater level across the site and over time should be anticipated. Regional mapping indicates that the historic high groundwater level is approximately 50 feet below the existing grade.
- We anticipate that the proposed project will involve excavations of up to 15 feet below the existing grade for installation of drilled pier foundations. Stability of excavations will be a concern, particularly where excavation sidewalls are disturbed by construction operations, or

where excavations encounter relatively cohesionless soil or are exposed to water. Recommendations for excavation stabilization are provided.

- Static settlement should be tolerable for the proposed improvements provided that the proposed structures are supported on foundations that conform with our recommendations and fill placement to raise grades is less than 2 feet in height.
- Our laboratory test results indicate that the near-surface soil has a very low to low expansion characteristic.
- Based on the results of the soil corrosivity tests during this study, the soils are considered to be corrosive (Appendix C) to buried ferrous metals as is typical for the area. Buried metals, such as play equipment, should be properly protected against corrosion. Corrosion protection measures should be discussed with the equipment manufacturer and may include corrosion resistant paint or other coatings.

9 RECOMMENDATIONS

The following sections present our geotechnical recommendations for the design and construction of the proposed improvements. The project improvements should be designed and constructed in accordance with these recommendations, applicable codes, and appropriate construction practices.

9.1 Seismic Design Criteria

Seismic Site Class D-default was selected. Table 1 presents the Risk-Targeted, Maximum Considered Earthquake (MCE_R) spectral response accelerations consistent with the 2019 California Building Code and corresponding site-adjusted and design level spectral response accelerations based on the USGS seismic design maps using the ASCE 7 Hazard Tool (ASCE, 2021). The values provided in the table may be used for structures with a fundamental period of 0.5 seconds or less presuming that the seismic response coefficient is calculated from equation 12.8-2 of ASCE Standard 7-16 in accordance with Exception 2 in Section 11.4.8 of ASCE Standard 7-16.

Table 1 – California Building Code Seismic Design Criteria

Seismic Design Parameter	Section 11.4 ASCE 7-16
Site Class	D - Default
Site Coefficient, F_a	1.2
Site Coefficient, F_v	-
Mapped Spectral Response Acceleration at 0.2-second period, S_s	2.056
Mapped Spectral Response Acceleration at 1.0-second period, S_1	0.735
Site-Adjusted Spectral Acceleration at 0.2-second period, S_{MS}	2.467 g
Site-Adjusted Spectral Acceleration at 1.0-second period, S_{M1}	-
Design Spectral Response Acceleration at 0.2-second Period, S_{DS}	1.644 g
Design Spectral Response Acceleration at 1.0-second Period, S_{D1}	-
Seismic Design Category for Risk Category I, II, or III	-

9.2 Earthwork Recommendations

Earthwork should be performed in accordance with the requirements of applicable governing agencies and the recommendations presented below. The geotechnical consultant should observe foundation excavations and earthwork operations. Evaluations performed by the geotechnical consultant during the course of operations may result in new recommendations, which could supersede the recommendations in this section.

9.2.1 Pre-Construction Conference

We recommend that a pre-construction conference be held to discuss the recommendations presented in the report. Representatives of the District, the design engineer, Ninyo & Moore, and the contractor should be in attendance to discuss project schedule and earthwork requirements.

9.2.2 Site Preparation

Site preparation should begin with the removal of existing vegetation, utility lines, debris and other deleterious materials from areas to be graded. Tree stumps and roots should be removed to such a depth that organic material is generally not present. Clearing and grubbing should extend beyond the proposed excavation and fill areas. Rubble and excavated materials that do not meet criteria for use as fill should be disposed of in an appropriate landfill. Existing utilities in the work area should be relocated away from the proposed structures. Existing utilities to be abandoned should be removed, crushed in place, or backfilled with grout.

Excavations resulting from removal of buried utilities, tree stumps, or obstructions should be backfilled with compacted fill in accordance with the recommendations in the following sections.

9.2.3 Observation and Removals

Prior to placement of fill, or the placement of forms or reinforcement for foundations, the client should request an evaluation of the exposed subgrade by Ninyo & Moore. Materials that are considered unsuitable shall be excavated under the observation of Ninyo & Moore in accordance with the recommendations in this section or supplemental recommendations by the geotechnical engineer.

Unsuitable materials include, but may not be limited to dry, loose, soft, wet, expansive, organic, or compressible natural soil, and undocumented or otherwise deleterious fill materials. Unsuitable materials should be removed from trench bottoms and below bearing surfaces to a depth at which suitable foundation subgrade is exposed, as evaluated in the field by Ninyo & Moore.

9.2.4 Material Recommendations

Materials used during earthwork, grading, and paving operations should comply with the requirements listed in Table 2. Materials should be evaluated by the geotechnical engineer for suitability prior to use. The contractor should notify the geotechnical consultant prior to import of materials or use of on-site materials to permit time for sampling, testing, and evaluation of the proposed materials. On-site materials may need to be dried out before re-use as fill. The contractor should be responsible for the uniformity of import material brought to the site.

Table 2 – Recommended Material Requirements		
Material and Use	Source	Requirements ^{1,2,3}
General Fill	Import or On-site Borrow	Close-graded with 35 percent or more passing No. 4 sieve and either: Expansion Index of 50 or less, Plasticity Index of 12 or less, or less than 10 percent, by dry weight, passing No. 200 sieve
Pipe/Conduit Bedding and Pipe Zone Material -material below conduit invert to 12 inches above conduit	Import	90 to 100 percent (by mass) should pass No. 4 sieve, and 5 percent or less should pass No. 200 sieve
Trench Backfill - above bedding material	Import or On-site Borrow	As per general fill and excluding rock/lumps retained on 4-inch sieve or 2-inch sieve in top 12 inches
Controlled Low Strength Material (CLSM)	Import	CSS ⁵ Section 19-3.02G

Notes:

¹ In general, fill should be free of rocks or lumps in excess of 6 inches in diameter, trash, debris, roots, vegetation or other deleterious material.

² In general, import fill should be tested or documented to be non-corrosive⁴ and free from hazardous materials in concentrations above levels of concern.

³ The specification of utility owner or local agency may supersede the indicated requirements in this table.

⁴ Non-corrosive as defined by the Corrosion Guidelines (Caltrans, 2021).

⁵ CSS is California Standard Specifications (Caltrans, 2018).

9.2.5 Subgrade Preparation

Subgrade below slabs or fill should be prepared as per the recommendations in Table 3. Prepared subgrade should be maintained in a moist (but not saturated) condition by the periodic sprinkling of water prior to placement of additional overlying fill. Subgrade that has been permitted to dry out and loosen or develop desiccation cracking, should be scarified, moisture-conditioned, and recompact as per the requirements above.

Table 3 – Subgrade Preparation Recommendations	
Subgrade Location	Source
Below Slabs, Pavement, and General Fill	<ul style="list-style-type: none"> • After clearing per Section 9.2.2, check for unsuitable materials as per Section 9.2.4. • Scarify 8 inches then moisture condition and compact as per Section 9.2.7. • Keep in moist condition by sprinkling water.

9.2.6 Fill Placement and Compaction

Fill and backfill should be compacted in horizontal lifts in conformance with the recommendations presented in Table 4. The allowable uncompacted thickness of each lift of fill depends on the type of compaction equipment utilized, but generally should not exceed 8 inches in loose thickness.

Fill Type	Location	Compacted Density¹	Moisture Content²
Subgrade	Below pavement (within 12 inches of finished subgrade)	95 percent	+ 2 percent or above
	Below slabs or fill and in locations not already specified	90 percent	+ 2 percent or above
General Fill	Below pavement (within 12 inches of finished subgrade)	95 percent	+ 2 percent or above
	In locations not already specified	90 percent	+ 2 percent or above
Bedding and Pipe Zone Fill	Material below invert to 12 inches above pipe or conduit	90 percent	Within +/- 2 Optimum
Trench Backfill	Top 12 inches below finish subgrade for areas subject to vehicular loading	95 percent	+ 2 percent or above
	In locations not already specified	90 percent	+ 2 percent or above
Aggregate Base	Below slabs or pavement	95 percent	Near Optimum

Notes:

¹ Expressed as percent relative compaction or ratio of field density to reference density (typically on a dry density basis for soil and aggregate). The reference density of soil and aggregate should be evaluated by ASTM D 1557.

² Target moisture content at compaction relative to the optimum as evaluated by ASTM D 1557

Compacted fill should be maintained in a moist (but not saturated) condition by the periodic sprinkling of water prior to placement of additional overlying fill. Fill that has been permitted to dry out and loosen or develop desiccation cracking, should be scarified, moisture-conditioned, and recompacted as per the requirements above.

9.2.7 Temporary Excavations and Shoring

Trench excavations shall be stabilized in accordance with the Excavation Rules and Regulations (29 Code of Federal Regulations [CFR], Part 1926) stipulated by the Occupational Safety and Health Administration (OSHA). Stabilization shall consist of shoring sidewalls or laying slopes back.

Dewatering pits or sumps should be used to depress the groundwater level (if encountered) below the bottom of the excavation. Table 5 lists the OSHA material type classifications and corresponding allowable temporary slope layback inclinations for soil deposits that may be encountered on site. We encountered granular soils that consisted of loose to very dense, silty sand during our subsurface investigation, which corresponds to OSHA Type C soil. If materials other than those anticipated are encountered, Ninyo & Moore should be provided an opportunity to review subsurface conditions. Alternatively, an internally-braced shoring system or trench shield conforming to the OSHA Excavation Rules and Regulations (29 CFR, Part 1926) may be used to stabilize excavation sidewalls during construction. The lateral earth pressures listed in Table 6 may be used to design or select the internally-braced shoring system or trench shield. The recommendations listed in Table 6 are based upon the limited subsurface data provided by our subsurface exploration and reflect the influence of the environmental conditions that existed at the time of our exploration. Excavation stability, material classifications, allowable slopes, and shoring pressures should be re-evaluated and revised, as-needed, during construction. Excavations, shoring systems and the surrounding areas should be evaluated daily by a competent person for indications of possible instability or collapse.

Table 5– OSHA Material Classifications and Allowable Slopes

Formation	OSHA Classification	Allowable Temporary Slope ^{1,2,3}	Lateral Earth Pressure on Shoring ⁴ (psf)
Alluvium (above groundwater)	Type C	1½ h:1v (34°)	80×D + 72

Notes:

- ¹ Allowable slope for excavations less than 20 feet deep. Excavation sidewalls in cohesive soil may be benched to meet the allowable slope criteria (measured from the bottom edge of the excavation). The allowable bench height is 4 feet. The bench at the bottom of the excavation may protrude above the allowable slope criteria.
- ² In layered soil, layers shall not be sloped steeper than the layer below.
- ³ Temporary excavations less than 5 feet deep may be made with vertical side slopes and remain unshored if judged to be stable by a competent person (29 CFR, Part 1926.650).
- ⁴ 'D' is depth of excavation for excavations up to 20 feet deep. Includes a surface surcharge equivalent to two feet of soil.

The shoring system should be designed or selected by a suitably qualified individual or specialty subcontractor. The shoring parameters presented in this report are preliminary design criteria, and the designer should evaluate the adequacy of these parameters and make appropriate modifications for their design. We recommend that the contractor take appropriate measures to protect workers. OSHA requirements pertaining to worker safety should be observed.

Excavations made in close proximity to existing structures may undermine the foundation of those structures and/or cause soil movement related distress to the existing structures. Stabilization techniques for excavations in close proximity to existing structures will need to account for the additional loads imposed on the shoring system and appropriate setback distances for temporary slopes. The contractor should be solely responsible for protection of existing site improvements and provide shoring and/or underpinning as needed.

The excavation bottoms may encounter wet, loose material which may be subject to pumping under heavy equipment loads. The contractor should be prepared to stabilize the bottom of the excavations. In general, unstable bottom conditions may be mitigated by using a stabilizing geogrid, overexcavating the excavation bottom to suitable depths and replacing with compacted fill, or other suitable method. Additionally, aeration of wet soils should be anticipated.

9.2.8 Utility Trenches

Trenches constructed for the installation of underground utilities should be stabilized in accordance with our recommendations in Section 9.2.9. Utility trenches should be backfilled with materials that conform to our recommendations in Section 9.2.5. Trench backfill, bedding, and pipe zone fill should be compacted in accordance with Section 9.2.7 of this report. Bedding and pipe zone fill should be shoveled under pipe haunches and compacted by manual or mechanical, hand-held tampers. Trench backfill should be compacted by mechanical means. Densification of trench backfill by flooding or jetting should not be permitted.

Trenches should not be excavated adjacent to footings. If trenches are to be excavated near a continuous footing, the bottom of the trench should be located above a 2:1 (horizontal to vertical) plane projected downward from the bottom of the footing. Utility lines that cross beneath footings should be encased in concrete or CLSM below the footing for a distance equivalent to the depth of the excavation.

9.3 Foundations

Foundations should be designed in accordance with structural considerations and our geotechnical recommendations. In addition, requirements of the governing jurisdictions, practices of the Structural Engineers Association of California, and applicable building codes should be considered in the design of the structures. Maximum static settlement due to building loads is anticipated to be on the order of ½ inch.

9.3.1 Spread Footings

Footings bearing on subgrade prepared as per the recommendations in Section 9.2.6. The footings may be designed using the criteria listed in Table 6. The geotechnical engineer should observe the footing excavations to evaluate bearing materials and subgrade condition before the exposed subgrade is covered.

Table 6– Recommended Bearing Design Parameters for Footings					
Footing	Sustained Loads	Footing Widths	Bearing Depth¹	Allowable Bearing Capacity²	Static Settlement
Wall Footing	3 kips/foot or less	12 inches or more	2 feet or more	3,000 psf	½ -inch total
Column Footing	12 kips or less	24 inches or more	2 feet or more	3,000 psf	½ -inch total

Notes:
¹ Below the adjacent finish grade and the existing grade.
² Net allowable bearing capacity in pounds per square foot with Safety Factor of 2 or more. Allowable bearing capacity may be increased by one-third for wind or seismic load combinations.

Structures supported on footings consistent with these recommendations should be designed for the total and differential settlements listed in Table 6 for sustained loads.

The spread footings should be reinforced with deformed steel bars as detailed by the project structural engineer. Where footings are located adjacent to utility trenches or other excavations, the footing bearing surfaces should bear below an imaginary plane extending upward from the bottom edge of the adjacent trench/excavation at a 1½:1 (horizontal to vertical) angle above the bottom edge of the footing. Footings should be deepened or excavation depths reduced as-needed. Footing bottoms should not be sloped more than 1-unit vertical to 10 units horizontal. Wall footings may be stepped provided that the bearing grade differential between adjacent steps does not exceed 18 inches and the slope of a series of such steps does not exceed 1-unit vertical to 2 units horizontal.

A lateral bearing pressure of 300 psf per foot of depth up to 3,000 psf may be used to evaluate the resistance of footings to lateral loads. The recommended lateral bearing pressure is for level and gently sloping ground conditions where the ground slope adjacent to the foundation is 5 percent or less. The lateral bearing pressure should be neglected to a depth of 12 inches where the ground adjacent to the foundation is not covered by a slab or pavement. The lateral bearing pressure may be increased by one-third when considering loads of short duration such as wind or seismic forces. A friction coefficient of 0.35 may be assumed for evaluating frictional resistance to lateral loads. A dry unit weight of 90 pounds per cubic foot (pcf) for soil, 120 pcf for aggregate and 150 pcf for normal weight concrete may be assumed for this evaluation.

9.3.2 Slabs-on-Grade

Building floor slabs should be designed by the project structural engineer based on the anticipated loading conditions. The subgrade should be prepared in accordance with Section 9.2.6. Where a vapor retarding system is not used, slabs should be constructed on 6 inches, or more, of aggregate base conforming to Section 9.2.5 and placed in accordance with Section 9.2.7. The slab should be reinforced with deformed steel bars. We recommend that masonry briquettes or plastic chairs be used to aid in the correct placement of slab reinforcement in the upper half of the slab. Refer to Section 9.5 for the recommended concrete cover over reinforcing steel. A vapor retarder is recommended in areas where moisture-sensitive floor coverings or conditioned environments are anticipated. Joints consistent with ACI guidelines (ACI, 2020) may be constructed at periodic intervals to reduce the potential for random cracking of the slab.

9.3.3 Drilled Piers for Minor Structures

Drilled piers for minor structures such as fences and light poles embedded 5 to 25 feet below grade may be designed for an allowable side friction of 300 psf to evaluate resistance to downward axial loads and 200 psf per foot depth for upward axial loads. The allowable skin friction includes a factor of safety of 2 for downward loading and 3 for upward loading. The allowable side friction may be increased by one-third when considering loads of short duration such as wind or seismic loads. The spacing between adjacent piers should be equivalent to eight pier diameters, or more to mitigate reduction due to group effects.

A lateral bearing pressure of 300 pounds per square foot (psf) per foot depth up to 3,000 psf may be used to evaluate resistance to lateral loads and overturning moments in accordance with Section 1806 of the 2019 CBC. The allowable lateral bearing pressure may be increased

by one-third for wind or seismic load combinations and by an additional factor of two for structures that can accommodate ½ inch of lateral deflection of the top of the pier foundation. Drilled pier excavations should be cleaned of loose material prior to pouring concrete. Drilled pier excavations that encounter groundwater or cohesionless soil may be unstable and may need to be stabilized by temporary casing or use of drilling mud. Standing water should be removed from the pier excavation or the concrete should be delivered to the bottom of the excavation, below the water surface, by tremie pipe. Casing should be removed from the excavation as the concrete is placed. Concrete should be placed in the piers in a manner that reduces the potential for segregation of the components. Piers should be completed with concrete the same day as the excavation is completed.

9.4 Pavements and Flatwork

Recommendations for pavement and exterior flatwork are presented in the following sections. A design R-value of 20 was selected based on subsurface soil encountered. The pavement subgrade should be observed by the geotechnical engineer during grading to check the finish subgrade for consistency with the assumed condition. Recommendations for preparation of subgrade are presented in Section 9.2.6.

9.4.1 Asphalt Pavement

Based on the damage observed along the pedestrian pathways, we recommend complete removal of the existing pavement sections and reconstruction with a new section of aggregate base and asphalt concrete. The existing aggregate base and asphalt concrete may be processed to meet Caltrans Class 2 Aggregate Base specifications for re-use.

Ninyo & Moore conducted an analysis to evaluate appropriate asphalt pavement structural sections following the methodology presented in the Highway Design Manual (Caltrans, 2020). Alternative sections were evaluated for pedestrian and vehicular loading. The pavement sections were designed for a 20-year service life presuming that periodic maintenance, including crack sealing and resurfacing will be performed during the service life of the pavement. Premature deterioration may occur without periodic maintenance. Our recommendations for the pavement sections are presented in Table 7.

Table 7– Asphalt Concrete Pavement Sections

Traffic Index	R-Value	Alternative 1	Alternative 2
3 (Light Vehicular Traffic)	20	3½ inches AC	2 inches AC 4½ inches AB
6 (Fire Lanes)	20	8 inches AC	3½ inches AC 9½ inches AB

Notes:

¹ AC is Type A, Dense-Graded Hot Mix Asphalt complying with Caltrans Standard Specification 39-2 (2018).

² AB is Class 2 Aggregate Base complying with Caltrans Standard Specification 26-1.02 (2018).

Aggregate base for pavement should be placed in lifts of no more than 8 inches in loose thickness and compacted per Section 9.2.7. Asphalt concrete should be placed and compacted in accordance with Caltrans Standard Specification and Construction Manual; asphalt concrete should be compacted to between 92 and 96 percent of the theoretical maximum specific gravity and density (Rice gravity – ASTM D 2041) of the material. Pavements should be sloped so that runoff is diverted to an appropriate collector (concrete gutter, swale, or area drain) to reduce the potential for ponding of water on the pavement. Concentration of runoff over asphalt pavement should be discouraged.

9.5 Concrete Placement

Concrete in contact with soil or water that contains high concentrations of soluble sulfates can be subject to chemical and/or physical deterioration. The sulfate ion concentration was measured 49 mg/kg and is determined to be insufficient to damage reinforced concrete structures, however due to the potential variability in soil conditions across the site, we recommend that Type V cement with a water/cement ratio of 0.45 or less be considered for the project.

9.6 Review of Construction Plans

The recommendations provided in this report are based on preliminary design information for the proposed construction. We recommend that a copy of the plans be provided to Ninyo & Moore for review before bidding to check the interpretation of our recommendations and that the designed improvements are consistent with our assumptions. It should be noted that, upon review of these documents, some recommendations presented in this report might be revised or modified to meet the project requirements.

9.7 Construction Observation and Testing

The recommendations provided in this report are based on subsurface conditions encountered in discrete exploratory borings. During construction, the geotechnical engineer or his representative in the field should be allowed to check the exposed subsurface conditions. During construction, the geotechnical engineer or his representative should be allowed to:

- Check for unsuitable materials and observe foundation excavations.
- Observe preparation and compaction of subgrade.
- Check and test imported materials prior to import to the project site.
- Observe placement and compaction of fill.
- Perform field density tests to evaluate fill and subgrade compaction.
- Observe placement of reinforcing steel and concrete in drilled piers and slabs.

The recommendations provided in this report assume that Ninyo & Moore will be retained as the geotechnical consultant during the construction phase of the project. If another geotechnical consultant is selected, we request that the selected consultant provide a letter to the architect and the owner (with a copy to Ninyo & Moore) indicating that they fully understand Ninyo & Moore's recommendations, and that they are in full agreement with the recommendations contained in this report. Ninyo & Moore cannot assume responsibility for aspects of construction for which we have not been given an opportunity to observe/test.

10 LIMITATIONS

The field evaluation, laboratory testing, geotechnical analyses, and assessment of geologic hazards presented in this report have been conducted in general accordance with current practice and the standard of care exercised by geotechnical consultants performing similar tasks in the project area at the time this report was prepared. No warranty, expressed or implied, is made regarding the conclusions, recommendations, and opinions presented in this report. There is no evaluation detailed enough to reveal every subsurface condition. Variations may exist, and conditions not observed or described in this report may be encountered during construction. Uncertainties relative to subsurface conditions can be reduced through additional subsurface exploration. Additional subsurface evaluation will be performed upon request. Please also note that our evaluation was limited to assessment of the geotechnical aspects of the project, and did not include evaluation of structural issues, environmental concerns, or the presence of hazardous materials.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires additional information or has questions regarding the content, interpretations presented, or completeness of this document.

This report is intended for design purposes only. It does not provide sufficient data to prepare an accurate bid by contractors. It is suggested that the bidders and their geotechnical consultant perform an independent evaluation of the subsurface conditions in the project areas. The independent evaluations may include, but not be limited to, review of other geotechnical reports prepared for the adjacent areas, site reconnaissance, and additional exploration and laboratory testing.

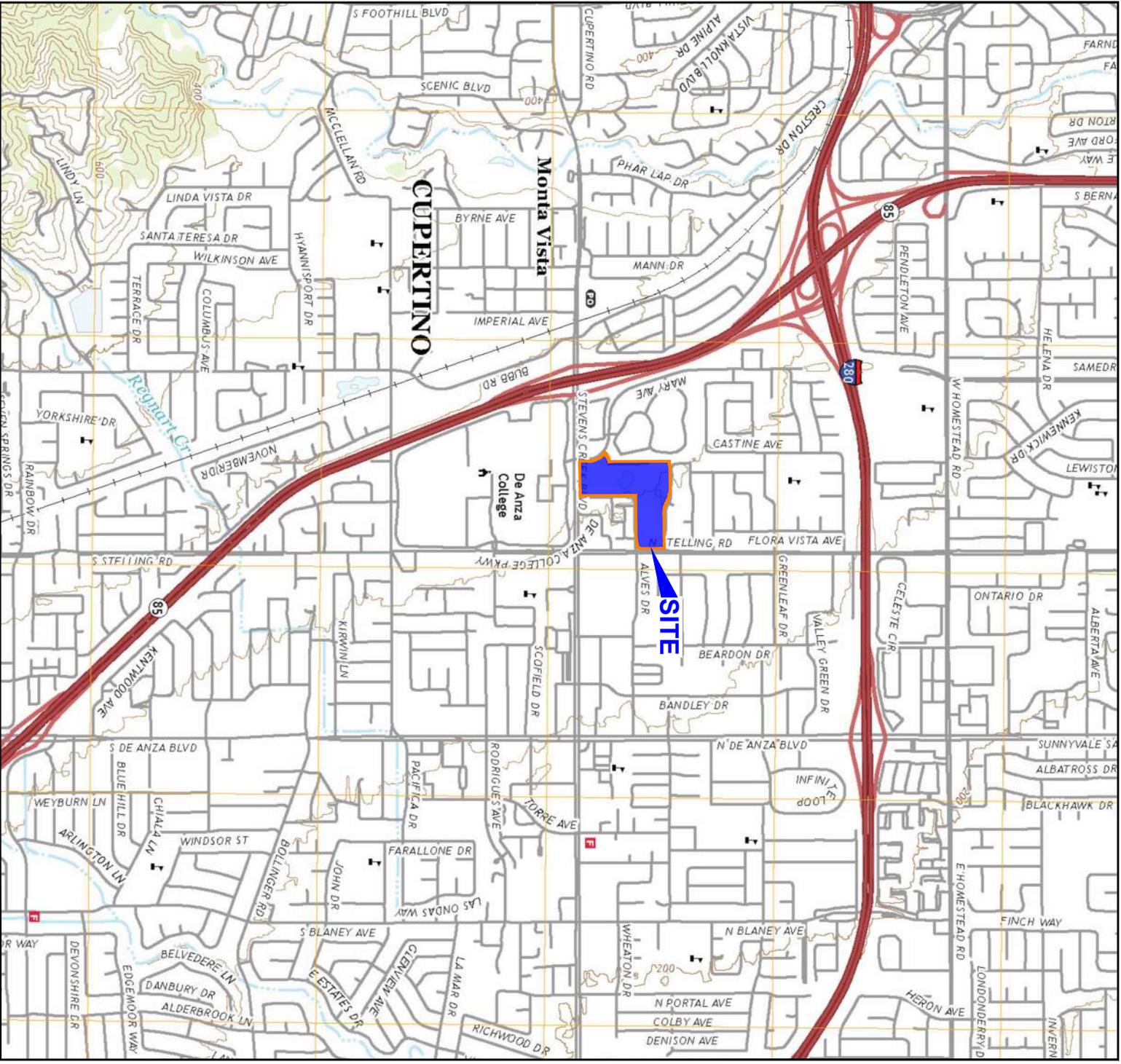
Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. If geotechnical conditions different from those described in this report are encountered, our office should be notified and additional recommendations will be provided, as appropriate. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

11 REFERENCES

- American Concrete Institute, 2021, ACI Manual of Concrete Practice.
- American Concrete Institute, 2014, Building Code Requirements for Structural Concrete (ACI 318-14) - Commentary on Building Code Requirements for Structural Concrete (ACI 318R-14).
- American Society of Civil Engineers (ASCE), 2016, Minimum Design Loads and Associated Criteria for Building and Other Structures, ASCE Standard 7-16.
- American Society of Civil Engineers (ASCE), 2021, ASCE 7 Hazard Tool, <https://asce7hazardtool.online/>
- California Building Standards Commission (CBSC), 2019, California Building Code (CBC), Title 24, Part 2, Volumes 1 and 2.
- California Department of Transportation (Caltrans), 2018, Standard Specifications.
- California Department of Transportation (Caltrans), 2020, Highway Design Manual, <https://dot.ca.gov/programs/design/manual-highway-design-manual-hdm>.
- California Department of Transportation (Caltrans), 2021, Corrosion Guidelines, Version 3.2, Division of Engineering Services, Materials Engineering and Testing Services, Corrosion Branch: dated May.
- California Geological Survey (CGS), 2002a, Seismic Hazard Zone Report for the Cupertino 7.5-Minute Quadrangle, Santa Clara Valley, California, Seismic Hazard Zone Report 068.
- California Geological Survey (CGS), 2007, Special Publication 42 - Fault Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps, by Bryant, W.A. and Hart, E.W.
- California Geological Survey (CGS), 2018, Earthquake Fault Zones, A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California: California Geologic Survey Special Publication 42.
- City of Cupertino, 2022, Memorial Park Specific Plan, EngageCupertino_Draft content, https://docs.google.com/document/d/1o7fSGt_Mt641L-z0oc5RVIIbFFILzXJoACdY43DshYY/edit
- Dibblee, T.W., Jr. and Minch, J.A., 2007, Geologic Map of the Cupertino and San Jose West Quadrangles, Santa Clara and Santa Cruz Counties, California: Dibblee Geological Foundation, Dibblee Foundation Map DF-351, scale 1:24,000
- Google Earth, 2022, Google Earth Pro 7.3.3.7699, <http://earth.google.com/>.
- Knudsen, K.L., Sowers, J.M., Witter, R.C., Wentworth, C.M., Helley, E.J., Nicholson, R.S., Wright, H.M., and Brown, K.H., 2000, Preliminary Maps of Quaternary Deposits and Liquefaction Susceptibility, Nine-County San Francisco Bay Region, California: a digital database: U.S. Geological Survey, Open-File Report OF-2000-444, Scale 1:275,000.
- Occupational Safety and Health Administration (OSHA), 1989, Occupational Safety and Health Standards – Excavations, Department of Labor, Title 29 Code of Federal Regulations (CFR) part 1926, dated October 31.
- Witter, R.C., Knudsen, K.L., Sowers, J.M., Wentworth, C.M., Koehler, R.D., and Randolph, C.E., 2006, Maps of Quaternary Deposits and Liquefaction Susceptibility in the Central San Francisco Bay Region, California: U.S. Geological Survey Open-File Report 2006-1037, Scale 1:200,000 (<http://pubs.usgs.gov/of/2006/1037/>).

FIGURES



NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCE: USGS, 2018



FIGURE 1

Ningo & Moore

Geotechnical & Environmental Sciences Consultants

SITE LOCATION

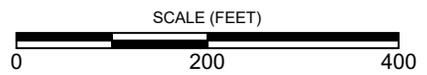
MEMORIAL PARK
 21121 STEVENS CREEK BOULEVARD
 CUPERTINO, CALIFORNIA
 404269001 | 11/22



LEGEND

-  PROJECT BOUNDARY
-  **B-1** (15.0') BORING LOCATION (09/19/2022) (TOTAL DEPTH, IN FEET)
-  **B-1a** (1.5') BORING LOCATION (08/24/2022) (TOTAL DEPTH, IN FEET)

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCE: GOOGLE EARTH, 2022

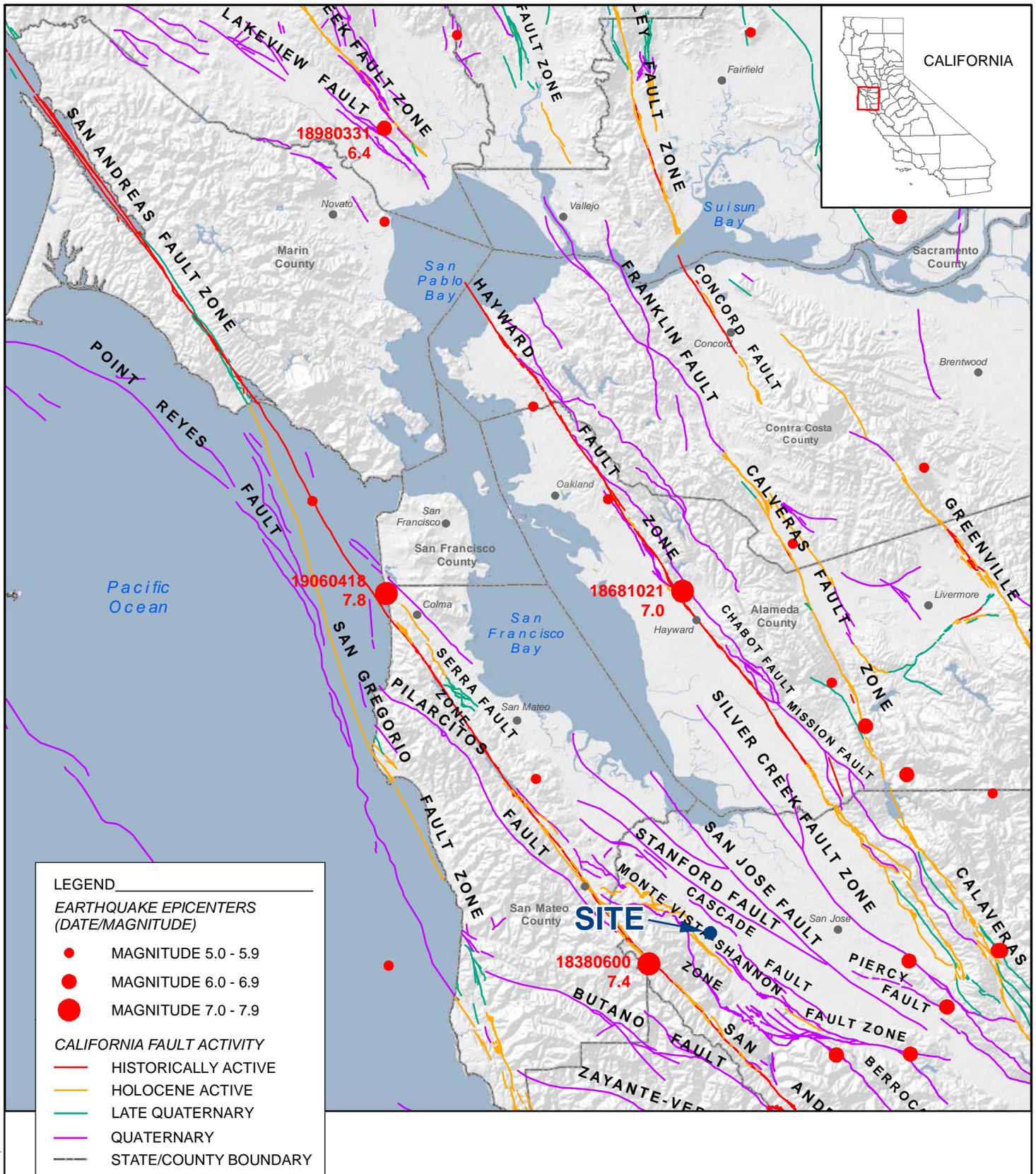


404269001.dwg 11/02/2022 AEK

FIGURE 2

EXPLORATION LOCATIONS

MEMORIAL PARK
 21121 STEVENS CREEK BOULEVARD
 CUPERTINO, CALIFORNIA
 404269001 | 11/22

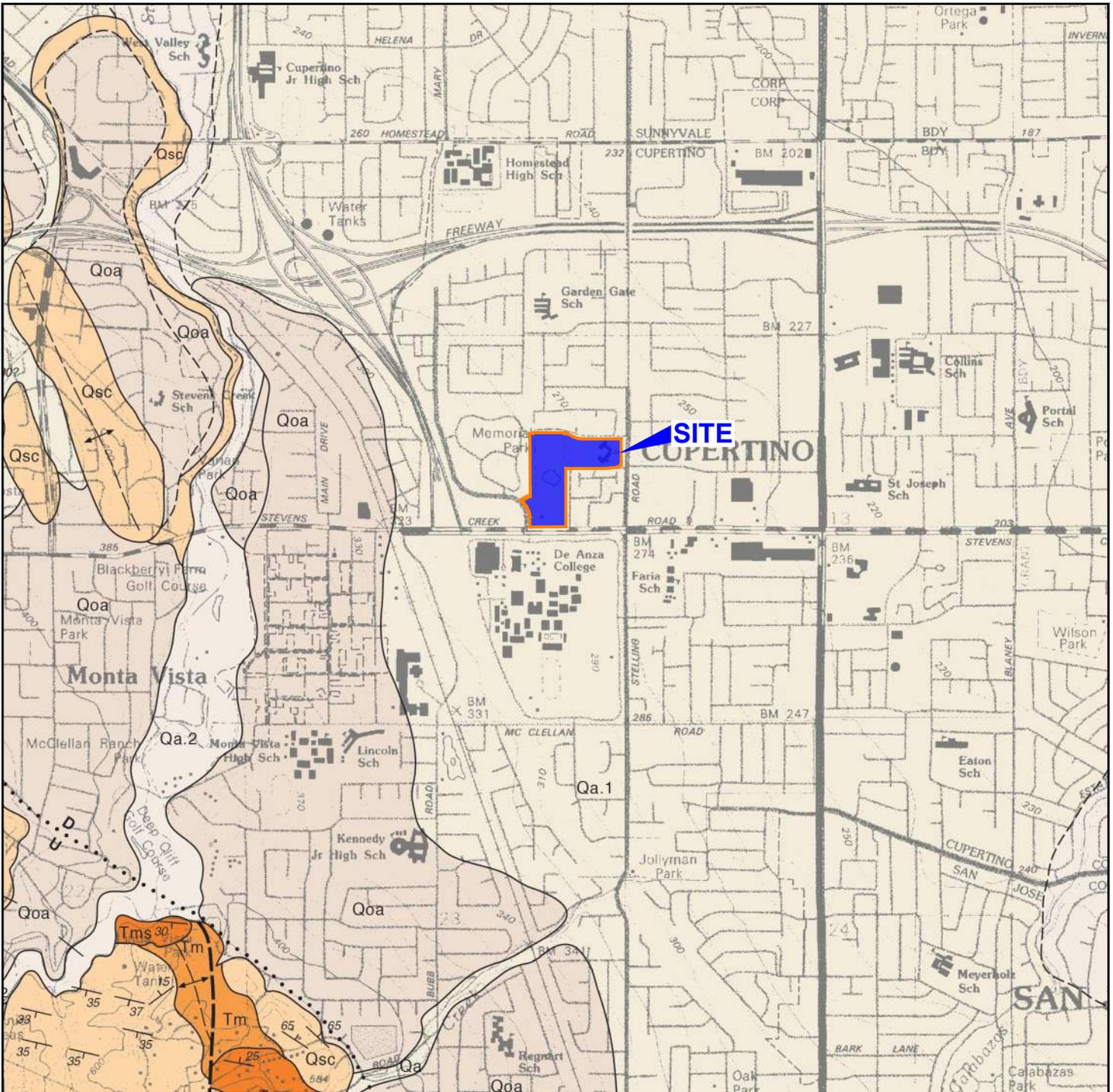


404269001-Fig3-FL.pdf 10/02/2022 AEK

FIGURE 3

FAULT LOCATIONS AND EARTHQUAKE EPICENTERS

MEMORIAL PARK
 21121 STEVENS CREEK BOULEVARD
 CUPERTINO, CALIFORNIA
 4042696001 | 11/22



LEGEND

Qa ALLUVIAL GRAVEL, SAND, SILT, & CLAY (HOLOCENE)	Qoa/Qt OLDER ALLUVIAL TERRACE GRAVEL, SAND, & CLAY, UNDEFORMED (PLEISTOCENE)	Tms MATADERO SANDSTONE (MIOCENE)	THRUST FAULT
Qa.1 ALLUVIAL SAND, SILT, & GRAVEL (HOLOCENE)	Qsc/Qt SANTA CLARA FORMATION/ NONMARINE SEDIMENTARY ROCKS (PLEISTOCENE/PLIOCENE)		FAULT
Qa.2 ALLUVIAL GRAVEL, SAND, SILT, & CLAY (HOLOCENE)	Tm MONTEREY FORMATION; SILICEOUS SHALE (MIOCENE)		GEOLOGIC CONTACT
			STRIKE AND DIP OF BEDDING

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE | REFERENCE: DIBBLEE, 2007

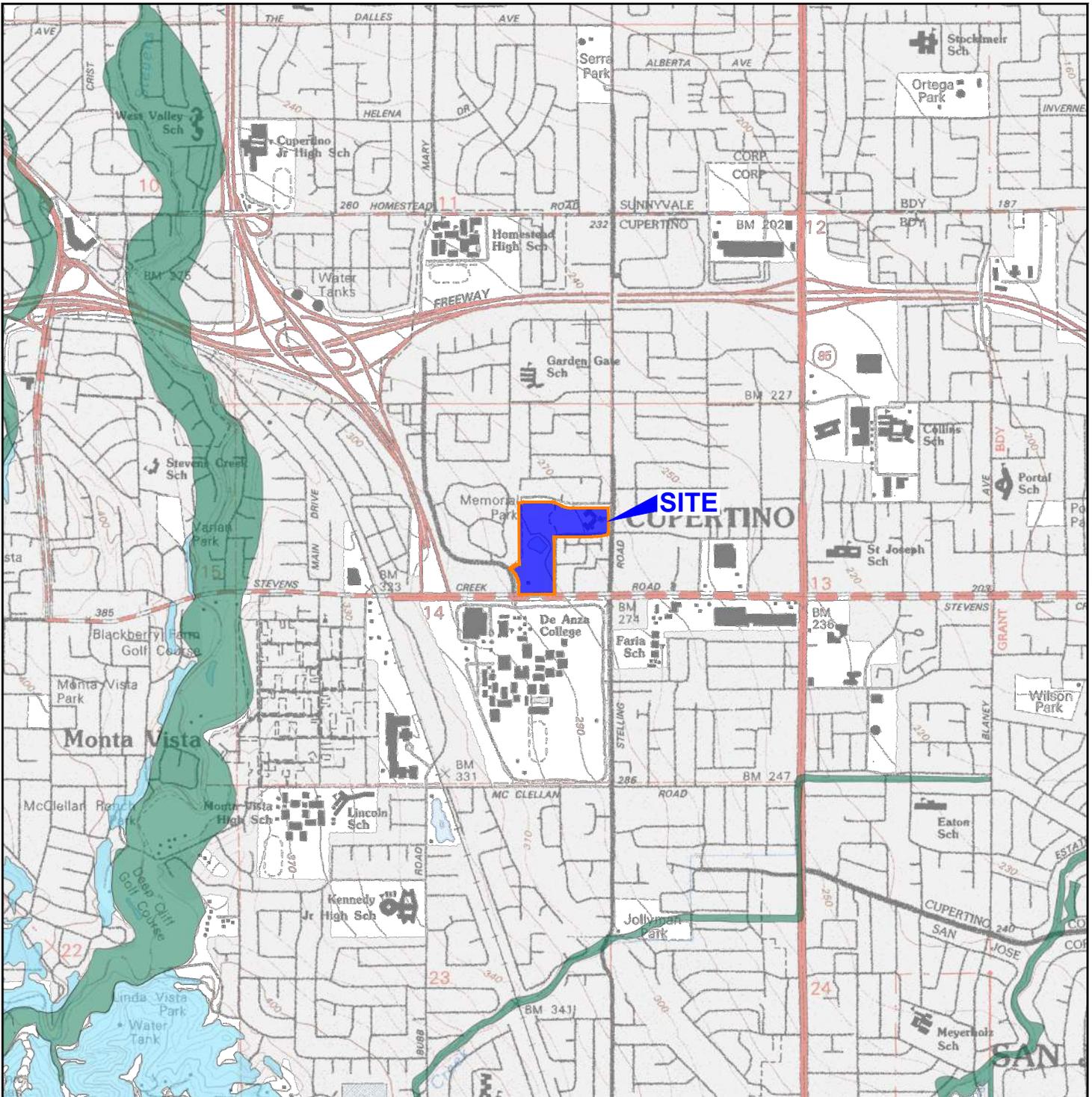


404269001.dwg 11/02/2022 AEK

FIGURE 4

REGIONAL GEOLOGY

MEMORIAL PARK
 21121 STEVENS CREEK BOULEVARD
 CUPERTINO, CALIFORNIA
 404269001 | 11/22



LEGEND

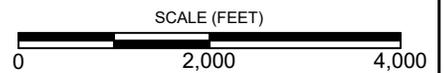


LIQUEFACTION ZONES:
 Areas where historic occurrence of liquefaction, or local geological, geotechnical, and groundwater conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.



EARTHQUAKE-INDUCED LANDSLIDE ZONES:
 Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

NOTE: DIMENSIONS, DIRECTIONS, AND LOCATIONS ARE APPROXIMATE
 REFERENCE: CGS, 1974, 2002



404269001.dwg 11/02/2022 AEK

FIGURE 5

SEISMIC HAZARD ZONES

MEMORIAL PARK
 21121 STEVENS CREEK BOULEVARD
 CUPERTINO, CALIFORNIA

404269001 | 11/22



Geotechnical & Environmental Sciences Consultants

APPENDIX A

Boring Logs

APPENDIX A

BORING LOGS

Field Procedure for the Collection of Disturbed Samples

Disturbed soil samples were obtained in the field using the following method.

Bulk Samples

Bulk samples of representative earth materials were obtained from the exploratory borings. The samples were bagged and transported to the laboratory for testing.

Field Procedure for the Collection of Relatively Undisturbed Samples

Relatively undisturbed soil samples were obtained in the field using the following method.

The Modified Split-Barrel Drive Sampler

The sampler, with an external diameter of 3.0 inches, was lined with 6-inch long, thin brass liners with inside diameters of approximately 2.4 inches. The sample barrel was driven into the ground with the weight of a hammer in general accordance with ASTM D 3550. The driving weight was permitted to fall freely. The approximate length of the fall, the weight of the hammer, and the number of blows per foot of driving are presented on the boring log as an index to the relative resistance of the materials sampled. The samples were removed from the sample barrel in the brass liners, sealed, and transported to the laboratory for testing.

BORING LOG EXPLANATION SHEET

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	
0	█						Bulk sample. Modified split-barrel drive sampler. No recovery with modified split-barrel drive sampler. Sample retained by others. Standard Penetration Test (SPT). No recovery with a SPT. Shelby tube sample. Distance pushed in inches/length of sample recovered in inches. No recovery with Shelby tube sampler. Continuous Push Sample. Seepage. Groundwater encountered during drilling. Groundwater measured after drilling.
5	XX/XX		⊕				
10			⊕				
15					▨	SM	MAJOR MATERIAL TYPE (SOIL): Solid line denotes unit change.
15					▨	CL	Dashed line denotes material change. Attitudes: Strike/Dip b: Bedding c: Contact j: Joint f: Fracture F: Fault cs: Clay Seam s: Shear bss: Basal Slide Surface sf: Shear Fracture sz: Shear Zone sbs: Shear Bedding Surface
20							The total depth line is a solid line that is drawn at the bottom of the boring.

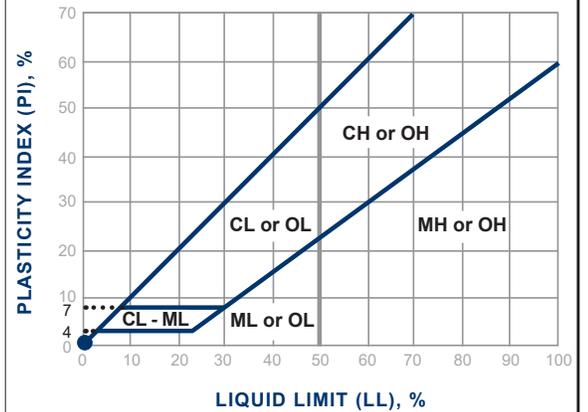
Soil Classification Chart Per ASTM D 2488

Primary Divisions		Secondary Divisions			
		Group Symbol	Group Name		
COARSE-GRAINED SOILS more than 50% retained on No. 200 sieve	GRAVEL more than 50% of coarse fraction retained on No. 4 sieve	CLEAN GRAVEL less than 5% fines	GW	well-graded GRAVEL	
			GP	poorly graded GRAVEL	
		GRAVEL with DUAL CLASSIFICATIONS 5% to 12% fines	GW-GM	well-graded GRAVEL with silt	
			GP-GM	poorly graded GRAVEL with silt	
			GW-GC	well-graded GRAVEL with clay	
			GP-GC	poorly graded GRAVEL with	
			GM	silty GRAVEL	
		GRAVEL with FINES more than 12% fines	GC	clayey GRAVEL	
			GC-GM	silty, clayey GRAVEL	
	SW		well-graded SAND		
	SP		poorly graded SAND		
	SAND 50% or more of coarse fraction passes No. 4 sieve	CLEAN SAND less than 5% fines	SW	well-graded SAND	
			SP	poorly graded SAND	
		SAND with DUAL CLASSIFICATIONS 5% to 12% fines	SW-SM	well-graded SAND with silt	
			SP-SM	poorly graded SAND with silt	
			SW-SC	well-graded SAND with clay	
			SP-SC	poorly graded SAND with clay	
			SM	silty SAND	
SAND with FINES more than 12% fines		SC	clayey SAND		
		SC-SM	silty, clayey SAND		
	CL	lean CLAY			
FINE-GRAINED SOILS 50% or more passes No. 200 sieve	SILT and CLAY liquid limit less than 50%	INORGANIC	ML	SILT	
			CL-ML	silty CLAY	
			OL (PI > 4)	organic CLAY	
		ORGANIC	OL (PI < 4)	organic SILT	
			CH	fat CLAY	
			MH	elastic SILT	
	SILT and CLAY liquid limit 50% or more	INORGANIC	OH (plots on or above "A"-line)	organic CLAY	
			OH (plots below "A"-line)	organic SILT	
			PT	Peat	
		Highly Organic Soils			

Grain Size

Description	Sieve Size	Grain Size	Approximate Size
Boulders	> 12"	> 12"	Larger than basketball-sized
Cobbles	3 - 12"	3 - 12"	Fist-sized to basketball-sized
Gravel	Coarse	3/4 - 3"	Thumb-sized to fist-sized
	Fine	#4 - 3/4"	Pea-sized to thumb-sized
Sand	Coarse	#10 - #4	Rock-salt-sized to pea-sized
	Medium	#40 - #10	Sugar-sized to rock-salt-sized
	Fine	#200 - #40	Flour-sized to sugar-sized
Fines	Passing #200	< 0.0029"	Flour-sized and smaller

Plasticity Chart



Apparent Density - Coarse-Grained Soil

Apparent Density	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
Very Loose	≤ 4	≤ 8	≤ 3	≤ 5
Loose	5 - 10	9 - 21	4 - 7	6 - 14
Medium Dense	11 - 30	22 - 63	8 - 20	15 - 42
Dense	31 - 50	64 - 105	21 - 33	43 - 70
Very Dense	> 50	> 105	> 33	> 70

Consistency - Fine-Grained Soil

Consistency	Spooling Cable or Cathead		Automatic Trip Hammer	
	SPT (blows/foot)	Modified Split Barrel (blows/foot)	SPT (blows/foot)	Modified Split Barrel (blows/foot)
Very Soft	< 2	< 3	< 1	< 2
Soft	2 - 4	3 - 5	1 - 3	2 - 3
Firm	5 - 8	6 - 10	4 - 5	4 - 6
Stiff	9 - 15	11 - 20	6 - 10	7 - 13
Very Stiff	16 - 30	21 - 39	11 - 20	14 - 26
Hard	> 30	> 39	> 20	> 26

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19/22</u> BORING NO. <u>B-1</u>
							GROUND ELEVATION <u>265'± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>HOLLOW STEM AUGER</u>
							DRIVE WEIGHT <u>140 lbs (SPOOLING CABLE)</u> DROP <u>30 IN</u>
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
							DESCRIPTION/INTERPRETATION
0						GC	<p>ALLUVIUM: Dark brown, wet, loose, clayey GRAVEL. Gravel up to 2.5 inches in diameter, subangular.</p>
5		20	7.1	114.0			<p>Medium dense, moist.</p>
		53					<p>Dense.</p>
		67					
10		50/6"				SC	<p>Light brown, dry, very dense, clayey SAND.</p>
15		50/3"					<p>Gray, very dense.</p>
20							<p>Total Depth: 15 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.</p> <p>Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).</p>

FIGURE A- 1

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>8/24/2022</u>	BORING NO. <u>B-1a</u>
							GROUND ELEVATION <u>265'± (MSL)</u>	SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>Hand Auger</u>	
							DRIVE WEIGHT _____	DROP _____
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>	
DESCRIPTION/INTERPRETATION								
0						GC	Brown, dry, dense, clayey GRAVEL with sand.	
							Total Depth: 1.5 feet stopped on refusal. Backfilled with soil shortly after boring on 8/24/2022. Notes: Groundwater was not encountered in boring at time of augering. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).	
5								
10								
15								
20								

FIGURE A- 2

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED	BORING NO.	
							9/19/2022	B-2	
							GROUND ELEVATION	SHEET	OF
							270± (MSL)	1	1
							METHOD OF DRILLING HOLLOW STEM AUGER		
							DRIVE WEIGHT	DROP	
							140 LBS (SPOOLING CABLE)	30 INCHES	
							SAMPLED BY	LOGGED BY	REVIEWED BY
							CDS	CDS	RH
							DESCRIPTION/INTERPRETATION		
0						GW-GC	ALLUVIUM: Brown, moist, medium dense, well-graded GRAVEL with clay and sand. Gravel up to 0.5" in diameter, subrounded.		
5		37							
		30							
		34	6.7	110.4					
10		75					Dense.		
							Total Depth: 11.5 feet stopped at planned depth. Backfilled with soil and cement immediately after boring on 9/19/2022.		
							Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).		
15									
20									

FIGURE A-3

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19/2022</u> BORING NO. <u>B-3</u>
							GROUND ELEVATION <u>276'± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>HOLLOW STEM AUGER</u>
							DRIVE WEIGHT <u>140 LBS (SPOOLING CABLE)</u> DROP <u>30 IN</u>
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
							DESCRIPTION/INTERPRETATION
0						CL	<p>ALLUVIUM: Dark brown, moist, very stiff, gravelly LEAN CLAY with trace sand.</p>
5		35				GP	<p>Brown, dry, medium dense, poorly graded GRAVEL with sand and clay.</p>
		59	11.0	116.1			<p>Total Depth: 6.5 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.</p> <p>Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).</p>
10							
15							
20							

FIGURE A- 4

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>8/24/2022</u> BORING NO. <u>B-3a</u>
							GROUND ELEVATION <u>276± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							DESCRIPTION/INTERPRETATION
0						CL	<p>Brown, dry to moist, firm, sandy CLAY with gravel. Gravel up to 2" in diameter, subangular.</p> <p>Very hard.</p> <p>Total Depth: 1.7 feet stopped on refusal.</p> <p>Backfilled with soil shortly after boring on 8/24/2022.</p> <p>Notes: Groundwater was not encountered in boring at time of augering. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).</p>

FIGURE A- 5

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19</u> BORING NO. <u>B-4</u>	
							GROUND ELEVATION <u>277± (MSL)</u> SHEET <u>1</u> OF <u>1</u>	
							METHOD OF DRILLING <u>HOLLOW STEM AUGER</u>	
							DRIVE WEIGHT <u>140 LBS (SPOOLING CABLE)</u> DROP <u>30 IN</u>	
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>	
DESCRIPTION/INTERPRETATION								
0						GC	<u>ALLUVIUM:</u> Brown, moist, medium dense, clayey GRAVEL with sand.	
5		32					Dense.	
		64						
			41	14.4	119.7		CL	Brown, moist, hard, LEAN CLAY with gravel.
10						GC	Brown, moist, dense, clayey GRAVEL with SAND.	
		72						
							Total Depth: 11.5 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.	
							Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).	
15								
20								

FIGURE A- 6

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19/2022</u> BORING NO. <u>B-5</u>
							GROUND ELEVATION <u>273'± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>HOLLOW STEM AUGER</u>
							DRIVE WEIGHT <u>140 LBS (SPOOLING CABLE)</u> DROP <u>30 IN</u>
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
							DESCRIPTION/INTERPRETATION
0						GC	ALLUVIUM: Dark brown, moist, medium dense, clayey GRAVEL with sand.
		27	7.3	115.3			
5		37					
							Total Depth: 6.5 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.
							Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).
10							
15							
20							

FIGURE A- 7

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19/22</u> BORING NO. <u>B-6</u>
							GROUND ELEVATION <u>280'± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>HOLLOW STEM AUGER</u>
							DRIVE WEIGHT <u>140 LBS (SPOOLING CABLE)</u> DROP <u>30 IN</u>
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
							DESCRIPTION/INTERPRETATION
0						GC	<u>ALLUVIUM:</u> Dark brown, moist, medium dense, clayey GRAVEL with sand.
5		36	10.9	119.2			22
10							Total Depth: 6.5 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.
15							Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).
20							

FIGURE A- 8

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>8/24/2022</u>	BORING NO. <u>B-6a</u>
							GROUND ELEVATION <u>280'± (MSL)</u>	SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>Hand Auger</u>	
							DRIVE WEIGHT _____	DROP _____
							SAMPLED BY <u>CDS</u>	LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
DESCRIPTION/INTERPRETATION								
0						GC	Brown, dry to moist, dense to very dense, clayey GRAVEL with sand.	
							Total Depth: 1.2 feet stopped on refusal.	
							Backfilled with soil shortly after boring on 8/24/2022.	
							Notes: Groundwater was not encountered in boring at time of augering. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).	
5								
10								
15								
20								

FIGURE A- 9

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19/22</u> BORING NO. <u>B-7</u>
							GROUND ELEVATION <u>272± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>HOLLOW STEM AUGER</u>
							DRIVE WEIGHT <u>140 LBS (SPOOLING CABLE)</u> DROP <u>30 IN</u>
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
							DESCRIPTION/INTERPRETATION
0						CL-ML	<p>ALLUVIUM: Reddish brown, moist, hard, silty CLAY with trace sand and gravel.</p> <p>Brown.</p>
75							
5		75					
		46					
						GC	Brown, moist, very dense, clayey GRAVEL with sand.
		88	11.4	125.3			
						GP	Brown, moist, very dense, GRAVEL with sand and gravel.
10		73					
							<p>Total Depth: 10.5 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.</p> <p>Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).</p>
15							
20							

FIGURE A- 10

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19/22</u> BORING NO. <u>B-8</u>
							GROUND ELEVATION <u>278'± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							DESCRIPTION/INTERPRETATION
0						GP	<p>ALLUVIUM: Brown, dry, dense, poorly graded GRAVEL with clay and sand.</p>
70							
5		72	4.2	113.1			
							<p>Total Depth: 6.5 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.</p> <p>Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).</p>
10							
15							
20							

FIGURE A- 11

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19/22</u> BORING NO. <u>B-9</u>
							GROUND ELEVATION <u>277± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>HOLLOW STEM AUGER</u>
							DRIVE WEIGHT <u>140 LBS (SPOOLING CABLE)</u> DROP <u>30 IN</u>
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
							DESCRIPTION/INTERPRETATION
0						GP	<p>ALLUVIUM: Brown, moist, medium dense, poorly graded GRAVEL with sand. Gravel up to 1/2" inches, subrounded. Fine- to medium-grained sand.</p> <p>Dry.</p> <p>Very dense, cobbles.</p>
5		23					
		76					
		78	3.7	106.0			
10		88				SC	Brown, moist, very dense, clayey SAND.
		86					
15							<p>Total Depth: 15 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.</p> <p>Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).</p>
20							

FIGURE A- 12

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19/22</u> BORING NO. <u>B-10</u>
							GROUND ELEVATION <u>286'± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>HOLLOW STEM AUGER</u>
							DRIVE WEIGHT <u>140 LBS (SPOOLING CABLE)</u> DROP <u>30 IN</u>
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
							DESCRIPTION/INTERPRETATION
0						GP	ALLUVIUM: Brown, moist, dense, poorly graded GRAVEL with clay and sand. Clast supported.
5		70	5.1	124.2			
10		65					Increasing sand content. Very dense.
15		82					
20		80	3.9	113.4			
							Total Depth: 15 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.
							Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).

FIGURE A- 13

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>8/24/2022</u>	BORING NO. <u>B-10a</u>
							GROUND ELEVATION <u>286'± (MSL)</u>	SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>Hand Auger</u>	
							DRIVE WEIGHT _____	DROP _____
							SAMPLED BY <u>CDS</u>	LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
DESCRIPTION/INTERPRETATION								
0						GC	Brown, dry, dense, clayey GRAVEL with sand.	
							Total Depth: 1.0 feet stopped on refusal.	
							Backfilled with soil shortly after boring on 8/24/2022.	
							Notes: Groundwater was not encountered in boring at time of augering. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents(Google, 2022).	
5								
10								
15								
20								

FIGURE A- 14

DEPTH (feet)	Bulk Driven SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED <u>9/19/22</u> BORING NO. <u>B-11</u>
							GROUND ELEVATION <u>286± (MSL)</u> SHEET <u>1</u> OF <u>1</u>
							METHOD OF DRILLING <u>HOLLOW STEM AUGER</u>
							DRIVE WEIGHT <u>140 LBS (SPOOLING CABLE)</u> DROP <u>30 IN</u>
							SAMPLED BY <u>CDS</u> LOGGED BY <u>CDS</u> REVIEWED BY <u>RH</u>
							DESCRIPTION/INTERPRETATION
0						GC	ALLUVIUM: Dark brown, moist, medium dense, clayey GRAVEL with sand.
5		55					Brown, moist, medium dense, GRAVEL with sand and clay
		38					Dense. Rock.
10		81	4.0	112.3			
		64					
15							Total Depth: 11.5 feet stopped at planned depth. Backfilled with soil immediately after boring on 9/19/2022.
20							Notes: Groundwater was not encountered in boring at time of borings. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents (Google, 2022).

FIGURE A- 15

DEPTH (feet)	Bulk Driven	SAMPLES	BLOWS/FOOT	MOISTURE (%)	DRY DENSITY (PCF)	SYMBOL	CLASSIFICATION U.S.C.S.	DATE DRILLED	BORING NO.				
								8/24/2022	B-11a				
								GROUND ELEVATION	SHEET	OF			
								286'± (MSL)	1	1			
								METHOD OF DRILLING	Hand Auger				
								DRIVE WEIGHT	DROP				
								SAMPLED BY	CDS	LOGGED BY	CDS	REVIEWED BY	RH
								DESCRIPTION/INTERPRETATION					
0							CL	Brown, dry to moist, firm to stiff, sandy lean CLAY with gravel.					
								Total Depth: 1.3 feet stopped on refusal.					
								Backfilled with soil shortly after boring on 8/24/2022.					
								Notes: Groundwater was not encountered in boring at time of augering. It may rise higher due to relatively slow rate of seepage in clay and several other factors, as discussed in the report. Ground elevation shown above is an estimation only. It is based on our interpretation of published maps and other documents reviewed for the purposes of this evaluation. It is not sufficiently accurate for preparing construction bids and design documents(Google, 2022).					
5													
10													
15													
20													

FIGURE A- 16



APPENDIX B

Laboratory Testing

APPENDIX B

LABORATORY TESTING

Classification

Soils were visually and texturally classified in accordance with the Unified Soil Classification System (USCS) in accordance with ASTM D 2488. Soil classifications are indicated on the logs of the exploratory borings in Appendix A.

In-Place Moisture and Density

The moisture content and dry density of relatively undisturbed samples obtained from the exploratory borings were evaluated in accordance with ASTM D 2937. The test results are presented on the logs of the exploratory borings in Appendix A.

Gradation Analysis

Gradation analysis tests were performed on selected representative soil samples in accordance with ASTM D 422. The grain-size distribution curves are shown on Figures B-1 through B-4. These test results were utilized in evaluating the soil classifications in accordance with the USCS.

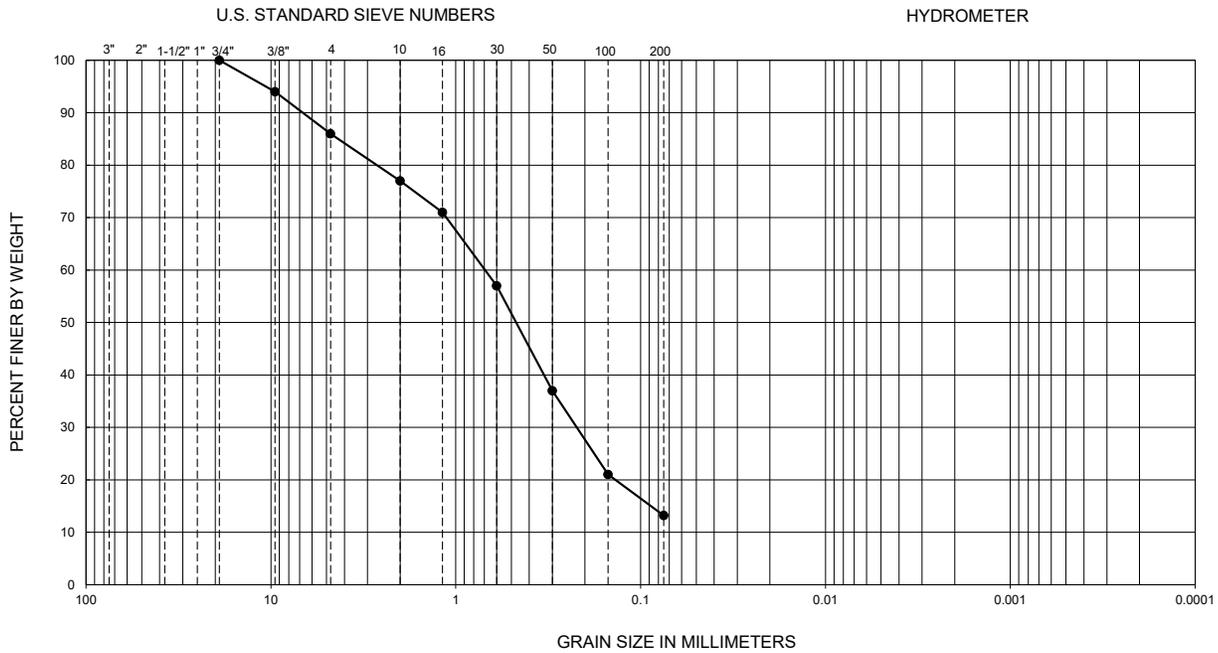
Atterberg Limits

Tests were performed on selected representative fine-grained soil samples to evaluate the liquid limit, plastic limit, and plasticity index in accordance with ASTM D 4318. These test results were utilized to evaluate the soil classification in accordance with the USCS. The test results and classifications are shown on Figure B-5.

Expansion Index

The expansion index of a selected material was evaluated in accordance with ASTM D 4829. The specimen was molded under a specified compactive energy at approximately 50 percent saturation (plus or minus 1 percent). The prepared 1 inch thick by 4 inch diameter specimen was loaded with a surcharge of 144 pounds per square foot and inundated with tap water. Readings of volumetric swell were made for a period of 24 hours. The test results are presented on Figure B-6.

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	B-1	10.0-10.5	--	--	--	--	0.23	0.72	--	--	13	SC

PERFORMED IN ACCORDANCE WITH ASTM D 422 / D6913

Group Name: Clayey SAND

Soak Time: 2.0

% Gravel 14

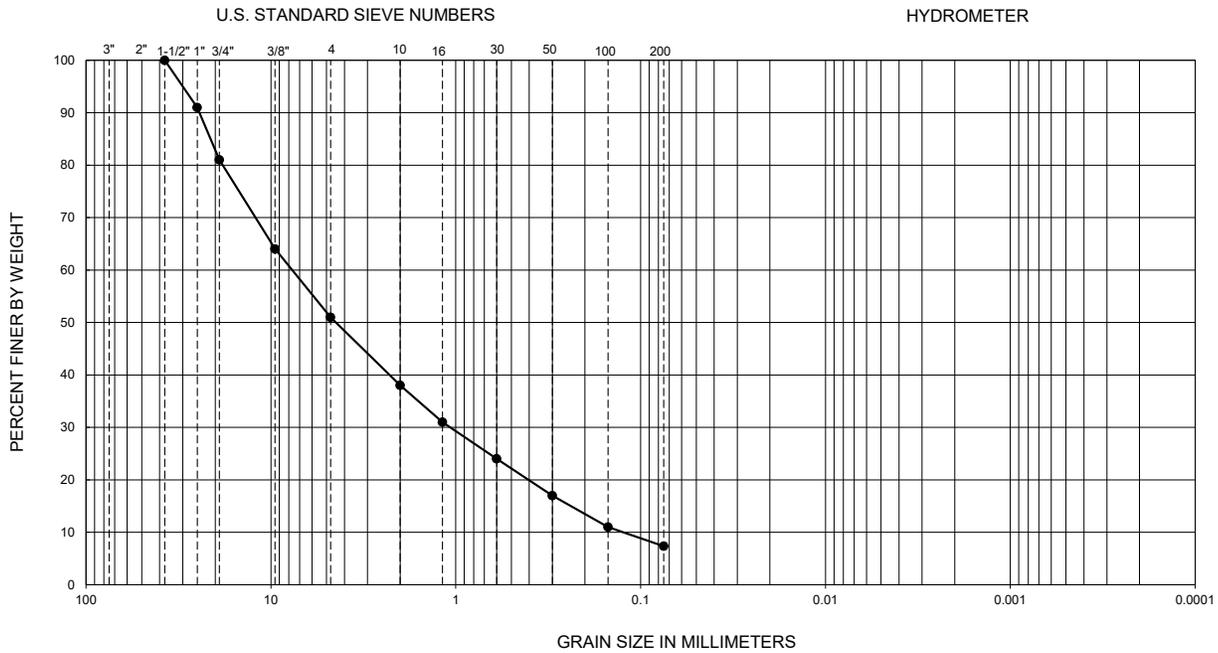
% Sand 73

% Fines 13

FIGURE B-1

GRADATION TEST RESULTS

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	B-2	10.0-10.5	--	--	--	0.13	1.10	8.04	62.1	1.2	7	GW-GC

PERFORMED IN ACCORDANCE WITH ASTM D 422 / D6913

Group Name: Well-graded GRAVEL with clay and sand

Soak Time: 2.0

% Gravel 49

% Sand 44

% Fines 7

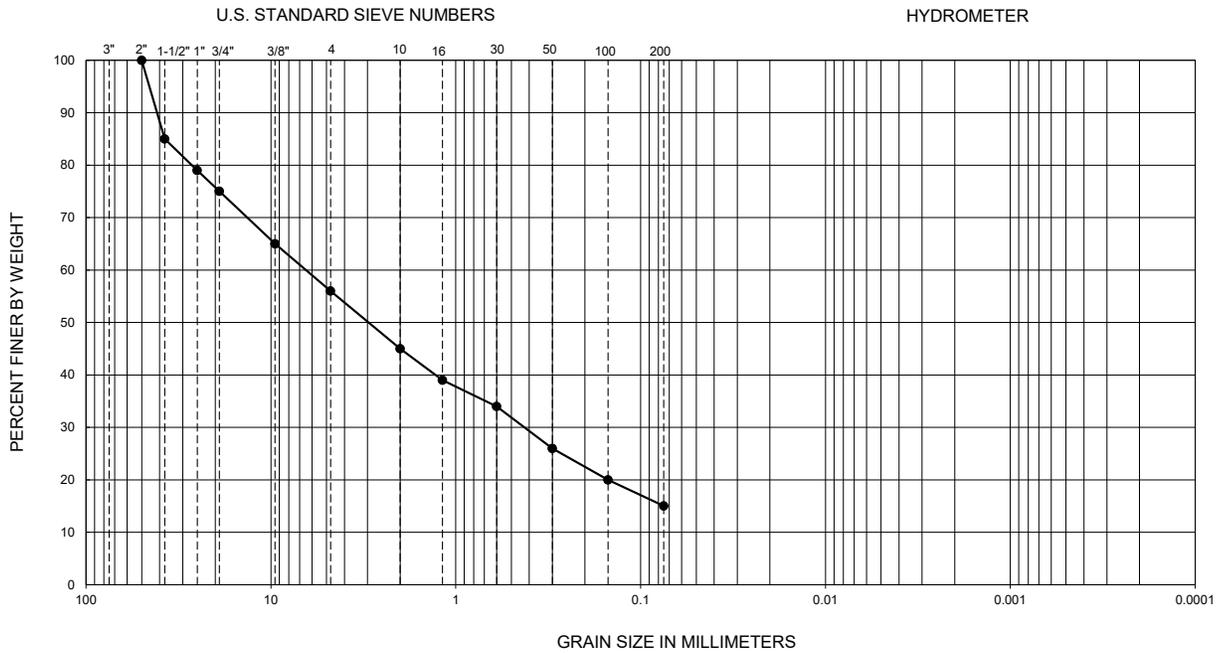
FIGURE B-2

GRADATION TEST RESULTS

CUPERTINO MEMORIAL PARK
21121 STEVENS BLVD, CUPERTINO, CA

404269001 | 11/22

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	B-5	6.0-6.5	--	--	--	--	0.45	6.86	--	--	15	GC

PERFORMED IN ACCORDANCE WITH ASTM D 422 / D6913

Group Name: Clayey GRAVEL with sand

Soak Time: 2.0

% Gravel 44

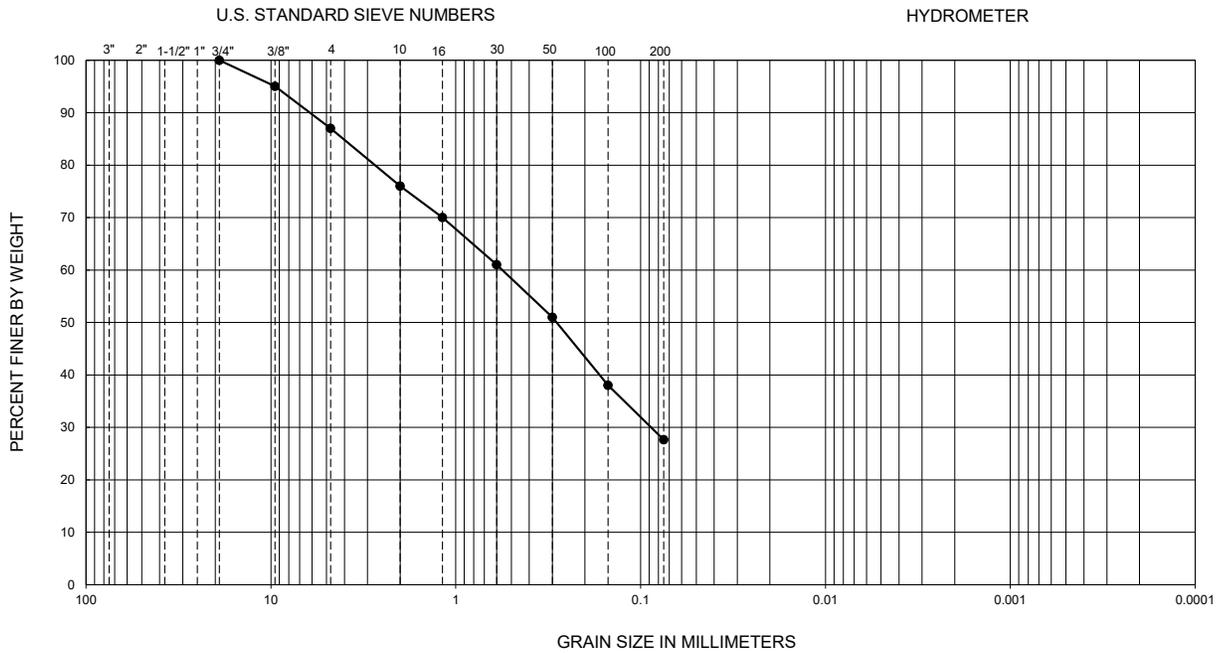
% Sand 41

% Fines 15

FIGURE B-3

GRADATION TEST RESULTS

GRAVEL		SAND			FINES	
Coarse	Fine	Coarse	Medium	Fine	SILT	CLAY



Symbol	Sample Location	Depth (ft)	Liquid Limit	Plastic Limit	Plasticity Index	D ₁₀	D ₃₀	D ₆₀	C _u	C _c	Passing No. 200 (percent)	USCS
●	B-9	10.5-11.0	--	--	--	--	0.09	0.57	--	--	28	SC

PERFORMED IN ACCORDANCE WITH ASTM D 422 / D6913

Group Name: Clayey SAND

Soak Time: 2.0

% Gravel 13

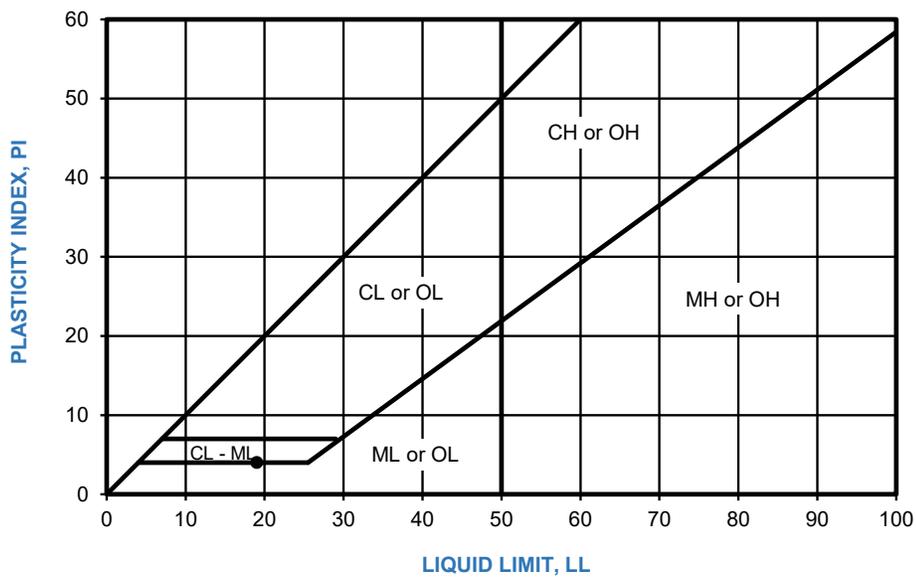
% Sand 59

% Fines 28

FIGURE B-4

GRADATION TEST RESULTS

SYMBOL	LOCATION	DEPTH (ft)	LIQUID LIMIT	PLASTIC LIMIT	PLASTICITY INDEX	USCS CLASSIFICATION (Fraction Finer Than No. 40 Sieve)	USCS
●	B-7	3.5-4.0	19	15	4	CL-ML	CL-ML



PERFORMED IN ACCORDANCE WITH ASTM D 4318

FIGURE B-5

ATTERBERG LIMITS TEST RESULTS

SAMPLE LOCATION	SAMPLE DEPTH (ft)	INITIAL MOISTURE (percent)	COMPACTED DRY DENSITY (pcf)	FINAL MOISTURE (percent)	VOLUMETRIC SWELL (in)	EXPANSION INDEX	POTENTIAL EXPANSION
B-3	2.5-3.0	9.4	111.8	17.9	0.006	6	Very Low
B-7	2.5-3.0	8.9	114.2	15.2	0.008	8	Very Low
B-11a	0.0-1.3	11.9	102.5	23.1	0.025	25	Low

PERFORMED IN ACCORDANCE WITH ASTM D 4829

FIGURE B-6

EXPANSION INDEX TEST RESULTS

CUPERTINO MEMORIAL PARK
21121 STEVENS BLVD, CUPERTINO, CA

404269001 | 11/22

APPENDIX C

Corrosivity Testing (CERCO Analytical)



7 September, 2022

Job No. 2208054
Cust. No. 13270

1100 Willow Pass Court, Suite A
Concord, CA 94520-1006
925 462 2771 Fax, 925 462 2775
www.cercoanalytical.com

Ms. Tatiana Gospe
Ninyo & Moore
2149 O'Toole Avenue, Suite 30
San Jose, CA 95131

Subject: Project No.: 404269001
Project Name: Memorial Park, 21121 Stevens Creek Blvd., Cupertino, CA
Corrosivity Analysis – ASTM Test Methods

Dear Ms. Gospe:

Pursuant to your request, CERCO Analytical has analyzed the soil sample submitted on August 29, 2022. Based on the analytical results, this brief corrosivity evaluation is enclosed for your consideration.

Based upon the resistivity measurement, this sample is classified as "corrosive". All buried iron, steel, cast iron, ductile iron, galvanized steel and dielectric coated steel or iron should be properly protected against corrosion depending upon the critical nature of the structure. All buried metallic pressure piping such as ductile iron firewater pipelines should be protected against corrosion.

The chloride ion concentration is 78 mg/kg and is determined to be insufficient to attack steel embedded in a concrete mortar coating.

The sulfate ion concentration is 49 mg/kg and is determined to be insufficient to damage reinforced concrete structures and cement mortar-coated steel at this location.

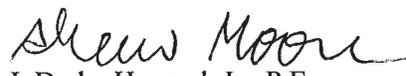
The pH of the soil is 7.32, which does not present corrosion problems for buried iron, steel, mortar-coated steel and reinforced concrete structures.

The redox potential is 200-mV and is indicative of potentially "moderately corrosive" soils resulting from anaerobic soil conditions.

This corrosivity evaluation is based on general corrosion engineering standards and is non-specific in nature. For specific long-term corrosion control design recommendations or consultation, please call *JDH Corrosion Consultants, Inc.* at (925) 927-6630.

We appreciate the opportunity of working with you on this project. If you have any questions, or if you require further information, please do not hesitate to contact us.

Very truly yours,
CERCO ANALYTICAL, INC.

JDH

J. Darby Howard, Jr., P.E.
President

JDH/jdl
Enclosure



1100 Willow Pass Court, Suite A
 Concord, CA 94520-1006
 925 462 2771 Fax. 925 462 2775
 www.cercoanalytical.com

Client: Ninyo & Moore
 Client's Project No.: 404269001
 Client's Project Name: Memorial Park, 21121 Stevens Creek Blvd., Cupertino, CA
 Date Sampled: 24-Aug-22
 Date Received: 29-Aug-22
 Matrix: Soil
 Authorization: Signed Chain of Custody

Date of Report: 7-Sep-2022

Job/Sample No.	Sample I.D.	Redox (mV)	pH	Conductivity (umhos/cm)*	Resistivity (100% Saturation) (ohms-cm)	Sulfide (mg/kg)*	Chloride (mg/kg)*	Sulfate (mg/kg)*
2208054-001	B-6/0.0-1.2'	200	7.32	-	1,800	-	78	49

Method:	ASTM D1498	ASTM D4972	ASTM D1125M	ASTM G57	ASTM D4658M	ASTM D4327	ASTM D4327
Reporting Limit:	-	-	10	-	50	15	15
Date Analyzed:	2-Sep-2022	2-Sep-2022	-	2-Sep-2022	-	2-Sep-2022	2-Sep-2022

* Results Reported on "As Received" Basis
 N.D. - None Detected

Sherri Moore
 Sherri Moore
 Chemist



2149 O'Toole Avenue, Suite 30 | San Jose, California 95131 | p. 408.435.9000

ARIZONA | CALIFORNIA | COLORADO | NEVADA | TEXAS | UTAH

ninyoandmoore.com

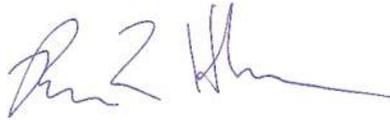
Ninyo & Moore
Geotechnical & Environmental Sciences Consultants



TYPE OF SERVICES	Phase I Environmental Site Assessment
LOCATION	Cupertino Memorial Park, 10185 North Stelling Road and 21251 Stevens Creek Boulevard Cupertino, California
CLIENT	David J. Powers & Associates
PROJECT NUMBER	118-139-1
DATE	October 13, 2022



Type of Services	Phase I Environmental Site Assessment
Location	Cupertino Memorial Park, 10185 North Stelling Road and 21251 Stevens Creek Boulevard Cupertino, California
Client	David J. Powers & Associates
Client Address	1871 The Alameda, Suite 200 San Jose, California 95126
Project Number	118-139-1
Date	October 13, 2022



Prepared by Ron L. Helm, C.E.G.
Senior Principal Geologist



Table of Contents

SECTION 1: INTRODUCTION	1
1.1 PURPOSE.....	1
1.2 SCOPE OF WORK.....	2
1.3 ASSUMPTIONS.....	2
1.4 ENVIRONMENTAL PROFESSIONAL	2
SECTION 2: SITE DESCRIPTION	3
2.1 LOCATION AND OWNERSHIP	3
2.2 CURRENT/PROPOSED USE OF THE SITE.....	3
2.3 SITE SETTING AND ADJOINING PROPERTY USE	3
SECTION 3: USER PROVIDED INFORMATION	3
3.1 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS	4
3.2 SPECIALIZED KNOWLEDGE AND COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION.....	4
SECTION 4: RECORDS REVIEW	4
4.1 STANDARD ENVIRONMENTAL RECORD SOURCES.....	4
4.1.1 On-Site Database Listings.....	5
4.1.2 Adjoining Property Database Listings and Nearby Spill Incidents	5
4.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES.....	5
4.2.1 City and County Agency File Review	5
4.2.2 Geologic Energy Management Division Maps	6
SECTION 5: PHYSICAL SETTING	6
5.1 RECENT USGS TOPOGRAPHIC MAP	6
5.2 HYDROGEOLOGY	6
SECTION 6: HISTORICAL USE INFORMATION	6
6.1 HISTORICAL SUMMARY	6
6.1.1 City Directory Review.....	8
SECTION 7: SITE RECONNAISSANCE	8
7.1 METHODOLOGY AND LIMITING CONDITIONS.....	8
7.2 OBSERVATIONS.....	9
7.2.1 Site Photographs	10
SECTION 8: ENVIRONMENTAL QUESTIONNAIRE AND INTERVIEWS	12
8.1 ENVIRONMENTAL QUESTIONNAIRE / CURRENT OWNER AND OCCUPANT INTERVIEW	12
8.2 INTERVIEWS WITH PREVIOUS OWNERS AND OCCUPANTS	12
8.3 INTERVIEWS WITH STATE AND/OR LOCAL GOVERNMENT OFFICIALS.....	12
SECTION 9: FINDINGS, OPINIONS, AND CONCLUSIONS (WITH RECOMMENDATIONS)	13
9.1 HISTORICAL SITE USAGE	13
9.2 CHEMICAL STORAGE AND USE	13
9.3 AGRICULTURAL USE.....	13
9.4 LEAD-BASED PAINT AND TERMITE CONTROL PESTICIDES.....	13
9.5 ASBESTOS CONTAINING BUILDING MATERIALS (ACBMS)	14
9.6 IMPORTED SOIL	14
9.7 POTENTIAL ENVIRONMENTAL CONCERNS WITHIN THE SITE VICINITY.....	14
9.8 DATA GAPS	14
9.9 DATA FAILURES	14
9.10 RECOGNIZED ENVIRONMENTAL CONDITIONS.....	15

SECTION 10: LIMITATIONS 15
10.1 REPORT VIABILITY 16

FIGURE 1 – VICINITY MAP
FIGURE 2 – SITE PLAN

APPENDIX A – DATABASE SEARCH REPORT
APPENDIX B – HISTORIC AERIAL PHOTOGRAPHS AND MAPS
APPENDIX C – LOCAL STREET DIRECTORY SEARCH RESULTS
APPENDIX D – QUESTIONNAIRE

Type of Services
Location

Phase I Environmental Site Assessment
Cupertino Memorial Park, 10185 North Stelling Road
and 21251 Stevens Creek Boulevard
Cupertino, California

SECTION 1: INTRODUCTION

This report presents the results of the Phase I Environmental Site Assessment (ESA) performed at Cupertino Memorial Park, 10185 North Stelling Road and 21251 Stevens Creek Boulevard in Cupertino, California (Site) as shown on Figures 1 and 2. This work was performed for David J. Powers & Associates in accordance with our August 19, 2022 agreement (Agreement).

1.1 PURPOSE

The scope of work presented in the Agreement was prepared in general accordance with ASTM E1527-21 titled, “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process” (ASTM Standard). The ASTM Standard is in general compliance with the Environmental Protection Agency (EPA) rule titled, “Standards and Practices for All Appropriate Inquiries; Final Rule” (AAI Rule, 40 CFR Part 312). The purpose of this Phase I ESA is to strive to identify, to the extent feasible pursuant to the scope of work presented in the Agreement, Recognized Environmental Conditions at the Site.

As defined by ASTM E1527-21, the term Recognized Environmental Condition means 1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; 2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or 3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment. A de minimis condition¹ is not a recognized environmental condition.

Cornerstone Earth Group, Inc. (Cornerstone) understands that David J. Powers & Associates is providing California Environmental Quality Act (CEQA) support associated with preparation of the Memorial Park Specific Plan. We performed this Phase I ESA to support David J. Powers & Associates in evaluation of Recognized Environmental Conditions at the Site. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions at the Site.

¹ A de minimis condition is defined by the ASTM Standard as a condition related to a release that generally does not present a threat to human health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

1.2 SCOPE OF WORK

As presented in our Agreement, the scope of work performed for this Phase I ESA included the following:

- A reconnaissance of the Site to note readily observable indications of significant releases of hazardous materials to structures, soil, soil vapor or groundwater.
- Drive-by observation of adjoining properties to note readily apparent activities involving hazardous materials that have or could significantly impact the Site.
- Acquisition and review of a regulatory agency database report of public records for the general area of the Site to evaluate potential impacts to the Site from reported contamination incidents on-Site or at nearby facilities.
- Review of readily available information on file at selected governmental agencies to help evaluate past and current Site use and hazardous materials management practices.
- Historical research including review of readily available maps and aerial photographs to help evaluate past and current Site uses.
- Interviews with persons reportedly knowledgeable of current and/or prior Site uses, including the current Site owner and occupant(s).
- Preparation of a written report summarizing our findings and recommendations.

The limitations for the Phase I ESA are presented in Section 10.

1.3 ASSUMPTIONS

In preparing this Phase I ESA, Cornerstone can neither warrant nor guarantee that records obtained from or prepared by other parties, such as, but not limited to, regulatory agency records, interview responses, maps, related documents, and environmental reports prepared by others are accurate or complete. Cornerstone relied on the information obtained during this study unless we had actual knowledge that the information was incorrect or unless it was obvious that the information was incorrect based on other information obtained. We also assumed that the boundaries of the Site, based on information provided by David J. Powers & Associates, are as shown on Figure 2. We have not independently verified the accuracy or completeness of any data received.

1.4 ENVIRONMENTAL PROFESSIONAL

This Phase I ESA was performed by Stason I. Foster, P.E. and Ron L. Helm, C.E.G. We declare that, to the best of our professional knowledge and belief, we meet the definition of Environmental Professional as defined in § 312.10 of 40 C.F.R. Part 312. We have the specific qualifications based on education, training and experience to assess a property of the nature, history and setting of the subject property. We have developed and performed the All Appropriate Inquiries in general conformance with the standards and practices set forth in 40 CFR Part 312.

SECTION 2: SITE DESCRIPTION

This section describes the Site as of the date of this Phase I ESA. The location of the Site is shown on Figures 1 and 2. Tables 1 through 3 summarize general characteristics of the Site and adjoining properties. The Site is described in more detail in Section 7, based on our on-Site observations.

2.1 LOCATION AND OWNERSHIP

Table 1 describes the physical location, and ownership of the Site, based on information provided by David J. Powers & Associates.

Table 1. Location and Ownership

Assessor's Parcel No. (APN)	Reported Address/Location	Owner	Approximate Lot Size
326-29-006	21251 Steven Creek Boulevard*	City of Cupertino	14.5 acres
326-54-041	10185 North Stelling Road	City of Cupertino	7.2 acres
326-27-033	N/A	City of Cupertino	0.4 acres

* 21121 Steven Creek Boulevard also was identified as an address associated with the Site and was researched during this Phase I ESA.

2.2 CURRENT/PROPOSED USE OF THE SITE

The current and proposed uses of the Site are summarized in Table 2.

Table 2. Current and Proposed Uses

Current Use	Cupertino Memorial Park, Quinlan Community Center and Cupertino Senior Center
Proposed Use	Public Park and Open Space, Public Facilities, Transportation, etc.

2.3 SITE SETTING AND ADJOINING PROPERTY USE

Land use in the general Site vicinity appears to be primarily residential. During the Site visit, adjoining properties were observed from the Site and from adjacent public thoroughfares. Based on our Site vicinity reconnaissance, adjoining property uses are summarized below in Table 3. No features, activities, uses or conditions on the adjoining properties were observed that are considered indicative of Recognized Environmental Conditions at the Site.

Table 3. Adjoining Property Uses

North	Residential
South	De Anza College (across Stevens Creek Boulevard)
East	Residential and Cupertino Sports Complex
West	Residential

SECTION 3: USER PROVIDED INFORMATION

The ASTM standard defines the User as the party seeking to use a Phase I ESA to evaluate the presence of Recognized Environmental Conditions associated with a property. For the purpose of this Phase I ESA, the User is David J. Powers & Associates. The "All Appropriate Inquiries"

Final Rule (40 CFR Part 312) requires specific tasks be performed by or on behalf of the party seeking to qualify for Landowner Liability Protection under CERCLA (*i.e.*, the User).

Per the ASTM standard, if the User has information that is material to Recognized Environmental Conditions in connection with the Site, such information should be provided to the Environmental Professional. This information includes: 1) specialized knowledge or experience of the User, 2) commonly known or reasonably ascertainable information within the local community, and 3) knowledge that the purchase price of the Site is lower than the fair market value due to contamination. A search of title records for environmental liens and activity and use limitations also is required.

3.1 ENVIRONMENTAL LIENS OR ACTIVITY AND USE LIMITATIONS

An environmental lien is a financial instrument that may be used to recover past environmental cleanup costs. Activity and use limitations (AULs) include other environmental encumbrances, such as institutional and engineering controls. Institutional controls (ICs) are legal or regulatory restrictions on a property's use, while engineering controls (ECs) are physical mechanisms that restrict property access or use.

The regulatory agency database report described in Section 4.1 did not identify the Site as being in 1) US EPA databases that list properties subject to land use restrictions (*i.e.*, engineering and institutional controls) or Federal Superfund Liens or 2) lists maintained by the California Department of Toxic Substances Control (DTSC) of properties that are subject to AULs or environmental liens where the DTSC is a lien holder.

ASTM E1527-21 categorizes the requirement to conduct a search for Environmental Liens and AULs as a User responsibility. A search of land title records for environmental liens and AULs was not within the scope of the current Phase I ESA and the User did not provide such search results to Cornerstone.

3.2 SPECIALIZED KNOWLEDGE AND COMMONLY KNOWN OR REASONABLY ASCERTAINABLE INFORMATION

Based on information provided by or discussions with David J. Powers & Associates, we understand that David J. Powers & Associates does not have specialized knowledge or experience, commonly known or reasonably ascertainable information regarding the Site, or other information that is material to Recognized Environmental Conditions.

SECTION 4: RECORDS REVIEW

4.1 STANDARD ENVIRONMENTAL RECORD SOURCES

Cornerstone conducted a review of federal, state and local regulatory agency database records provided by Environmental Data Resources (EDR) to evaluate the likelihood of contamination incidents at and near the Site. The database sources and the search distances are in general accordance with the requirements of ASTM E1527-21. A list of the database sources reviewed, a description of the sources, and a radius map showing the location of reported facilities relative to the project Site are attached in Appendix A.

The purpose of the records review was to obtain reasonably available information to help identify Recognized Environmental Conditions. Accuracy and completeness of record information varies among information sources, including government sources. Record information is often inaccurate or incomplete. The Environmental Professional is not obligated to identify mistakes or insufficiencies or review every possible record that might exist with respect to the Site. The customary practice is to review information from standard sources that is reasonably ascertainable within reasonable time and cost constraints.

4.1.1 On-Site Database Listings

Memorial Park Ponds Repurposing was identified at the Site address on the California Integrated Water Quality System (CIWQS) database, a computer system used by the State and Regional Water Quality Control Boards to track information about places of environmental interest, manage permits and other orders, track inspections, and manage violations and enforcement activities. This listing appears to be associated recent construction activities involving the removal of decorative, concrete lined ponds at the park.

4.1.2 Adjoining Property Database Listings and Nearby Spill Incidents

Based on the information presented in the agency database report, no off-Site spill incidents were reported that appear likely to significantly impact soil, soil vapor or groundwater beneath the Site. The potential for impact was based on our interpretation of the types of incidents, the locations of the reported incidents in relation to the Site and the assumed groundwater flow direction. A few businesses on adjoining properties were identified on regulatory agency databases relating primarily to regulatory filings associated with hazardous material use/storage, and generation or disposal of hazardous wastes. Such listings are common for commercial facilities in urban settings and are not indicative of hazardous material releases; thus, further review of records associated with these listings does not appear warranted.

4.2 ADDITIONAL ENVIRONMENTAL RECORD SOURCES

The following additional sources of readily ascertainable public information for the Site also were reviewed during this Phase I ESA.

4.2.1 City and County Agency File Review

Cornerstone obtained available files pertaining to the Site at the following public agencies: the Cupertino Building Department (BD), Santa Clara County Fire Department (SCCFD), and the Santa Clara County Department of Environmental Health (DEH).

The DEH and SCCFD indicated that they had no files pertaining to hazardous materials use at the Site.

Building Department files for 21251 Stevens Creek Boulevard contained permit records dated between 1999 and 2017 for construction of the existing Senior Center building and subsequent repairs and alterations. Permits dated between 2010 and 2016 were for cellular telephone antenna equipment installation. A 2022 permit was for the in-progress pond repurposing project at Memorial Park. The files additionally contained a 1980 Certificate of Occupancy for a former "Senor Citizen Building."

Building Department files for 10185 North Stelling Road contained permit records dated between 1988 and 2021 associated with construction of the Quinlan Community Center and various subsequent alterations and repairs.

4.2.2 Geologic Energy Management Division Maps

To evaluate the presence of oil or gas wells on-Site and in the immediate Site vicinity, maps available on-line at the California Department of Conservation, Geologic Energy Management Division (CalGEM) website were reviewed. Review of the available map for the Site area did not show oil or gas wells on-Site or on the adjacent properties.

SECTION 5: PHYSICAL SETTING

We reviewed readily available geologic and hydrogeologic information to evaluate the likelihood that chemicals of concern released on a nearby property could pose a significant threat to the Site and/or its intended use.

5.1 RECENT USGS TOPOGRAPHIC MAP

A 2018 USGS 7.5 minute topographic map was reviewed to evaluate the physical setting of the Site. The Site's elevation is approximately 280 feet above mean sea level; topography in the vicinity of the Site slopes downward gently to the northeast towards the San Francisco Bay.

5.2 HYDROGEOLOGY

Based on our experience and information presented in the California Geotracker database pertaining to nearby properties, groundwater beneath the Site is likely present at depths of greater than 100 feet. Groundwater likely flows toward the northeast.

SECTION 6: HISTORICAL USE INFORMATION

The objective of the review of historical use information is to develop a history of the previous uses of the Site and adjoining properties in order to help identify the likelihood of past uses having led to Recognized Environmental Conditions at the Site. The ASTM standard requires the identification of all obvious uses of the Site from the present back to the Site's first developed use, or back to 1940, whichever is earlier, using reasonably ascertainable standard historical sources. The identification of obvious uses of adjoining properties also is required.

6.1 HISTORICAL SUMMARY

The historical sources reviewed are summarized below. The results of our review of these sources are summarized in Table 4.

- **Historical Aerial Photographs:** We reviewed aerial photographs dated between 1939 and 2016 obtained from EDR of Shelton, Connecticut; copies of aerial photographs reviewed are presented in Appendix B.
- **Historical Topographic Maps:** We reviewed USGS 15-minute and 7.5-minute historic topographic maps dated 1897, 1899, 1902, 1943, 1947, 1948, 1953, 1961, 1968, 1973,

1980, 2012, 2015 and 2018; copies of historic topographic maps reviewed are presented in Appendix B.

- **Historical Fire Insurance Maps:** EDR reported that the Site was not within the coverage area of fire insurance maps.

Table 4. Summary of Historical Source Information

Date	Source	Comments
1897, 1899, 1902, 1943, 1947, 1948, 1953, 1961, 1968, 1973 and 1980	Topographic maps	<p>Site: Several small structures typical of residences and associated outbuildings are depicted on-Site. Orchards also are depicted on-Site on the maps dated from 1948 to 1968.</p> <p>Adjoining Properties: Small structures typical of residences are depicted on some of the adjoining parcels. Orchards also are depicted on adjoining properties on the maps dated from 1943 to 1968. What appear to be residential developments are shown to the north and east by 1953 and to the west by 1973. De Anza College is shown to the south by 1968.</p>
1995 to 2018	Topographic maps	<p>Site: The Quinlan Community Center is shown to have been constructed on the eastern portion of the Site by 1995.</p> <p>Adjoining Properties: De Anza College is shown to the south and other adjoining properties are shown within the urban developed area of Cupertino.</p>
1939 to 1968	Aerial photographs	<p>Site: Shown to be occupied by orchards and what appear to be several residences and associated outbuildings.</p> <p>Adjoining Properties: Shown to be occupied mainly by orchards and what appear to be several residences and associated outbuildings. An increase in residential development is shown to the east by the 1950s. De Anza College is shown to have been constructed to the south by 1968.</p>
1974	Aerial photograph	<p>Site: Grading and construction associated with Memorial Park facilities (e.g., tennis courts and baseball field) is shown to be in progress on the northwestern portion of the Site. Residences and associated outbuildings, along with orchards are shown to remain on other portions of the Site.</p> <p>Adjoining Properties: Orchards remain to the north and southeast. De Anza College is shown to the south. Residential developments are shown to the east and west.</p>
1982 to 2016	Aerial photographs	<p>Site: A former building at the Cupertino Senior Center location is shown to have been constructed by 1982 and Memorial Park facilities are shown on the western portion of the Site. Orchards are shown to remain on the eastern portion of the Site on the 1982 photograph; by 1991, the Quinlan Community Center is shown to have been constructed on the eastern portion of the Site. By 2006, the existing Cupertino Senior Center building is shown to have been constructed, replacing a former building.</p> <p>Adjoining Properties: Development on adjoining properties appears generally similar to the existing conditions.</p>

6.1.1 City Directory Review

To obtain additional information regarding past uses of the Site and adjoining properties, business directories including city, cross reference and telephone directories were reviewed, if available, at approximately five year intervals for the years spanning 1968 through 2017. A summary of the city directory listings for Site occupants is presented in Table 6. The listed business names at adjoining properties are not indicative of businesses that are typically associated with the use or storage of significant quantities of hazardous materials (e.g., gasoline stations, dry cleaners, manufacturing facilities, etc.). The acquired city directory report is presented in Appendix C.

Table 5. On-Site City Directory Listings

Date	Occupant
10185 North Stelling Road	
1992	Cupertino Community Services and Robert W. Quinlan Center
1995	Cupertino Community Services and Cupertino Historical Museum, Cupertino Recreation Department and Salvation Army
2000	Cupertino Community Services and Cupertino Historical Society & Museum
2005 and 2010	Cupertino Historical Society, Cupertino Parks & Recreation and Quinlan Community Center
2014 and 2017	Cupertino Historical Society & Museum
21251 Stevens Creek Boulevard	
1985	Cupertino Senior Center
1992	Cupertino Senior Community Center
1995	Cupertino Senior Citizen Center
2000	City of Cupertino City / Recreation
2005, 2010 and 2014	Cupertino Senior Center
2017	City of Cupertino

SECTION 7: SITE RECONNAISSANCE

We performed a Site reconnaissance to evaluate current Site conditions and to attempt to identify Site Recognized Environmental Conditions. The results of the reconnaissance are discussed below. Additional Site observations are summarized in Table 6. Photographs of the Site are presented in Section 7.2.1.

7.1 METHODOLOGY AND LIMITING CONDITIONS

To observe current Site conditions (readily observable environmental conditions indicative of a significant release of hazardous materials), Cornerstone staff Stason I. Foster, P.E. visited the Site on September 26, 2022. The Site reconnaissance was conducted by walking representative areas of the Site, including the interiors of the on-Site structures, the periphery of the structures and the Site periphery. The Site also was observed from adjacent public thoroughfares. Cornerstone staff only observed those areas that were reasonably accessible, safe, and did not require movement of equipment, materials or other objects. Physical obstructions that limited our ability to view the ground surface at the Site included the existing buildings and associated paved vehicle drives and parking areas (typical of developed properties).

7.2 OBSERVATIONS

At the time of our visit, the Site was developed with Cupertino Memorial Park, the Cupertino Senior Center, and the Quinlan Community Center.

The Cupertino Senior Center and Quinlan Community Center buildings were observed to consist of various rooms used for events, classes and activities, as well as general office space and kitchen facilities. Cupertino Historical Museum and a preschool facility also operated within the community center building.

Memorial Park was observed to consist of open space, tennis courts, athletic fields, and picnic and playground areas. Grading associated with a project to remove former concrete lined decorative ponds was observed to be in progress. A cellular telephone antenna tower and fenced equipment enclosure also were present.

Two wood-framed sheds with concrete floor slabs were observed within the park that contained grounds maintenance equipment. Hazardous materials observed within the sheds consisted primarily of gasoline that was stored in safety cans within a flammable materials storage cabinet, weed killer (Roundup®) contained in portable backpack pump sprayers and marking paint for sports fields.

Facility maintenance rooms were observed in both the Cupertino Senior Center and Quinlan Community Center buildings that contained paints and other common building maintenance supplies. General housekeeping within the facility maintenance rooms, as well as the grounds maintenance sheds, appeared orderly and no evidence of significant chemical spills was readily apparent.

Electricity and/or natural gas fuel sources appeared to be used for building heating/cooling purposes. Potable water appeared to be supplied by the local water service provider. The buildings presumably are connected to the publicly owned sanitary sewer system; no on-Site septic systems were obvious. On-Site storm water catch basins appeared to discharge via below ground piping to the City's storm water drainage system. Electrical transformer owned by PG&E were observed on concrete pads within the park and near the community center and senior center buildings. No evidence of transformer oil leaks was observed.

Table 6. Summary of Readily Observable Site Features

General Observation	Comments
Aboveground Storage Tanks	Not Observed
Agricultural Wells	Not Observed
Air Emission Control Systems	Not Observed
Boilers	Not Observed
Burning Areas (waste burn pits or ash disposal areas)	Not Observed
Chemical Mixing Areas	Not Observed
Chemical Storage Areas	Observed as described above
Drainage Ditches	Not Observed
Drums, Totes, and Intermediate Bulk Containers	Not Observed
Elevators	Not Observed

Table 6 (Continued). Summary of Readily Observable Site Features

General Observation	Comments
Emergency Generators	Not Observed
Equipment Maintenance Areas	Not Observed
Fill Placement (<i>i.e.</i> , fill used to build up the site elevations)	Not Observed
Groundwater Monitoring Wells	Not Observed
Hoods and Ducting (associated with chemical use)	Not Observed
Hydraulic Vehicle or Equipment Lifts	Not Observed
Incinerators	Not Observed
Petroleum Pipelines or Wells	Not Observed
Pits, Ponds, or Lagoons.	Not Observed
Railroad Lines	Not Observed
Row Crops or Orchards	Not Observed
Septic Systems or Cesspools	Not Observed
Solid Waste Disposal Areas (other than municipal trash containers)	Not Observed
Stained Soil or Pavement	Not Observed
Stains or Corrosion on Floors, Walls, or Ceilings	Not Observed
Standing Surface Water or Pools	Not Observed
Stockpiles of Soil or Debris	Not Observed
Stressed Vegetation (unrelated to the lack of water)	Not Observed
Strong, Pungent, or Noxious Odors	Not Observed
Sumps, Clarifiers, Oil-Water Separators, or similar structures	Below grade grease interceptors were observed near kitchen facilities
Transformers	Observed as described above
Underground Storage Tanks	Not Observed
Unidentified Substance Containers	Not Observed
Vehicle Maintenance Areas	Not Observed
Vehicle Wash Areas	Not Observed
Wastewater Neutralization Systems	Not Observed

The comment "Not Observed" does not warrant that these features are not present on-Site; it only indicates that these features were not readily observed during the Site visit.

7.2.1 Site Photographs



Photograph 1. View of the Quinlan Community Center building.



Photograph 2. Interior of Quinlan Community Center.



Photograph 3. Interior of Quinlan Community Center.



Photograph 4. View of the Cupertino Senior Center building.



Photograph 5. Interior of the Cupertino Senior Center.



Photograph 6. Memorial Park picnic area.



Photograph 7. Memorial Park playground area.



Photograph 8. Memorial Park (former pond area).



Photograph 9. One of two grounds maintenance sheds at Memorial Park.



Photograph 10. Interior of grounds maintenance shed.

SECTION 8: ENVIRONMENTAL QUESTIONNAIRE AND INTERVIEWS

8.1 ENVIRONMENTAL QUESTIONNAIRE / CURRENT OWNER AND OCCUPANT INTERVIEW

To help obtain information on current and historical Site use and use/storage of hazardous materials on-Site, we provided an environmental questionnaire for completion by the Site owner (City of Cupertino). The completed questionnaire is attached in Appendix D. The information provided on the questionnaire appears generally consistent with our on-Site observations and information obtained from other data sources. No information indicative of Recognized Environmental Conditions was reported on the questionnaire.

8.2 INTERVIEWS WITH PREVIOUS OWNERS AND OCCUPANTS

Contact information for previous Site owners and occupants was not provided to us. Therefore, interviews with previous Site owners and occupants could not be performed.

8.3 INTERVIEWS WITH STATE AND/OR LOCAL GOVERNMENT OFFICIALS

Per the ASTM Standard, a reasonable attempt should be made to interview at least one staff member of any one of the following types of state and/or local government agencies: fire department, health department, building department, or other agency having jurisdiction over hazardous waste disposal or other environmental matters in the area.

The Cupertino Building Department, Santa Clara County Fire Department, and the Santa Clara County DEH were contacted during this study. The DEH is the Certified Unified Program Agency (CUPA) responsible for implementing California's Unified Hazardous Waste and Hazardous Materials Management regulatory program for properties within Cupertino; the Fire Department also is a Participating Agency (PA). Files pertaining to the Site were requested from each of these agencies; a summary of the information obtained was discussed in Section 4.2.1.

SECTION 9: FINDINGS, OPINIONS, AND CONCLUSIONS (WITH RECOMMENDATIONS)

Cornerstone performed this Phase I ESA in general conformance with ASTM E1527-21 to support David J. Powers & Associates in evaluation of Recognized Environmental Conditions. Our findings, opinions and conclusions are summarized below.

9.1 HISTORICAL SITE USAGE

Based on the information obtained during this study, the Site historically was occupied by orchards, along with what appear to have been several residences and associated outbuildings. During the mid-1970s, Memorial Park facilities (e.g., tennis courts and baseball field) were constructed on the western portion of the Site. A former senior center building was constructed at the southwest corner of the Site during the early 1980s. The existing Quinlan Community Center was constructed on the eastern portion of the Site during the late 1980s. The existing Cupertino Senior Center building was constructed in approximately 2000, replacing the former senior center building.

9.2 CHEMICAL STORAGE AND USE

Paints and other common building maintenance supplies were observed within facility maintenance rooms in both the Cupertino Senior Center and Quinlan Community Center buildings. Grounds maintenance sheds within Memorial Park were observed to contain gasoline that was stored in safety cans within a flammable materials storage cabinet, weed killer (Roundup®) contained in portable backpack pump sprayers and marking paint for sports fields. General housekeeping within the facility maintenance rooms and the grounds maintenance sheds appeared orderly and no evidence of significant chemical spills was readily apparent.

9.3 AGRICULTURAL USE

The Site historically was used for agricultural purposes for several decades. Pesticides may have been applied to crops in the normal course of farming operations. Residual pesticide concentrations may remain in on-Site soil. If elevated concentrations of agricultural chemicals are present, mitigation or soil management measures may be required. We recommend performing soil sampling to evaluate if agricultural chemicals are present at concentrations that may pose a risk to human health. At agricultural properties, pesticides often were stored within structures such as barns or sheds. The recommended sampling should include an evaluation of these former structures, along with the agricultural field areas.

9.4 LEAD-BASED PAINT AND TERMITE CONTROL PESTICIDES

In 1978, the Consumer Product Safety Commission banned lead-containing paints and coatings sold for consumer use. Some lead-containing products, such as industrial coatings, however, are still allowed. Based on the age of the existing Cupertino Senior Center and Quinlan Community Center buildings, lead-containing paint is not likely to be present. Some of the Memorial Park structures (such as restrooms) appear to have been constructed during the 1970s and have greater potential for the presence of lead-containing paint. If demolition is planned, the removal of lead-containing paint is not required if it is bonded to the building materials. However, if the lead-containing paint is flaking, peeling, or blistering, it should be removed prior to demolition. In either case, applicable OSHA regulations must be followed; these include

requirements for worker training, air monitoring and dust control, among others. Any debris or soil containing lead must be disposed appropriately.

Soil adjacent to structures, if painted with lead-containing paint, can become impacted with lead as a result of the weathering and/or peeling of painted surfaces. Soil near wood framed structures also can be impacted by pesticides historically used to control termites. No information was identified during this study documenting the use of lead based paint or termite control pesticides on-Site; however, if previously used, residual pesticide and lead concentrations may remain in on-Site soil. Lead and/or pesticides often are identified in soil near old residences and outbuildings, such as those historically located on-Site. We recommend that shallow soil at the former structure locations be evaluated for the possible presence of lead and pesticides.

9.5 ASBESTOS CONTAINING BUILDING MATERIALS (ACBMS)

Based on the age of the existing Cupertino Senior Center and Quinlan Community Center buildings, it is unlikely that these building materials contain asbestos. Some of the Memorial Park structures (such as restrooms) appear to have been constructed during the 1970s and have greater potential for the presence of asbestos. If demolition, renovation, or re-roofing of the buildings is planned, an asbestos survey may be required by local authorities or National Emissions Standards for Hazardous Air Pollutants (NESHAP) guidelines. NESHAP guidelines require the removal of potentially friable ACBMs prior to building demolition or renovation that may disturb the ACBM.

9.6 IMPORTED SOIL

If the planned development will require importing soil for Site grading, we recommend documenting the source and quality of imported soil. The DTSC's October 2001 Clean Fill Advisory provides useful guidance on evaluating imported fill.

9.7 POTENTIAL ENVIRONMENTAL CONCERNS WITHIN THE SITE VICINITY

Based on the information obtained during this study, no hazardous material spill incidents have been reported in the Site vicinity that would be likely to significantly impact the Site.

9.8 DATA GAPS

ASTM Standard E1527-21 requires the Environmental Professional to comment on significant data gaps that affect our ability to identify Recognized Environmental Conditions. A data gap is a lack of or inability to obtain information required by the ASTM Standard despite good faith efforts by the Environmental Professional to gather such information. A data gap by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. No significant data gaps were identified during this Phase I ESA.

9.9 DATA FAILURES

As described by ASTM Standard E1527-21, a data failure occurs when all of the standard historical sources that are reasonably ascertainable and likely to be useful have been reviewed and yet the historical research objectives have not been met. Data failures are not uncommon when attempting to identify the use of a Site at five year intervals back to the first use or to 1940

(whichever is earlier). The ASTM Standard requires the Environmental Professional to comment on the significance of data failures and whether the data failure affects our ability to identify Recognized Environmental Conditions. A data failure by itself is not inherently significant; it only becomes significant if it raises reasonable concerns. No significant data failures were identified during this Phase I ESA.

9.10 RECOGNIZED ENVIRONMENTAL CONDITIONS

Cornerstone has performed a Phase I ESA in general conformance with the scope and limitations of ASTM E1527-21. This assessment identified the following Recognized Environmental Conditions².

- The Site historically was used for agricultural purposes. There is a potential that residual pesticides could remain in Site soil. If present, this soil may require appropriate management.
- Soil adjacent to structures that are painted with lead-containing paint can become impacted with lead as a result of the weathering and/or peeling of painted surfaces. Soil near wood-framed structures also can be impacted by pesticides historically used to control termites. There is a potential that residual lead and pesticide concentrations could remain in on-Site soil resulting from prior on-Site structures.

This assessment did not identify any Controlled Recognized Environmental Conditions³ or Historical Recognized Environmental Conditions⁴ associated with the Site.

SECTION 10: LIMITATIONS

Cornerstone performed this Phase I ESA to support David J. Powers & Associates in evaluation of Recognized Environmental Conditions associated with the Site. David J. Powers & Associates understands that no Phase I ESA can wholly eliminate uncertainty regarding the potential for Recognized Environmental Conditions to be present at the Site. This Phase I ESA is intended to reduce, but not eliminate, uncertainty regarding the potential for Recognized Environmental Conditions. David J. Powers & Associates understands that the extent of information obtained is based on the reasonable limits of time and budgetary constraints.

Findings, opinions, conclusions and recommendations presented in this report are based on readily available information, conditions readily observed at the time of the Site visit, and/or information readily identified by the interviews and/or the records review process. Phase I ESAs are inherently limited because findings are developed based on information obtained from a non-intrusive Site evaluation. Cornerstone does not accept liability for deficiencies, errors, or

² Recognized Environmental Condition means 1) the presence of hazardous substances or petroleum products in, on, or at the subject property due to a release to the environment; 2) the likely presence of hazardous substances or petroleum products in, on, or at the subject property due to a release or likely release to the environment; or 3) the presence of hazardous substances or petroleum products in, on, or at the subject property under conditions that pose a material threat of a future release to the environment.

³ A Recognized Environmental Condition that has been addressed to the satisfaction of the applicable regulatory agency with hazardous substances or petroleum products allowed to remain in place subject to the implementation of required controls.

⁴ A previous release of hazardous substances or petroleum products affecting the Site that has been addressed to the satisfaction of the applicable regulatory agency and meeting unrestricted use criteria established by the applicable regulatory agency without subjecting the Site to any controls.

misstatements that have resulted from inaccuracies in the publicly available information or from interviews of persons knowledgeable of Site use. In addition, publicly available information and field observations often cannot affirm the presence of Recognized Environmental Conditions; there is a possibility that such conditions exist. If a greater degree of confidence is desired, soil, groundwater, soil vapor and/or air samples should be collected by Cornerstone and analyzed by a state-certified laboratory to establish a more reliable assessment of environmental conditions.

Cornerstone acquired an environmental database of selected publicly available information for the general area of the Site. Cornerstone cannot verify the accuracy or completeness of the database report, nor is Cornerstone obligated to identify mistakes or insufficiencies in the information provided (ASTM E1527-21, Section 8.1.3). Due to inadequate address information, the environmental database may have mapped several facilities inaccurately or could not map the facilities. Releases from these facilities, if nearby, could impact the Site.

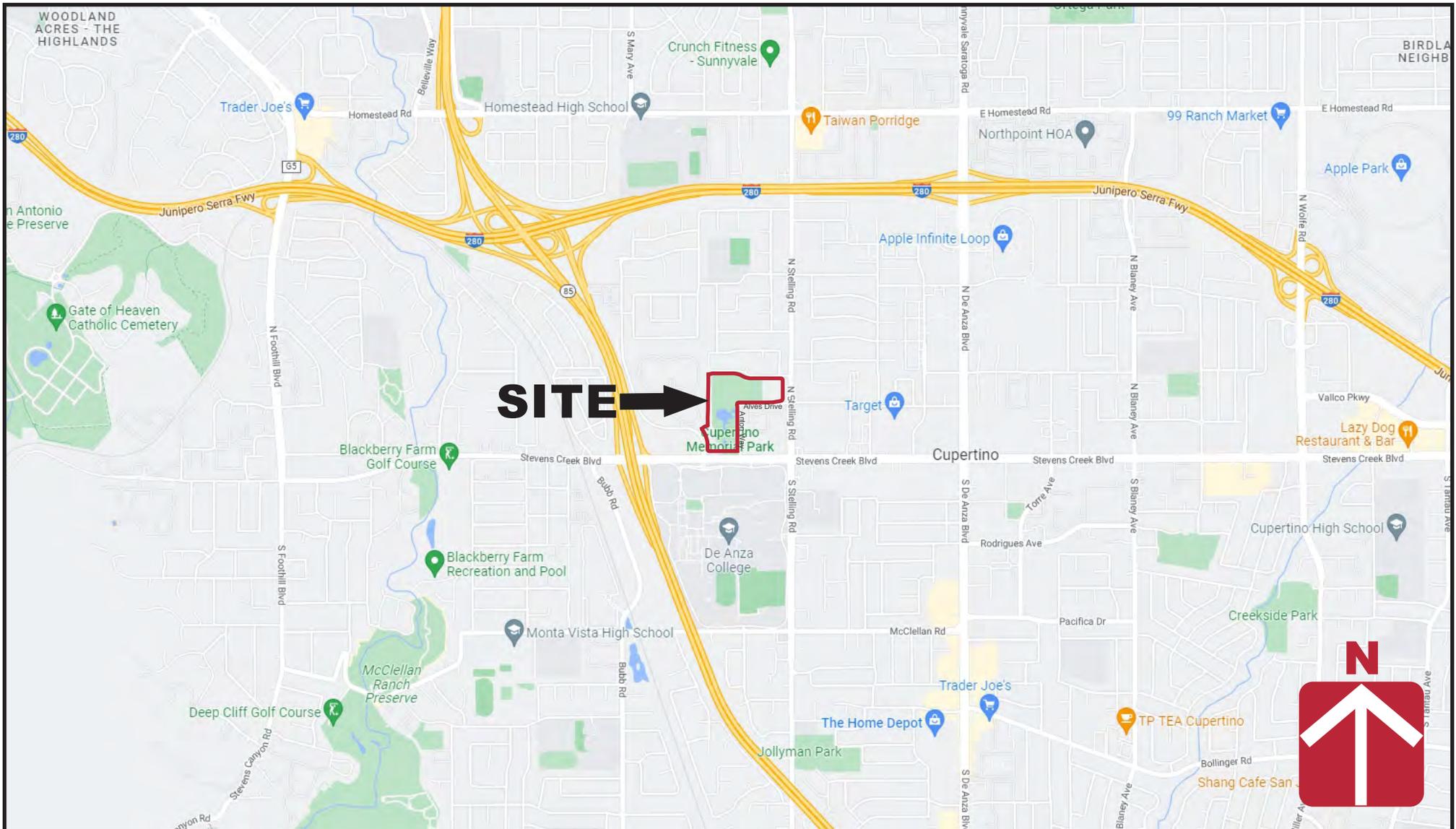
David J. Powers & Associates may have provided Cornerstone environmental documents prepared by others. David J. Powers & Associates understands that Cornerstone reviewed and relied on the information presented in these reports and cannot be responsible for their accuracy.

This report, an instrument of professional service, was prepared for the sole use of David J. Powers & Associates and may not be reproduced or distributed without written authorization from Cornerstone. Cornerstone makes no warranty, expressed or implied, except that our services have been performed in accordance with the environmental principles generally accepted at this time and location.

10.1 REPORT VIABILITY

Per ASTM E1527-21 and 40 CFR Part 312, a Phase I Environmental Site Assessment report is presumed to be viable when it is conducted within one year prior to the date of acquisition of the subject property (or, for transactions not involving an acquisition such as a lease or refinance, the date of the intended transaction), provided that the following components of the inquiries were conducted or updated within 180 days prior to the date of purchase or the date of the intended transaction:

<u>Task</u>	<u>Date Completed</u>
Interview with current owner and occupant	September 21, 2022
Review of standard government environmental record sources	September 19, 2022
Visual observation of the Site and of adjoining properties	September 26, 2022
Declaration by the Environmental Professional	October 13, 2022
Searches for recorded environmental cleanup liens	User responsibility



Vicinity Map

**Cupertino Memorial Park
 10185 North Stelling Road and
 21251 Stevens Creek Boulevard
 Cupertino, CA**

Project Number
 118-139-1

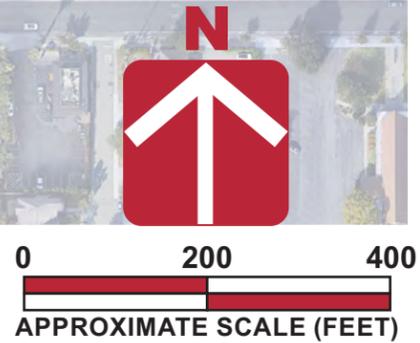
Figure Number
 Figure 1

Date
 October 2022

Drawn By
 RRN



Base by Google Earth, dated 08/15/2020



Project Number	118-139-1
Figure Number	Figure 2
Date	October 2022
Drawn By	RRN

Site Plan
Cupertino Memorial Park
10185 North Stelling Road and
21251 Stevens Creek Boulevard
Cupertino, CA

APPENDIX A – DATABASE SEARCH REPORT

APPENDIX B – HISTORIC AERIAL PHOTOGRAPHS AND MAPS

APPENDIX C – LOCAL STREET DIRECTORY SEARCH RESULTS

APPENDIX D – QUESTIONNAIRE

MEMORIAL PARK SPECIFIC PLAN NOISE AND VIBRATION ASSESSMENT

CUPERTINO, CALIFORNIA

December 19, 2023



Prepared for:

**Nick Towstopiat
Associate Project Manager
David J. Powers & Associates, Inc.
1871 The Alameda, Suite 200
San José, CA 95126**

Prepared by:

**Heather A. Bruce and
Michael S. Thill**

ILLINGWORTH & RODKIN, INC.
//// Acoustics • Air Quality ///
**429 East Cotati Avenue
Cotati, CA 94931
(707) 794-0400**

I&R Job No.: 23-101

INTRODUCTION

The approximate 22.5-acre project site currently contains Memorial Park, the Quinlan-Community Center, and the Cupertino Senior Center in the City of Cupertino. Within Memorial Park, there are currently six tennis courts (including one court that is dual-lined to provide four pickleball courts), a softball field, an amphitheater, the Cupertino Veterans Memorial, playground areas, picnic areas, and the Memorial Park Gazebo. Until 2013, Memorial Park also contained a concrete-lined, artificial pond in the central portion of the park south of the softball field. It was drained in 2013 in response to the ongoing drought, and was proposed for removal under the City's 2021-2022 Capital Improvement Program. In 2022, construction began under a separate project application to remove the concrete liner, backfill and grade the area, install landscaping and sodded turf, and pedestrian pathways. The park is currently open from sunrise to 10 p.m. seven days per week.

The project proposes to implement a Specific Plan for Memorial Park that outlines improvements planned for the park. Although no improvements are proposed for the Quinlan Community Center or Cupertino Senior Center buildings, the project would upgrade the courtyards outside these two buildings with new landscaping and seating areas. The project's primary components include:

- Softball Field- the existing softball field would continue to be used for programmed adult softball leagues, senior softball activities, and public rentals throughout the year. However, the area would also serve as a dog off-leash area (DOLA) when the softball field is not in use. Operation of the DOLA would likely be limited to several hours in the afternoon during normal park operating hours;
- Tennis Courts- six existing tennis courts on the northwest corner of the project site would remain in the same location, and the only proposed change under the Master Plan would be to remove the pickleball dual-striping on one of the tennis courts;
- Basketball Court- a basketball court with new lighting would be added adjacent to the eastern side of the softball field, and the existing landscaped berms would be utilized as seating areas around the new basketball court;
- Pickleball Courts- eight pickleball courts would be added on the southeast corner of the site, adjacent to the intersection of Stevens Creek Boulevard and Anton Way. Additional lighting would be installed for the pickleball courts, and the courts would be open during normal park operating hours.
- Bocce Ball Court- would be installed adjacent to the Senior Center, and would be programmed for Senior Center socials, classes, and public rentals. No new lights are proposed for the bocce ball court;
- Playground Areas- Currently, the park contains two playground areas, one south of the tennis courts and one south of the amphitheater. The project would relocate and replace these playground areas with an All-Abilities Playground area and a Nature Playground area, both of which would be centrally located within the park between the Senior Center

and softball field. A new publicly accessible restroom would be constructed adjacent to the All-Abilities Playground area;

- Picnic Areas- the existing reservable picnic area east of the softball field would be renovated and two new picnic areas would be added on-site. Renovation of the existing picnic area would include replacing the decomposed granite surfacing with concrete surfacing, installing new shade structures, installing new landscaping and trees, and providing additional barbeque and potable water stations. One new picnic area would be constructed south of the Veterans Memorial and a second would be constructed adjacent to the Memorial park Gazebo. Both new picnic areas would include picnic tables and shade structures;
- Amphitheater- the existing amphitheater has an official seating capacity of approximately 140 people. Currently, the programming for the amphitheater includes concerts and theater productions that occur during the summer months (June through September). These events generally occur between 10:30 a.m. and 8:00 p.m. depending on the type of performance. Typically, the adjacent lawn areas act as unofficial seating for the attendees that cannot be accommodated by the seats. Performances at the amphitheater can draw as many as 300 to 500 attendees. The project would upgrade the existing amphitheater to increase the amount of seating available, provide Americans with Disabilities Act (ADA) compliant improvements such as reinforced stairs and pathways, and install a shade structure. In addition, the existing stage infrastructure would be improved through the installation of a new shade structure, new surfacing, and telecommunication and fiber optic equipment. The types of performances held at the amphitheater would remain the same. The project would not create a larger stage to accommodate larger scale events;
- Park Programing would include events typically range in size from as low as 100 to 150 attendees for minor events to as high as 4,000 to 5,000 attendees for major events like the annual Cherry Blossom Festival. Spillover parking for larger events is accommodated in the surface parking areas at De Anza College, which is located across the street on the south side of Stevens Creek Boulevard. The proposed project would not alter the type or scale of the current events held at the park; however, if some of the currently scheduled events are no longer held in the future, alternative events may be scheduled to take their place. In addition to the existing event lawn area located west of the Quinlan Community Center, the project would reconfigure a smaller (i.e., approximately 70,000 square feet) area comprised of lawn and hardscaping south of the softball field where the concrete-lined pond was previously located. Events would include:
 - Easter Egg Hunt
 - Holi Celebration
 - Cherry Blossom Festival
 - YAB Summer Kick-Off
 - Relay for Life: Silicon Valley North
 - Field Day
 - Independence Day Celebration
 - Rotary Fall Festival

- Bhubaneswar Sister City Celebration
- Diwali Festival
- Veteran's Day Memorial Ceremony

This report evaluates the project's potential to result in significant noise and vibration impacts with respect to California Environmental Quality Act (CEQA) guidelines. The report is divided into three sections: 1) the Setting Section provides a brief description of the fundamentals of environmental noise and groundborne vibration, summarizes applicable regulatory criteria, and discusses the results of the ambient noise monitoring survey completed to document existing noise conditions; 2) the General Plan Consistency Section discusses noise and land use compatibility utilizing policies in the City of Cupertino's General Plan; and 3) the Impacts and Mitigation Measures Section describes the significance criteria used to evaluate project impacts, provides a discussion of each project impact, and presents measures, where necessary, to mitigate the impacts of the project on sensitive receptors in the vicinity.

SETTING

Fundamentals of Environmental Noise

Noise may be defined as unwanted sound. Noise is usually objectionable because it is disturbing or annoying. The objectionable nature of sound could be caused by its *pitch* or its *loudness*. *Pitch* is the height or depth of a tone or sound, depending on the relative rapidity (*frequency*) of the vibrations by which it is produced. Higher pitched signals sound louder to humans than sounds with a lower pitch. *Loudness* is the intensity of sound waves combined with the reception characteristics of the ear. Intensity may be compared with the height of an ocean wave in that it is a measure of the amplitude of the sound wave.

In addition to the concepts of pitch and loudness, there are several noise measurement scales which are used to describe noise in a particular location. A *decibel (dB)* is a unit of measurement which indicates the relative amplitude of a sound. The zero on the decibel scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Sound levels in decibels are calculated on a logarithmic basis. An increase of 10 decibels represents a ten-fold increase in acoustic energy, while 20 decibels is 100 times more intense, 30 decibels is 1,000 times more intense, etc. There is a relationship between the subjective noisiness or loudness of a sound and its intensity. Each 10 decibel increase in sound level is perceived as approximately a doubling of loudness over a fairly wide range of intensities. Technical terms are defined in Table 1.

There are several methods of characterizing sound. The most common in California is the *A-weighted sound level (dBA)*. This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. Representative outdoor and indoor noise levels in units of dBA are shown in Table 2. Because sound levels can vary markedly over a short period of time, a method for describing either the average character of the sound or the statistical behavior of the variations must be utilized. Most commonly, environmental sounds are described in terms of an average level that has the same acoustical energy as the summation of all the time-varying events. This *energy-equivalent sound/noise descriptor* is called *Leq*. The most common averaging period is hourly, but *Leq* can describe any series of noise events of arbitrary duration.

The scientific instrument used to measure noise is the sound level meter. Sound level meters can accurately measure environmental noise levels to within about plus or minus 1 dBA. Various computer models are used to predict environmental noise levels from sources, such as roadways and airports. The accuracy of the predicted models depends upon the distance the receptor is from the noise source. Close to the noise source, the models are accurate to within about plus or minus 1 to 2 dBA.

Since the sensitivity to noise increases during the evening and at night – because excessive noise interferes with the ability to sleep – 24-hour descriptors have been developed that incorporate artificial noise penalties added to quiet-time noise events. The *Community Noise Equivalent Level (CNEL)* is a measure of the cumulative noise exposure in a community, with a 5 dB penalty added to evening (7:00 p.m. – 10:00 p.m.) and a 10 dB addition to nocturnal (10:00 p.m. – 7:00 a.m.) noise levels. The *Day/Night Average Sound Level (DNL or L_{dn})* is essentially the same as CNEL, with the exception that the evening time period is dropped and all occurrences during this three-hour period are grouped into the daytime period.

Effects of Noise

Sleep and Speech Interference

The thresholds for speech interference indoors are about 45 dBA if the noise is steady and above 55 dBA if the noise is fluctuating. Outdoors the thresholds are about 15 dBA higher. Steady noises of sufficient intensity (above 35 dBA) and fluctuating noise levels above about 45 dBA have been shown to affect sleep. Interior residential standards for multi-family dwellings are set by the State of California at 45 dBA L_{dn}. Typically, the highest steady traffic noise level during the daytime is about equal to the L_{dn} and nighttime levels are 10 dBA lower. The standard is designed for sleep and speech protection and most jurisdictions apply the same criterion for all residential uses. Typical structural attenuation is 12-17 dBA with open windows. With closed windows in good condition, the noise attenuation factor is around 20 dBA for an older structure and 25 dBA for a newer dwelling. Sleep and speech interference is therefore possible when exterior noise levels are about 57-62 dBA L_{dn} with open windows and 65-70 dBA L_{dn} if the windows are closed. Levels of 55-60 dBA are common along collector streets and secondary arterials, while 65-70 dBA is a typical value for a primary/major arterial. Levels of 75-80 dBA are normal noise levels at the first row of development outside a freeway right-of-way. In order to achieve an acceptable interior noise environment, bedrooms facing secondary roadways need to be able to have their windows closed, those facing major roadways and freeways typically need special glass windows.

Annoyance

Attitude surveys are used for measuring the annoyance felt in a community for noises intruding into homes or affecting outdoor activity areas. In these surveys, it was determined that the causes for annoyance include interference with speech, radio and television, house vibrations, and interference with sleep and rest. The L_{dn} as a measure of noise has been found to provide a valid correlation of noise level and the percentage of people annoyed. People have been asked to judge the annoyance caused by aircraft noise and ground transportation noise. There continues to be

disagreement about the relative annoyance of these different sources. When measuring the percentage of the population highly annoyed, the threshold for ground vehicle noise is about 50 dBA L_{dn} . At a L_{dn} of about 60 dBA, approximately 12 percent of the population is highly annoyed. When the L_{dn} increases to 70 dBA, the percentage of the population highly annoyed increases to about 25-30 percent of the population. There is, therefore, an increase of about 2 percent per dBA between a L_{dn} of 60-70 dBA. Between a L_{dn} of 70-80 dBA, each decibel increase increases by about 3 percent the percentage of the population highly annoyed. People appear to respond more adversely to aircraft noise. When the L_{dn} is 60 dBA, approximately 30-35 percent of the population is believed to be highly annoyed. Each decibel increase to 70 dBA adds about 3 percentage points to the number of people highly annoyed. Above 70 dBA, each decibel increase results in about a 4 percent increase in the percentage of the population highly annoyed.

TABLE 1 Definition of Acoustical Terms Used in this Report

Term	Definition
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure. The reference pressure for air is 20 micro Pascals.
Sound Pressure Level	Sound pressure is the sound force per unit area, usually expressed in micro Pascals (or 20 micro Newtons per square meter), where 1 Pascal is the pressure resulting from a force of 1 Newton exerted over an area of 1 square meter. The sound pressure level is expressed in decibels as 20 times the logarithm to the base 10 of the ratio between the pressures exerted by the sound to a reference sound pressure (e. g., 20 micro Pascals). Sound pressure level is the quantity that is directly measured by a sound level meter.
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure. Normal human hearing is between 20 Hz and 20,000 Hz. Infrasonic sound are below 20 Hz and Ultrasonic sounds are above 20,000 Hz.
A-Weighted Sound Level, dBA	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter de-emphasizes the very low and very high frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise.
Equivalent Noise Level, L_{eq}	The average A-weighted noise level during the measurement period.
L_{max} , L_{min}	The maximum and minimum A-weighted noise level during the measurement period.
L_{01} , L_{10} , L_{50} , L_{90}	The A-weighted noise levels that are exceeded 1%, 10%, 50%, and 90% of the time during the measurement period.
Day/Night Noise Level, L_{dn} or DNL	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 p.m. and 7:00 a.m.

Term	Definition
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after addition of 5 decibels in the evening from 7:00 p.m. to 10:00 p.m. and after addition of 10 decibels to sound levels measured in the night between 10:00 p.m. and 7:00 a.m.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

Source: Handbook of Acoustical Measurements and Noise Control, Harris, 1998.

TABLE 2 Typical Noise Levels in the Environment

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110 dBA	Rock band
Jet fly-over at 1,000 feet		
	100 dBA	
Gas lawn mower at 3 feet		
	90 dBA	
Diesel truck at 50 feet at 50 mph		Food blender at 3 feet
	80 dBA	Garbage disposal at 3 feet
Noisy urban area, daytime		
Gas lawn mower, 100 feet	70 dBA	Vacuum cleaner at 10 feet
Commercial area		Normal speech at 3 feet
Heavy traffic at 300 feet	60 dBA	
		Large business office
Quiet urban daytime	50 dBA	Dishwasher in next room
Quiet urban nighttime	40 dBA	Theater, large conference room
Quiet suburban nighttime		
	30 dBA	Library
Quiet rural nighttime		Bedroom at night, concert hall (background)
	20 dBA	
		Broadcast/recording studio
	10 dBA	
	0 dBA	

Source: Technical Noise Supplement (TeNS), California Department of Transportation, September 2013.

Fundamentals of Groundborne Vibration

Ground vibration consists of rapidly fluctuating motions or waves with an average motion of zero. Several different methods are typically used to quantify vibration amplitude. One method is the Peak Particle Velocity (PPV). The PPV is defined as the maximum instantaneous positive or negative peak of the vibration wave. In this report, a PPV descriptor with units of mm/sec or in/sec is used to evaluate construction generated vibration for building damage and human complaints. Table 3 displays the reactions of people and the effects on buildings that continuous or frequent intermittent vibration levels produce. The guidelines in Table 3 represent syntheses of vibration criteria for human response and potential damage to buildings resulting from construction vibration.

Construction activities can cause vibration that varies in intensity depending on several factors. The use of pile driving and vibratory compaction equipment typically generates the highest construction related groundborne vibration levels. Because of the impulsive nature of such activities, the use of the PPV descriptor has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to cause damage and the degree of annoyance for humans.

The two primary concerns with construction-induced vibration, the potential to damage a structure and the potential to interfere with the enjoyment of life, are evaluated against different vibration limits. Human perception to vibration varies with the individual and is a function of physical setting and the type of vibration. Persons exposed to elevated ambient vibration levels, such as people in an urban environment, may tolerate a higher vibration level.

Structural damage can be classified as cosmetic only, such as paint flaking or minimal extension of cracks in building surfaces; minor, including limited surface cracking; or major, that may threaten the structural integrity of the building. Safe vibration limits that can be applied to assess the potential for damaging a structure vary by researcher. The damage criteria presented in Table 3 include several categories for ancient, fragile, and historic structures, the types of structures most at risk to damage. Most buildings are included within the categories ranging from “Historic and some old buildings” to “Modern industrial/commercial buildings”. Construction-induced vibration that can be detrimental to the building is very rare and has only been observed in instances where the structure is at a high state of disrepair and the construction activity occurs immediately adjacent to the structure.

The annoyance levels shown in Table 3 should be interpreted with care since vibration may be found to be annoying at lower levels than those shown, depending on the level of activity or the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Low-level vibrations frequently cause irritating secondary vibration, such as a slight rattling of windows, doors, or stacked dishes. The rattling sound can give rise to exaggerated vibration complaints, even though there is very little risk of actual structural damage.

TABLE 3 Reaction of People and Damage to Buildings from Continuous or Frequent Intermittent Vibration Levels

Velocity Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.01	Barely perceptible	No effect
0.04	Distinctly perceptible	Vibration unlikely to cause damage of any type to any structure
0.08	Distinctly perceptible to strongly perceptible	Recommended upper level of the vibration to which ruins and ancient monuments should be subjected
0.1	Strongly perceptible	Virtually no risk of damage to normal buildings
0.25	Strongly perceptible to severe	Threshold at which there is a risk of damage to historic and some old buildings.
0.3	Strongly perceptible to severe	Threshold at which there is a risk of damage to older residential dwellings such as plastered walls or ceilings
0.5	Severe-- Vibrations considered unpleasant	Threshold at which there is a risk of damage to newer residential structures

Source: Transportation and Construction Vibration Guidance Manual, California Department of Transportation, April 2020.

Regulatory Background

This section describes the relevant guidelines, policies, and standards established by State Agencies, Santa Clara County, and the City of Cupertino. The State CEQA Guidelines, Appendix G, are used to assess the potential significance of impacts pursuant to local General Plan policies, Municipal Code standards, or the applicable standards of other agencies. A summary of the applicable regulatory criteria is provided below.

Federal Government

Federal Transit Administration. The Federal Transit Administration (FTA) has identified construction noise thresholds in the *Transit Noise and Vibration Impact Assessment Manual*,¹ which limit daytime construction noise to 80 dBA L_{eq} at residential land uses, 85 dBA L_{eq} at commercial land uses, and to 90 dBA L_{eq} at industrial land uses.

State of California

State CEQA Guidelines. The California Environmental Quality Act (CEQA) contains guidelines to evaluate the significance of effects of environmental noise attributable to a proposed project. Under CEQA, noise impacts would be considered significant if the project would result in:

¹ Federal Transit Administration, *Transit Noise and Vibration Impact Assessment Manual*, FTA Report No. 0123, September 2018.

- (a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- (b) Generation of excessive groundborne vibration or groundborne noise levels;
- (c) 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, if the project would expose people residing or working in the project area to excessive noise levels.

City of Cupertino General Plan. The Health and Safety Chapter in the City of Cupertino General Plan sets forth policies related to noise control in the City. The following policies are applicable to the proposed project:

Policy HS-8.1: Land Use Decision Evaluation. Use the Land Use Compatibility for Community Noise Environments chart (see Figure HS-8), the Future Noise Contour Map (see Figure D-2), and the City Municipal Code to evaluate land use decisions.

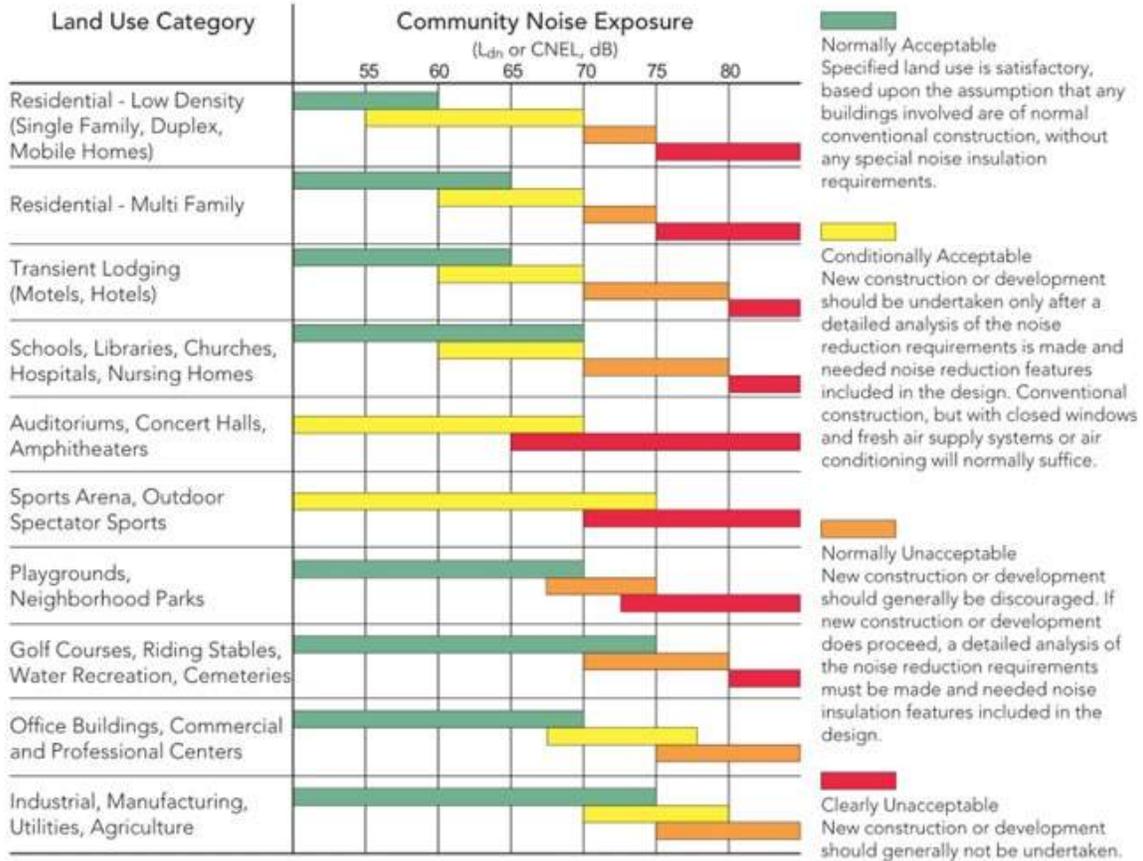
Policy HS-8.3: Construction and Maintenance Activities. Establish and enforce reasonable allowable periods of the day during weekdays, weekends, and holidays for construction activities. Require the construction contractors to use the best available technology to minimize excessive noise and vibration from construction equipment such as pile drivers, jack hammers, and vibratory rollers.

Policy HS-8.5: Neighborhoods. Review residents' needs for convenience and safety and prioritize them over the convenient movement of commute or through traffic where practical.

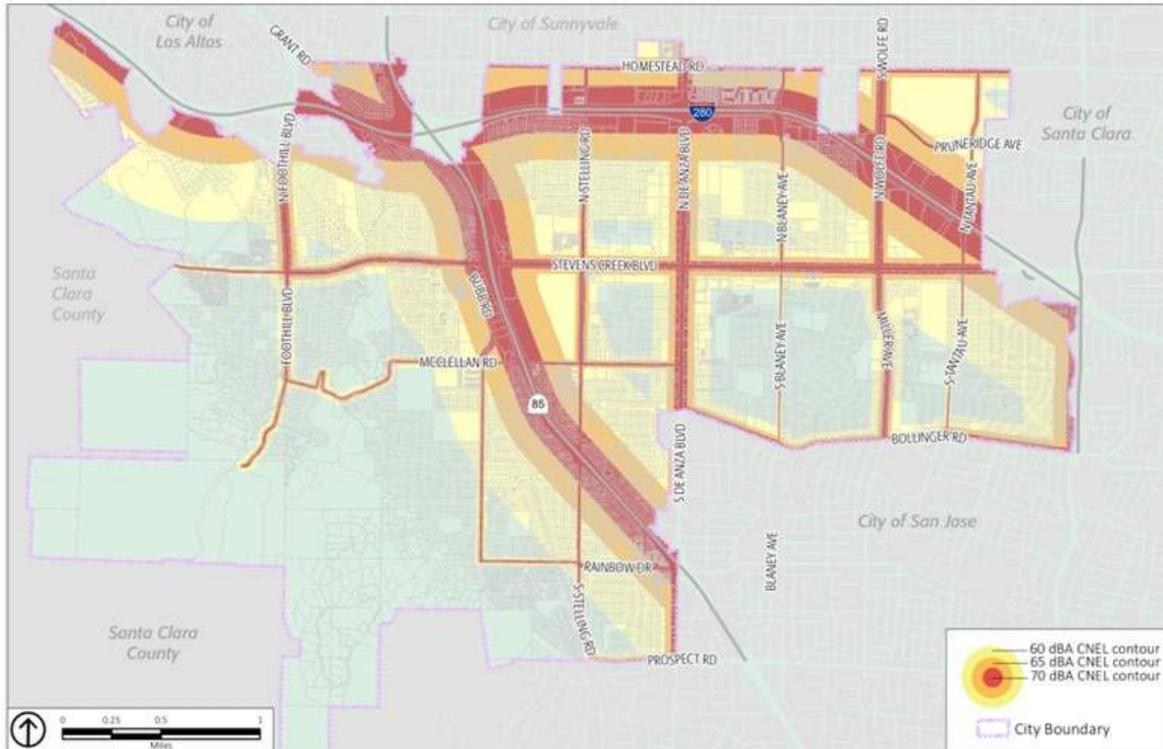
Policy HS-8.6: Traffic Calming Solutions to Street Noise. Evaluated solutions to discourage through traffic in neighborhoods through enhanced paving and modified street design.

Strategy HS-8.6.1: Local Improvement. Modify street design to minimize noise impact to neighbors.

**FIGURE HS-8
LAND USE COMPATIBILITY FOR
COMMUNITY NOISE ENVIRONMENTS**



**FIGURE D-2
FUTURE NOISE CONTOURS**



City of Cupertino Municipal Code. The City’s Municipal Code contains a Zoning Ordinance that limits noise levels at adjacent properties. The following sections establish applicable limits:

10.48.040 Daytime and Nighttime Maximum Noise Levels. Individual noise sources, or the combination of a group of noise sources located on the same property, shall not produce a noise level exceeding those specified on property zoned as follows, unless specifically provided in another section of this chapter:

Land Use at Point of Origin	Maximum Noise Level at Complaint Site of Receiving Property	
	Nighttime	Daytime
Residential	50 dBA	60 dBA
Nonresidential	55 dBA	65 dBA

10.48.50 Brief Daytime Incidents.

A During the daytime period only, brief noise incidents exceeding limits in other sections of this chapter are allowed; providing, that the sum of the noise duration in minutes plus the excess noise level does not exceed twenty in a two-hour period. For example, the following combinations would be allowable:

Noise Increment Above Normal Standard	Noise Duration in 2-Hour Period
5 dBA	15 minutes
10 dBA	10 minutes
15 dBA	5 minutes
19 dBA	1 minute

B For multifamily dwelling interior noise, Section 10.48.054, the sum of excess noise level and duration in minutes of a brief daytime incident shall not exceed ten in any two-hour period, measured at the receiving location.

C Section 10.48.050A does not apply to Section 10.48.055 (Motor Vehicle Idling).

10.48.051 Landscape Maintenance Activities. The use of motorized equipment for landscape maintenance activities shall be limited to the hours of 8:00 a.m. to 8:00 p.m. on weekdays, and 9:00 a.m. to 6:00 p.m. on weekends and holidays, with the exception of landscape maintenance activities for public schools, public and private golf courses, and public facilities, which are allowed to begin at 7:00 a.m. The use of motorized equipment for landscape maintenance activities during these hours is exempted from the limits of Section 10.48.040; provided, that reasonable efforts are made by the user to minimize the disturbances to nearby residents by, for example, installation of appropriate mufflers or noise baffles, running equipment only the minimal period necessary, and locating equipment so as to generate minimum noise levels on adjoining properties.

10.48.052 Outdoor Public Events.

A Outdoor events open to the general public on nonresidential property, such as parades, rallies, fairs, concerts and special sales and promotional events, involving generation of noise levels higher than would normally occur, by use of the human voice, public address systems, musical instruments, electronic amplification systems, and similar sound producing activities, are allowed upon obtaining an appropriate permit from the city, and subject to the following general limitations:

- 1 The event shall not produce noise levels above seventy dBA on any residential property for a period longer than three hours during daytime.
- 2 The event shall not produce noise levels above sixty dBA on any residential property during the period from eight p.m. to eleven p.m., and above fifty-five dBA for any other nighttime period.
- 3 Continuous or repeated peak noise levels above ninety-five dBA shall not be produced at any location where persons may be continuously exposed.

B The conditions imposed upon the event or activity in the permit issued by the City, regarding maximum noise level, location of noise sources, or duration of activity, for example, may be more limiting than this section, to protect certain individuals, areas or nearby activities which would otherwise be disturbed, and these permit conditions, when in conflict with this section, are overriding.

10.48.53 Grading, Construction and Demolition.

A Grading, construction and demolition activities shall be allowed to exceed the noise limits of Section 10.48.040 during daytime hours; provided, that the equipment utilized has high-quality

noise muffler and abatement devices installed and in good condition, and the activity meets one of the following two criteria:

1. No individual device produces a noise level more than eighty-seven dBA at a distance of twenty-five feet (7.5 meters); or
2. The noise level on any nearby property does not exceed eighty dBA.

B Notwithstanding Section 10.48.053A, it is a violation of this chapter to engage in any grading, street construction, demolition or underground utility work within seven hundred fifty feet of a residential area on Saturdays, Sundays and holidays, and during the nighttime period, except as provided in Section 10.48.030.

C Construction, other than street construction, is prohibited on holidays, except as provided in Sections 10.48.029 and 10.48.030.

D Construction, other than street construction, is prohibited during nighttime periods unless it meets the nighttime standards of Section 10.48.040.

E The use of helicopters as a part of a construction and/or demolition activity shall be restricted to between the hours of nine a.m. and six thirty p.m. Monday through Friday only, and prohibited on the weekends and holidays. The notice shall be given at least twenty-four hours in advance of said usage. In cases of emergency, the twenty-four hour period may be waived.

10.48.055 Motor Vehicle Idling. Motor vehicles, including automobiles, trucks, motorcycles, motor scooters and trailers or other equipment towed by a motor vehicle, shall not be allowed to remain in one location with the engine or auxiliary motors running for more than three minutes in any hour, in an area other than on a public right-of-way, unless:

- A The regular noise limits of Section 10.48.040 are met while the engine and/or auxiliary motors are running; or
- B The vehicle is in use for provision of police, fire, medical, or other emergency services.

10.48.060 Noise Disturbances. No person shall unreasonably make, continue, or cause to be made or continued, any noise disturbance as defined in Section 10.48.010. “Noise disturbance” means any sound which:

1. Endangers or injures the safety or health of humans or animals; or
2. Annoys or disturbs a reasonable person of normal sensitivities; or
3. Endangers or damages personal or real property.

Existing Noise Environment

Figure 1 shows the existing park and vicinity. Figure 2 shows the proposed improvements to the park. The project site is located at the northeast corner of Mary Avenue and Stevens Creek Boulevard, and is bordered by Christensen Drive and single family residences to the north, North Stelling Road, Anton Way, and single family residential land uses and Cupertino Sports Center to the east, Alves Drive, Stevens Creek Boulevard, single family residential land uses, and DeAnza College to the south, Mary Avenue, and multi-family residential land uses to the west. SR-85 is located approximately 1,000 feet west of the project. The noise environment at the site and in the surrounding area results primarily from local vehicular traffic along Stevens Creek Boulevard, Mary Avenue, and Anton Way, as well as from recreational activities associated with the park itself.

A noise monitoring survey consisting of two long-term noise measurements (LT-1 and LT-2) and six short-term noise measurements (ST-1 through ST-6) was made between Tuesday, August 29, 2023, and Friday, September 1, 2023. All noise measurement locations are shown in Figure 1.

Long-term noise measurement LT-1 was located along the eastern boundary of the park, approximately 20 feet west of the Anton Way centerline. Hourly average noise levels at LT-1 typically ranged from 49 to 60 dBA L_{eq} during daytime hours (7:00 a.m. to 10:00 p.m.) and from 34 to 55 dBA L_{eq} during nighttime hours (10:00 p.m. to 7:00 a.m.). An abnormally high hourly average noise level of 68 dBA L_{eq} was observed on Thursday, August 31, 2023 during the 9:00 a.m. hour. After careful review of the data, this noise level was removed from the CNEL calculation. The CNELs on Wednesday, August 29, 2023, and Thursday August 30, 2023 were 58 dBA. The main sources of noise at this location were traffic along Anton Way and activities occurring within the park. The daily trend in noise levels at LT-1 are shown in Figures A-1 through Figures A-4 in Appendix A.

Long-term noise measurement LT-2 was located along the west boundary of the park near an existing parking lot. Hourly average noise levels at LT-2 ranged from 47 to 65 dBA L_{eq} during daytime hours and from 37 to 53 dBA L_{eq} during the nighttime hours. Unusually high hourly average noise levels were observed on Tuesday August 29, 2023 during the 6:00 p.m. hour (60 dBA L_{eq}) and on Thursday August 31, 2023 during the 3:00 p.m. hour (56 dBA L_{eq}). The CNEL was 57 dBA on Wednesday, August 30, 2023, and 56 dBA on Thursday, August 31, 2023. The main sources of noise at this location were also traffic within the existing parking lot and park activities. The daily trend in noise levels at LT-2 are shown in A-5 through A-8 in Appendix A.

Short-term noise measurement ST-1 was conducted on Tuesday, August 29, 2023, between 12:35 p.m. and 12:50 p.m. As shown in Figure 1, measurement ST-1 was located within Memorial Park near an existing picnic area. The main noise source at this location was traffic along Stevens Creek Boulevard and Anton Way and playground noise. The 15-minute average noise level measured at this location was 55 dBA L_{eq} .

Short-term noise measurement ST-2 was conducted on Tuesday, August 29, 2023, between 12:30 p.m. and 12:45 p.m. ST-2 was located within Memorial Park near the existing tennis courts and event lawn. The main noise source at this location was tennis play. The 15-minute average noise level measured at this location was 47 dBA L_{eq} . Eight automobiles and 1 medium truck passed along Christensen Drive during this measurement period. Traffic along Christensen Drive produced noise levels of ranging from 44 to 53 dBA.

Short-term noise measurement ST-3 was conducted on Friday, September 1, 2023, between 3:55 p.m. and 4:10 p.m. ST-3 was located within Memorial Park adjacent to the existing playground. The main noise sources at this location were children at the playground vehicular traffic along Stevens Creek Boulevard and Anton Way. The 15-minute average noise level measured at this location was 57 dBA L_{eq} . Vehicles passing along Stevens Creek Boulevard and Anton Way during the measurement, producing noise levels ranging from 54 to 61 dBA. The existing playground produced noise levels ranging from 56 to 63 dBA.

Short-term noise measurement ST-4 was conducted on Friday, September 1, 2023, between 3:20 p.m. and 3:30 p.m. ST-4 was located within Memorial Park adjacent to the existing softball field. The main noise source at this location were musicians playing drums. The 10-minute average noise level measured at this location was 65 dBA L_{eq} .

Short-term noise measurement ST-5 was conducted on Friday, September 1, 2023, between 3:10 p.m. and 3:20 p.m. ST-5 was located within Memorial Park adjacent to the existing pickleball courts. The main noise source at this location was pickleball play. The 10-minute average noise level measured at this location was 58 dBA L_{eq} .

Short-term noise measurement ST-6 was conducted on Friday, September 1, 2023, between 3:40 p.m. and 3:50 p.m. ST-6 was located within Memorial Park adjacent to the existing tennis courts. The main noise source at this location was tennis play. The 10-minute average noise level measured at this location was 58 dBA L_{eq} .

A summary of short-term noise measurements ST-1 through ST-6 is shown in Table 4 below.

TABLE 4 Summary of Short-Term Noise Measurements (dBA)

Noise Measurement Location	Date, Time	Measured Noise Level, dBA					
		L_{max}	$L_{(1)}$	$L_{(10)}$	$L_{(50)}$	$L_{(90)}$	L_{eq}
ST-1: Memorial Park-Picnic Area	8/29/2023 12:35 p.m. to 12:50 p.m.	64	62	58	53	48	55
ST-2: Memorial Park – Event Lawn and Tennis Courts	8/29/2023 12:30 p.m. to 12:45 p.m.	60	53	49	46	45	47
ST-3: Memorial Park - Playground	9/1/2023 3:55 p.m. to 4:10 p.m.	68	62	59	56	55	57
ST-4: Memorial Park – Softball Field	9/1/2023 3:20 p.m. to 3:30 p.m.	71	69	68	65	54	65
ST-5 Memorial Park – Pickleball Courts	9/1/2023 3:10 p.m. to 3:20 p.m.	68	65	61	56	53	58
ST-6 Memorial Park – Tennis Courts	9/1/2023 3:40 p.m. to 3:50 p.m.	70	64	59	57	56	58

FIGURE 1 Aerial Image of the Project Site and Surrounding Area with the Noise Measurement Locations Identified



FIGURE 2 Memorial Park Specific Plan



GENERAL PLAN CONSISTENCY ANALYSIS

Noise and Land Use Compatibility

Figure HS-8 of the City of Cupertino General Plan identifies 50 to 70 dB CNEL as normally acceptable for parks and playgrounds. The future noise environment at the project site would continue to result primarily from vehicular traffic along Stevens Creek Boulevard, Anton Way, North Stelling Road, and Alves Drive.

Long-term noise measurements LT-1 and LT-2 quantified existing CNEL noise levels. The results of these measurements showed that existing CNEL noise levels range from 57 to 58 dBA. The on-site noise measurement data is also consistent with projections for roadway noise. Based on a review of the future roadway noise contours from Cupertino's General Plan, future noise levels in the project vicinity are anticipated to increase above existing levels by 2-3 dB but would not approach 70 dBA CNEL except within areas close to Stevens Creek Boulevard. The future noise exposure at activity areas proposed nearest to Stevens Creek Boulevard would reach 65 dBA CNEL. Therefore, future noise levels at the project site would be considered by the City of Cupertino to be compatible with the proposed recreational land uses.

NOISE IMPACTS AND MITIGATION MEASURES

Significance Criteria

The following criteria were used to evaluate the significance of environmental noise resulting from the project:

- (a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- (b) Generation of excessive groundborne vibration or groundborne noise levels;
- (c) 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, if the project would expose people residing or working in the project area to excessive noise levels.

Impact 1a: Noise from Project Operations. The proposed project would not result in a substantial permanent noise level increase. Further, the proposed project would not generate noise levels exceeding the City's established thresholds at noise-sensitive receptors in the project vicinity. **This is a less-than-significant impact.**

When the source of noise originates from nonresidential land uses, Section 10.48.040 of the City's Municipal Code limits noise levels received on any nearby land use to 65 dBA L_{eq} during daytime hours (7:00 a.m. to 10:00 p.m.) and to 55 dBA L_{eq} at night (10:00 p.m. to 7:00 a.m.). Additionally, Section 10.48.050 provides further noise limitations during daytime hours for sources that occur for brief periods of time. For a 5-minute noise duration occurring within a 2-hour period, the noise limits mentioned above would increase by 15 dBA (80 dBA during daytime hours and 70 dBA during nighttime hours). For a 1-minute noise duration occurring within a 2-hour period, the noise limits mentioned above would increase by 19 dBA (84 dBA during daytime hours and 74 dBA during nighttime hours). Most sports activities occurring at the park, including playground noise, would occur continuously for more than 30 minutes in any given hour, with intermittent maximum noise levels from whistles, etc. Parking lot activities would be intermittent; however, under worst-case conditions, which would occur before and after sports events, parking lot activities could occur continuously for more than 30 minutes in a given hour.

Existing daytime hourly average and maximum instantaneous noise levels at LT-1 range from 48 to 68 dBA L_{eq} (average of 54 dBA L_{eq}) and from 53 to 85 dBA L_{max} (average of 70 dBA L_{max}), respectively. For LT-2, daytime hourly average noise levels range from 47 to 65 dBA L_{eq} (average of 52 dBA L_{eq}), and maximum instantaneous noise levels range from 50 to 90 dBA L_{max} (average of 61 dBA L_{max}).

The existing noise environment is dominated by traffic noise from Stevens Creek Boulevard, Mary Avenue and the surrounding residential streets. In addition to the local traffic noise, Memorial Park currently has one lighted softball field, six lighted tennis courts (including one court that is dual-lined to provide four pickleball courts), an amphitheater, the Cupertino Veterans Memorial, two playground areas, multiple BBQ and picnic areas, and the Memorial Park Gazebo, public restrooms, the Cupertino Senior Center, Quinlan Community Center, and four parking lots, which would generate sporadic noise.

Current operations at Memorial Park include:

- Softball Field: available from 10:00 a.m. to 8:00 p.m.
- Amphitheater: available from 10:30 a.m. to 8:00 p.m.
- Event Lawn: available from 7:00 a.m. to 10:00 p.m.
- Tennis Courts (pickleball courts): available from 7:00 a.m. to 10:00 p.m.

Under the conditions of the proposed project, the softball field would continue to be used as a DOLA when the field is not in use, the six existing tennis courts would remain with the removal of the four pickleball court striping, the existing two playground areas would be relocated, the existing reservable picnic area would be renovated, and the existing amphitheater would be upgraded to increase the amount of seating, provide ADA compliant improvements, and update the existing stage infrastructure. The parking lot accessed via Alves Drive would be reconfigured, several pedestrian access points to the park would be realigned, and a Class 1 bicycle route would

be added to connect Alves Drive, Mary Avenue, and Christen Drive.

Additionally, the project would include the following:

- One new lighted basketball court adjacent to the eastern side of the existing softball field.
- Eight new lighted pickleball courts would be added on the southeast corner of the site adjacent to the Stevens Creek Boulevard and Anton Way intersection.
- One unlighted bocce ball court adjacent to the Senior Center.
 - Planned use for Senior Center Socials, classes, and public rentals.
- Two playground areas would be moved to be centrally located within the park between the Senior Center and softball field.
 - Playgrounds would include an all-abilities playground and a nature playground.
 - A new publicly accessible restroom would be constructed adjacent to the all-abilities playground.
- Two new picnic areas would be constructed.
 - One south of the Veterans Memorial and a second adjacent to the Memorial Park Gazebo.
- Nine parallel parking stalls along Anton Way adjacent to the new pickleball courts would be added.

Under the proposed project, hours of operation at the park would continue from sunrise to 10:00 p.m. seven days per week.

Sports and Park Operational Noise

New noise generating activities at Memorial Park would include basketball, pickleball, and playground activities. Based on measurements made by *Illingworth & Rodkin, Inc. (I&R)* at similar neighborhood parks in the Bay Area, the following noise source levels are used in this report:

- Basketball activities – average hourly noise levels of 65 dBA L_{eq} at 30 feet from the center of the court.
- Pickleball activities – average hourly noise levels of 55 dBA L_{eq} at a distance of 120 feet from the center of the four courts; with maximum noise levels up to 70 dBA L_{max} .
- Playground activities – average hourly noise levels of 59 to 67 dBA L_{eq} at a distance of 50 feet from the center of the playground, with maximum noise levels up to 75 dBA L_{max} .

Noise levels generated by the sports activities and other park activities were calculated at the nearest receptors. The composite park noise level was assumed to occur from sunrise to 10:00 p.m., and the estimated L_{eq} and L_{max} noise levels for each sports park activity, as propagated to the

surrounding receptor property lines, are summarized in Table 5. Additionally, the worst-hour L_{eq} is also provided in the table, assuming multiple activities occurring simultaneously.

The proposed changes to the amphitheater and tennis courts and the addition of the bocce ball court, two new picnic areas, DOLA, and class 1 bike lanes would not generate substantial noise above existing conditions.

Hourly average noise levels are not expected to exceed the 65 dBA threshold at the property lines of the residential land uses during individual activities and simultaneous use. The maximum noise level threshold of 84 dBA is not expected to be exceeded at any of the receptors.

Maximum noise levels could reach 71 dBA L_{max} at the property lines of the residential land uses nearest the pickleball courts. As an option, an 8-foot noise barrier could be added along the northern and eastern boundaries of the pickleball courts to reduce the maximum noise levels at the residential land uses to 61 dBA L_{max} .

TABLE 5 Estimated Park Activity Noise Levels at Nearby Land Uses

Park Activity	West Multi-Family Residential			North Single Family Residential			East Single Family Residential		
	Distance from Center of Park Activity Area (feet)	Hourly L_{eq} (dBA)	L_{max} (dBA)	Distance from Center of Park Activity Area (feet)	Hourly L_{eq} (dBA)	L_{max} (dBA)	Distance from Center of Park Activity Area (feet)	Hourly L_{eq} (dBA)	L_{max} (dBA)
Basketball	365	43	-	435	42	-	200	49	-
Pickleball (8 Courts)	500	43	58	1,000	37	52	110	56 46 ^c	71 61 ^c
All Abilities Playground	215	54	62	665	45	53	315	51	59
Nature Playground	215	54	62	950	41	49	285	52	60
Combined Worst-Hour^a	-	58	62^b	-	48	53^b	-	59 49^c	71^b 61^c

^aCombined worst-hour levels would include activities on the basketball court, all 8 pickleball courts, the All Abilities playground, and the Nature playground.

^b L_{max} noise levels will not be combined, instead the loudest noise level is used.

^cNoise levels account for an optional 8-foot noise barrier along the northern and eastern boundaries of the pickleball courts.

To assess the permanent noise increase due to future park activities, the worst-case CNEL noise levels generated by the sports activity were calculated at the nearest residences located north, west and east of the park and compared to the existing ambient noise levels documented at sites LT-1 and LT-2 (58 dBA CNEL and 56 to 57 dBA CNEL, respectively). Assuming worst-case conditions, the basketball court and pickleball activities are assumed in use from 7:00 a.m. to 10:00 p.m. The playgrounds are assumed from 9:00 a.m. until 7:00 p.m. The estimated park CNEL noise levels propagated to the nearest property lines of the surrounding land uses are summarized in Table 6.

TABLE 6 Estimated Noise Level Increase of Existing Plus Project Park Activity Over Future Noise Levels at Receptors in the Project Vicinity

Receptor	Future CNEL (dBA)	Worst-Case Park Activity CNEL (dBA)	Worst-Case Future Combined CNEL (dBA)	Noise Level Increase, CNEL (dBA)
West Multi-family Residential	58 to 60	55	60 to 62	1 to 2
North Single Family Residential	58 to 60	46	58 to 60	0
East Single Family Residential	60 to 61	57	62 to 63	2

Since future exterior noise levels are expected to be greater than 60 dBA CNEL a 3 dBA CNEL increase would be considered significant. Permanent noise level increases were estimated to range from 0 to 2 dBA CNEL. Therefore, this would be a less-than-significant impact.

Parking Activities

Nine new parallel parking stalls will be located along Anton Way adjacent to the new pickleball courts. Noise associated with the use of the parking stalls would include engines, door slams, and human voices. The hourly average noise levels resulting from all of these noise-generating activities in a small parking area typically range from 50 to 52 dBA L_{eq} at a distance of 50 feet from the center of the parking area. The worst-case CNEL was calculated, assuming maximum parking activities every other hour between 8:00 a.m. and 10:00 p.m.

Table 7 summarizes the estimated parking noise at the surrounding receptors when the noise source is centered at the new parking area on the project site.

TABLE 7 Estimated Noise Level Increase of Existing Plus Project Parking Activities Over Existing Noise Levels at Receptors in the Project Vicinity

Receptor	Distance from Center of Nearest Parking Area (feet)	Hourly L_{eq} (dBA)	CNEL (dBA)	Noise Level Increase, CNEL (dBA)
East Single Family Residential	55	49 to 51	50	0

Noise levels resulting from parking activities would be below the City’s noise level standards and ambient noise levels documented at site LT-1. Additionally, proposed parking activities would not measurably contribute to ambient noise levels in the area (0 dBA CNEL increase) at the west and north residences. This is a less-than-significant impact.

Project Traffic

Since future exterior noise levels are expected to be greater than 60 dBA CNEL a 3 dBA CNEL increase would be considered significant. The project’s traffic and parking analysis² included vehicular trip generation estimates. The project is anticipated to generate 1.7 trips per parking space on weekdays and 1.16 trips per parking space on weekends. Based upon traffic counts conducted during our measurements, existing hourly traffic volume along Anton Way was 32 automobiles and along Stevens Creek Boulevard was 1,492 automobiles. Development of the projects parking activities would not measurably contribute to ambient noise levels in the area (0 dBA CNEL increase). This is a less-than-significant impact.

Total Combined Project-Generated Noise

Table 8 summarizes the noise level increases for each project-generated noise source, as well as the total combined increase. The total noise level increase would range from 0 to 2 dBA at all surrounding receptors. This is less than 3 dBA, which is the threshold for residential receptors with future exterior noise levels above 60 dBA CNEL.

While the worst-hour hourly average noise level would exceed the Municipal Code threshold of 55 dBA at the residential receptors to the west and to the north, this would not be considered a significant impact since the park is owned and operated by a public entity. This is a less-than-significant impact.

TABLE 8 Estimated Noise Level Increase of Existing Plus Project Over Existing at Receptors in the Project Vicinity

Receptor	Increase Due to Park Activities, CNEL (dBA)	Increase Due to Parking Noise, CNEL (dBA)	Increase Due to Project Traffic, CNEL (dBA)	Total Noise Level Increase, CNEL (dBA)
West Residential	1 to 2	0	0	1 to 2
North Residential	0	0	0	0
South Residential	2	0	0	0 to 2

Mitigation Measure 1a: None required.

² TJKM, “Trip Generation for New Parking Lot at Cupertino Memorial Park in Cupertino, CA,” August 2, 2023.

Impact 1b: Temporary Construction Noise. Existing noise-sensitive land uses would be exposed to a temporary increase in ambient noise levels due to project construction activities but would not exceed the City's standards. This is a **less-than-significant impact**.

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

Section 10.48.053 of the City's Municipal Code exempts construction noise from the noise limits defined in Section 10.48.040 if activities occur on weekdays during daytime hours, provided that the equipment utilized has high-quality noise muffler and abatement devices installed and are in good condition. The construction activities also need to meet the following two criteria: 1) no individual device shall produce noise levels exceeding 87 dBA at a distance of 25 feet; and 2) the noise level measured at any nearby property shall not exceed 80 dBA. Construction activities are prohibited on weekends, holidays, or during nighttime hours at sites within 750 feet of residential land uses.

Construction activities generate considerable amounts of noise, especially during earth-moving activities when heavy equipment is used. The highest maximum noise levels generated by project construction would typically range from about 80 to 90 dBA L_{max} at a distance of 50 feet from the noise source. A list of typical maximum instantaneous noise levels measured at 50 feet are provided in Table 9. Table 10 shows the hourly average noise level ranges, by construction phase for various types of construction projects. Construction-generated noise levels drop off at a rate of about 6 dBA per doubling of the distance between the source and receptor. Shielding by buildings or terrain can provide an additional 5 to 10 dBA noise reduction at distant receptors.

Construction would be completed over a period of approximately 15 years as funding is made available for individual improvements. It is anticipated the first five years of construction would include improvements such as the upgrades to the existing parking lot accessed via Mary Avenue and construction of the All-Abilities Playground, Nature Playground, bocce court, pickleball courts, and new parallel parking stalls along Anton Way. The second five-year period would include improvements such as the upgrades to the existing amphitheater, renovation of the parking lot accessed via Alves Drive, construction of the basketball court, and renovation of the existing picnic area. The final five-year period is anticipated to consist of landscaping improvements in the parking lot areas adjacent to the Quinlan Community Center and Senior Center.

TABLE 9 Construction Equipment, 50-foot Noise Emission Limits

Equipment Category	L_{max} Level (dBA)^{1,2}	Impact/Continuous
Arc Welder	73	Continuous
Auger Drill Rig	85	Continuous
Backhoe	80	Continuous
Bar Bender	80	Continuous
Boring Jack Power Unit	80	Continuous
Chain Saw	85	Continuous
Compressor ³	70	Continuous
Compressor (other)	80	Continuous
Concrete Mixer	85	Continuous
Concrete Pump	82	Continuous
Concrete Saw	90	Continuous
Concrete Vibrator	80	Continuous
Crane	85	Continuous
Dozer	85	Continuous
Excavator	85	Continuous
Front End Loader	80	Continuous
Generator	82	Continuous
Generator (25 KVA or less)	70	Continuous
Gradall	85	Continuous
Grader	85	Continuous
Grinder Saw	85	Continuous
Horizontal Boring Hydro Jack	80	Continuous
Hydra Break Ram	90	Impact
Impact Pile Driver	105	Impact
Insitu Soil Sampling Rig	84	Continuous
Jackhammer	85	Impact
Mounted Impact Hammer (hoe ram)	90	Impact
Paver	85	Continuous
Pneumatic Tools	85	Continuous
Pumps	77	Continuous
Rock Drill	85	Continuous
Scraper	85	Continuous
Slurry Trenching Machine	82	Continuous
Soil Mix Drill Rig	80	Continuous
Street Sweeper	80	Continuous
Tractor	84	Continuous
Truck (dump, delivery)	84	Continuous
Vacuum Excavator Truck (vac-truck)	85	Continuous
Vibratory Compactor	80	Continuous
Vibratory Pile Driver	95	Continuous
All other equipment with engines larger than 5 HP	85	Continuous

Notes: ¹ Measured at 50 feet from the construction equipment, with a “slow” (1 sec.) time constant.

² Noise limits apply to total noise emitted from equipment and associated components operating at full power while engaged in its intended operation.

³ Portable Air Compressor rated at 75 cfm or greater and that operates at greater than 50 psi.

TABLE 10 Typical Ranges of Construction Noise Levels at 50 Feet, L_{eq} (dBA)

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

Source: U.S.E.P.A., Legal Compilation on Noise, Vol. 1, p. 2-104, 1973.

Based on our experience with similar project equipment expected to be used in each construction phase are summarized in Table 11, along with the quantity of each type of equipment and the reference noise level at 50 feet, assuming the operation of the two loudest pieces of construction equipment for each construction phase.

Federal Highway Administration's (FHWA's) Roadway Construction Noise Model (RCNM) was used to calculate the hourly average noise levels for each phase of construction, assuming the two loudest pieces of equipment would operate simultaneously, as recommended by the FTA for construction noise evaluations. This construction noise model includes representative sound levels for the most common types of construction equipment and the approximate usage factors of such equipment that were developed based on an extensive database of information gathered during the construction of the Central Artery/Tunnel Project in Boston, Massachusetts (CA/T Project or "Big Dig"). The usage factors represent the percentage of time that the equipment would be operating at full power.

To assess construction noise impacts at the receiving property lines of existing noise-sensitive receptors, the worst-case hourly average noise level, which would result in the noise levels summarized in Table 11, was propagated from the geometrical center of the project site to the nearest property lines of the receptors. These noise level estimates are shown in Table 12. Noise levels in Tables 11 and 12 do not assume reductions due to intervening buildings or existing barriers.

TABLE 11 Estimated Construction Noise Levels for the Proposed Park at a Distance of 50 feet

Phase of Construction	Construction Equipment (Quantity)	Estimated Construction Noise Level at 50 feet
Demolition	Concrete/Industrial Saw (1) ^a Excavators (3) Rubber-Tired Dozer (2)	84 dBA L _{eq}
Site Preparation	Rubber-Tired Dozer (3) ^a Tractor/Loader/Backhoe (4) ^a	82 dBA L _{eq}
Grading/Excavation	Excavator (2) Grader (1) ^a Rubber-Tired Dozer (1) Scraper (2) Tractor/Loader/Backhoe (2) ^a	84 dBA L _{eq}
Building – Exterior	Crane (1) Forklift (3) Generator Set (1) ^a Tractor/Loader/Backhoe (3) ^a Welder (1)	82 dBA L _{eq}
Building – Interior/ Architectural Coating	Air Compressor (1) ^a	74 dBA L _{eq}
Paving	Paver (2) ^a Paving Equipment (2) ^a Roller (2)	83 dBA L _{eq}

TABLE 12 Estimated Construction Noise Levels at Nearby Land Uses

Phase	Calculated Hourly Average L_{eq} at Noise-Sensitive Receptors, dBA L_{eq}							
	First 5 Years		Second 5 Years			Third 5 Years		
	Multi-Family Residential West (230 ft)	Single Family Residential East (270 ft)	Multi-Family Residential West (370 ft)	Single Family Residential North (380 ft)	Single Family Residential East (240 ft)	Single Family Residential North (230 ft)	Single Family Residential South (260 ft)	Single Family Residential East (370 ft)
Demolition	75	73	71	70	74	75	74	71
Site Preparation	71	70	67	67	71	71	70	67
Grading & Excavation	74	73	70	70	74	74	73	70
Building – Exterior	70	69	66	66	70	70	69	66
Building – Interior & Architectural Coating	60	59	56	56	60	60	59	56
Paving	71	70	67	67	71	71	70	67

These construction noise levels would not exceed the exterior threshold of 80 dBA L_{eq} at the nearby land-uses. While specific construction activities would at times exceed these thresholds when work is conducted near shared property lines, construction would move throughout the project site during the planned period and thus would not constitute a significant temporary increase.

Standard Construction Noise Controls:

Reasonable regulation of the hours of construction, as well as regulation of the arrival and operation of heavy equipment and the delivery of construction material, are necessary to protect the health and safety of persons, promote the general welfare of the community, and maintain the quality of life. The following measures should be used to reduce construction noise levels as low as practical:

- Limit construction activity to weekdays between daytime hours with no construction on Saturdays, Sundays, and holidays;
- Utilize "quiet" models of air compressors and other stationary noise sources where such technology exists;
- Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment;
- Locate all stationary noise-generating equipment, such as air compressors and portable power generators, as far away as possible from adjacent land uses;
- Locate staging areas and construction material areas as far away as possible from adjacent land uses;
- Prohibit all unnecessary idling of internal combustion engines.

Mitigation Measure 1b: None required.

Impact 2: Exposure to Excessive Groundborne Vibration due to Construction.
Construction-related vibration levels resulting from activities at the project site would not exceed 0.3 in/sec PPV at the nearest sensitive receptor. **This is a less-than-significant impact.**

The construction of the project may generate vibration when heavy equipment or impact tools (e.g. hoe rams) are used in close proximity to existing buildings. Construction activities would include demolition, site preparation, grading and excavation, building exterior, building interior, and paving. Pile driving, which can cause excessive vibration, is not expected to be required.

For structural damage, the California Department of Transportation recommends a vibration limit of 0.5 in/sec PPV for buildings structurally sound and designed to modern engineering standards, 0.3 in/sec PPV for buildings that are found to be structurally sound but where structural damage is a major concern, and a conservative limit of 0.08 in/sec PPV for ancient buildings or buildings that are documented to be structurally weakened. No known ancient buildings or buildings that are

documented to be structurally weakened adjoin the project area. Therefore, conservatively, groundborne vibration levels exceeding 0.3 in/sec PPV would have the potential to result in a significant vibration impact.

Vibration levels would vary depending on soil conditions, construction methods, and equipment used. Table 13 presents typical vibration levels that could be expected from construction equipment at a distance of 25 feet. Project construction activities, such as drilling, the use of jackhammers, rock drills and other high-power or vibratory tools, and rolling stock equipment (tracked vehicles, compactors, etc.), 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. Table 13 also summarizes the distances to the 0.08 in/sec PPV threshold for historical buildings and to the 0.3 in/sec PPV threshold for all other buildings.

TABLE 13 Vibration Source Levels for Construction Equipment

Equipment	PPV at 25 ft. (in/sec)	Minimum Distance to Meet 0.08 in/sec PPV (feet)	Minimum Distance to Meet 0.3 in/sec PPV (feet)
Clam shovel drop	0.202	56	18
Hydromill (slurry wall)	in soil	0.008	1
	in rock	0.017	2
Vibratory Roller	0.210	58	19
Hoe Ram	0.089	27	9
Large bulldozer	0.089	27	9
Caisson drilling	0.089	27	9
Loaded trucks	0.076	23	8
Jackhammer	0.035	12	4
Small bulldozer	0.003	2	<1

Source: Transit Noise and Vibration Impact Assessment Manual, Federal Transit Administration, Office of Planning and Environment, U.S. Department of Transportation, September 2018, as modified by Illingworth & Rodkin, Inc., January 2023.

Vibration levels are highest close to the source, and then attenuate with increasing distance at the rate $(D_{ref}/D)^{1.1}$, where D is the distance from the source in feet, and D_{ref} is the reference distance of 25 feet. Table 14 presents typical vibration levels that could be expected from construction equipment at 25 feet and summarizes the expected vibration levels at the nearest off-site buildings, which would be 20 feet or more from areas of the project site that would be developed as part of the project.

TABLE 14 Vibration Levels for Construction Equipment

Equipment	PPV at 25 ft. (in/sec)	Vibration Levels at Nearest Buildings (in/sec PPV)			
		Multi-Family Residential West (30 ft)	Single-Family Residential East (55 ft)	Single-Family Residential North (60 ft)	Future Mix-Use West (250 feet)
Clam shovel drop	0.202	0.165	0.085	0.077	0.016
Hydromill (slurry wall)	In soil	0.007	0.010	0.003	0.003
	In rock	0.014	0.022	0.007	0.006
Vibratory Roller	0.21	0.172	0.088	0.080	0.017
Hoe Ram	0.089	0.073	0.037	0.034	0.007
Large bulldozer	0.089	0.073	0.037	0.034	0.007
Caisson drilling	0.089	0.073	0.037	0.034	0.007
Loaded trucks	0.076	0.062	0.032	0.029	0.006
Jackhammer	0.035	0.029	0.015	0.013	0.003
Small bulldozer	0.003	0.002	0.001	0.001	0.0002

Source: Transit Noise and Vibration Impact Assessment Manual, Federal Transit Administration, Office of Planning and Environment, U.S. Department of Transportation, FTA Report No. 0123, September 2018, as modified by Illingworth & Rodkin, Inc., September 2023.

Project-generated vibration levels would fall below the Caltrans recommended threshold of 0.3 in/sec PPV at surrounding conventional buildings located further than 18 feet from the project site. Neither cosmetic, minor, or major damage would occur at distances of 20 feet or more. At these locations, and in other surrounding areas where vibration would not be expected to cause structural damage, vibration levels may still be perceptible. However, as with any type of construction, this would be anticipated and would not be considered significant, given the intermittent and short duration of the phases that have the highest potential of producing vibration. By use of administrative controls, such as notifying neighbors of scheduled construction activities, annoyance due to perceptible vibration levels can be kept to a minimum.

In summary, the construction of the project would not generate vibration levels exceeding 0.3 in/sec PPV threshold at the nonhistorical buildings surrounding the project site. This would be a less-than-significant impact.

Mitigation Measure 2: None required.

Impact 3: Excessive Aircraft Noise. The project would not expose people to excessive aircraft noise levels. **This is a less-than-significant impact.**

The San Jose Mineta International Airport is located approximately 6.4 miles northeast of the project site and is the closest airport. The project site lies well outside the 60 dBA CNEL noise contour for 2037. The noise environment at the site would not substantially increase due to aircraft noise from this airport.

Mitigation Measure 3: None required.

Cumulative Impacts

From the City's website,³ the following planned or approved projects are located within 1,000 feet of the proposed project:

- **Westport Cupertino** – this project is located west of the project site, opposite Mary Avenue at 21267 Stevens Creek Boulevard. This project was identified as a future receptor in this report. The Westport Cupertino project would include the demolition of a 71,250 square foot retail center (the Oaks) and construct a mixed-use development consisting of 267 housing units (88 rowhouse/townhomes, 179 senior apartments), 27 memory care rooms, and 20,000 square feet of commercial space. This project is currently under construction. This project is likely to be constructed before the proposed project. The multi-family residential to the west of Cupertino Memorial Park would be a shared receptor for both construction sites. Considering that the Westport Cupertino project is likely to be constructed prior to the Memorial Park Specific Plan project, a cumulative construction impact is not expected.

³ <https://mydashgis.com/SanCarlosProjects/map>

No other projects are located within 1,000 feet of the proposed project site. Therefore, potential cumulative construction impacts would be less-than-significant.

APPENDIX A

FIGURE A-1 Daily Trend in Noise Levels at LT-1, Tuesday, August 29, 2023

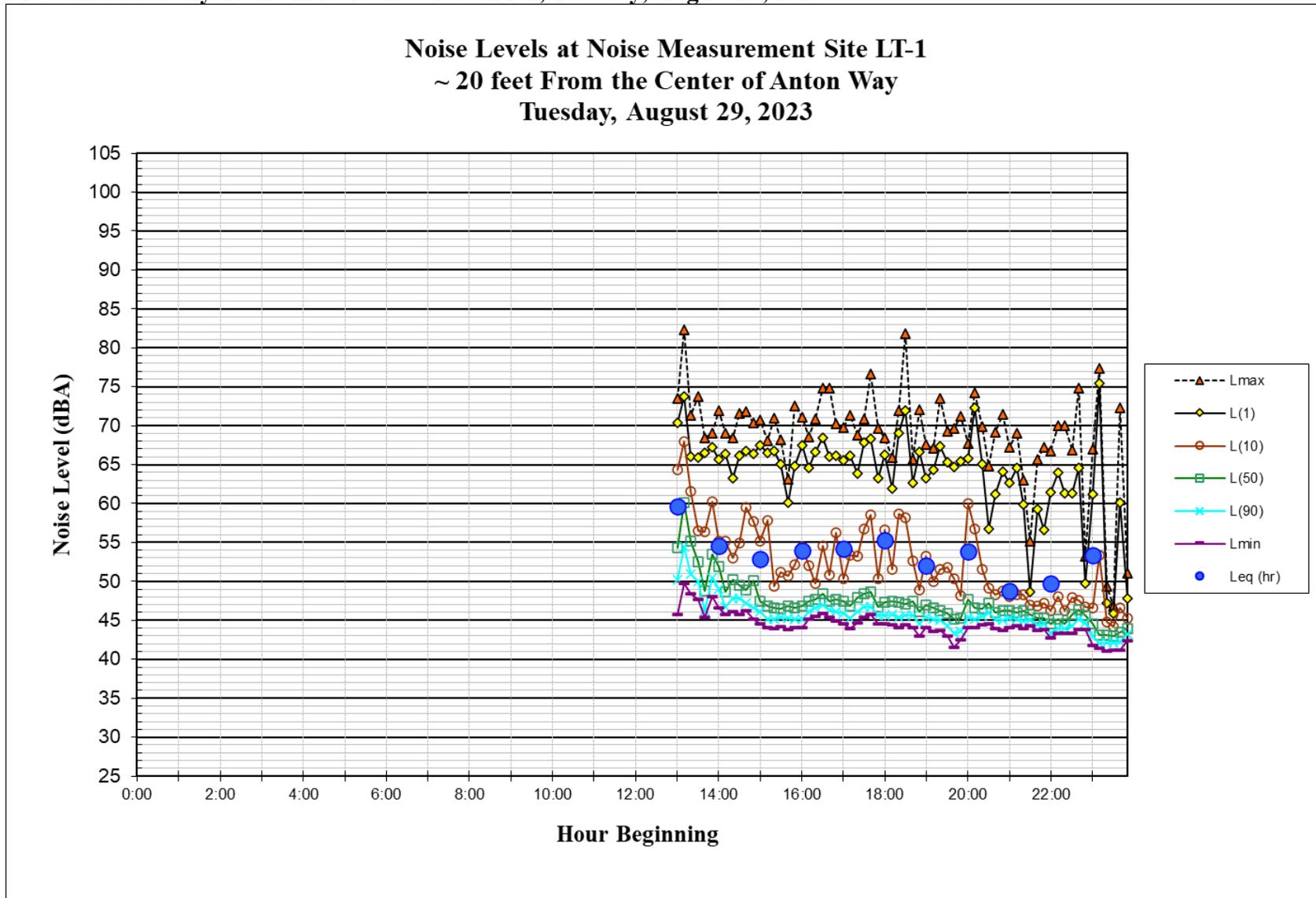


FIGURE A-2 Daily Trend in Noise Levels at LT-1, Wednesday, August 30, 2023

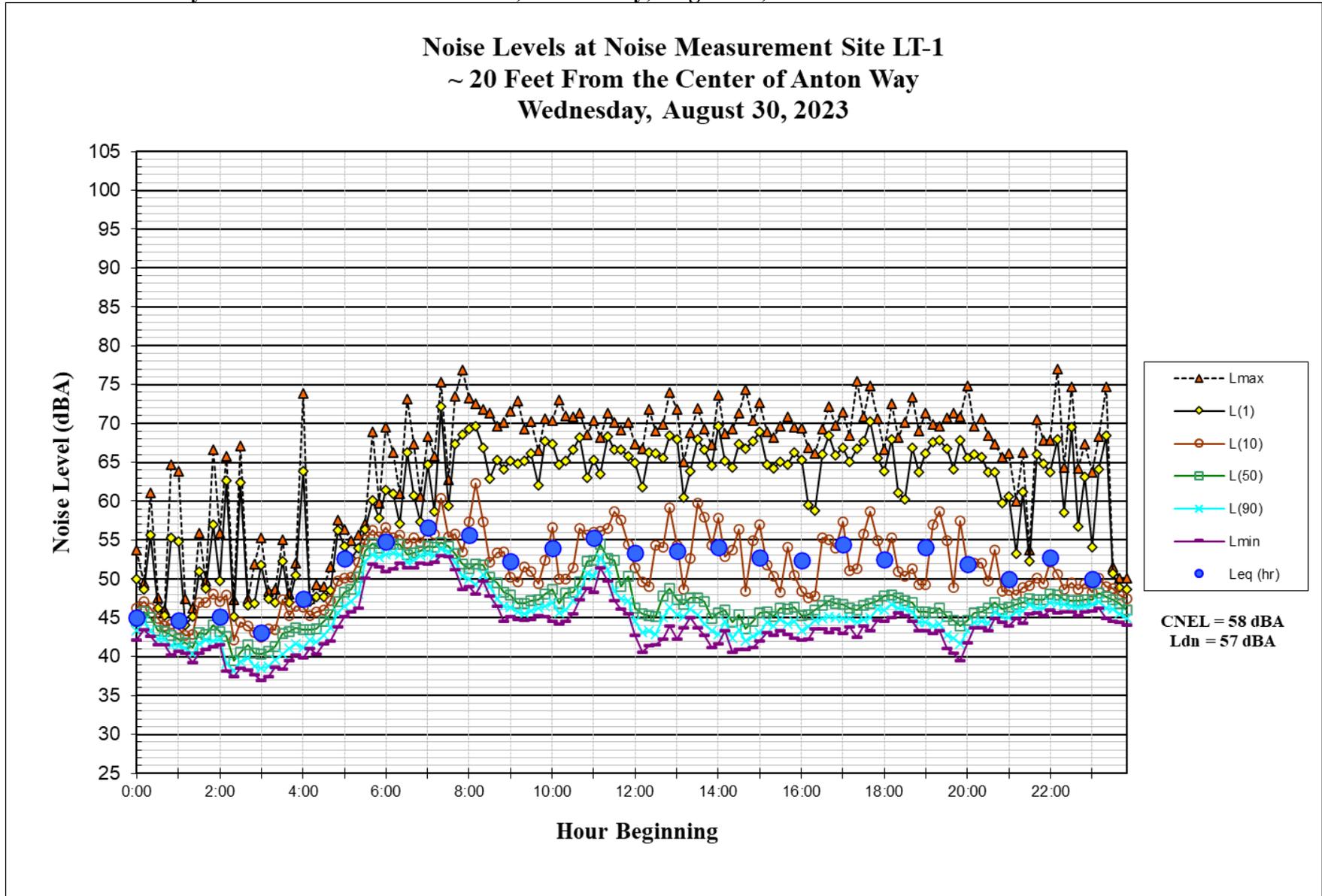


FIGURE A-3 Daily Trend in Noise Levels at LT-1, Thursday, August 31, 2023

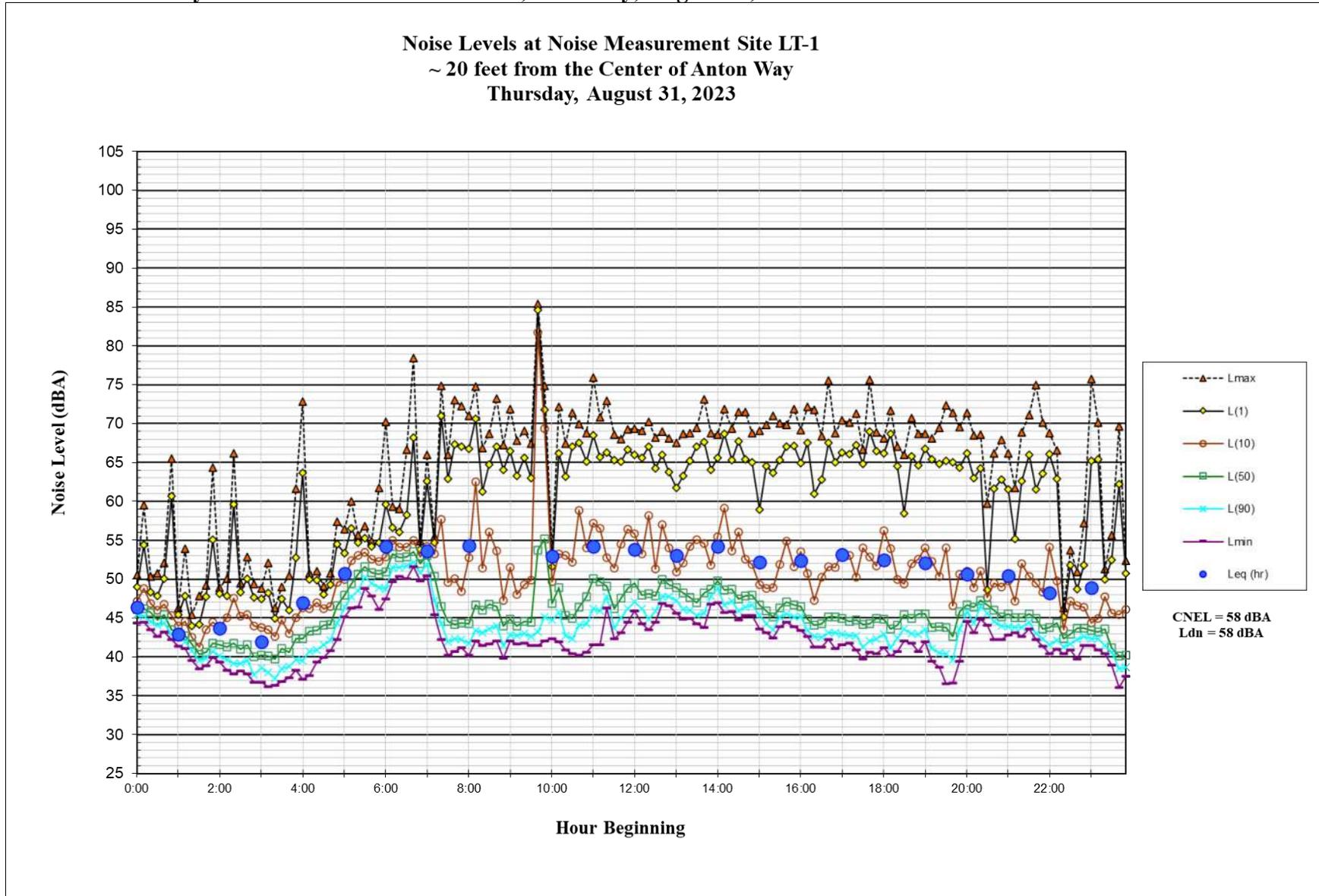


FIGURE A-4 Daily Trend in Noise Levels at LT-1, Friday, September 1, 2023

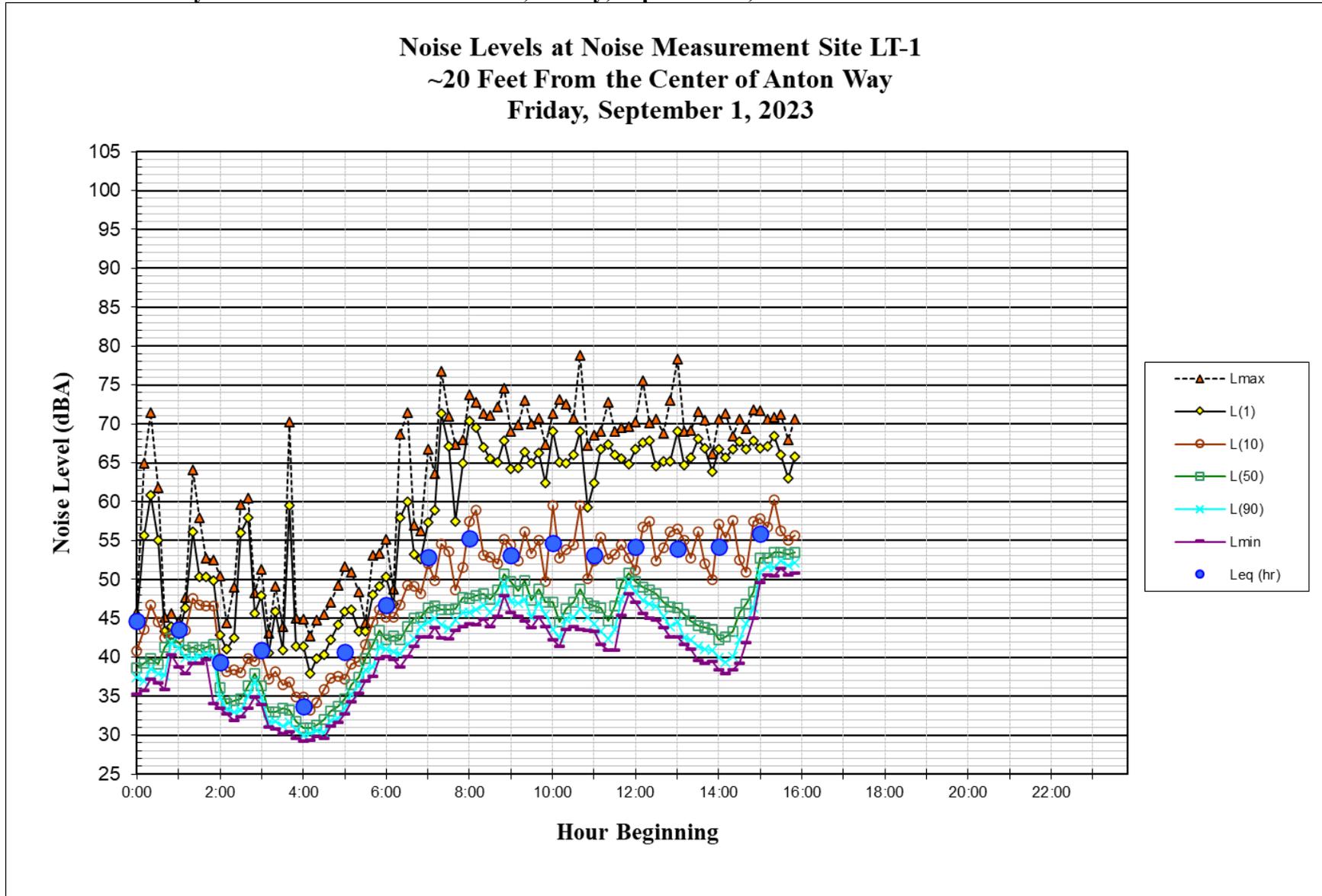


FIGURE A-5 Daily Trend in Noise Levels at LT-2, Tuesday, August 29, 2023

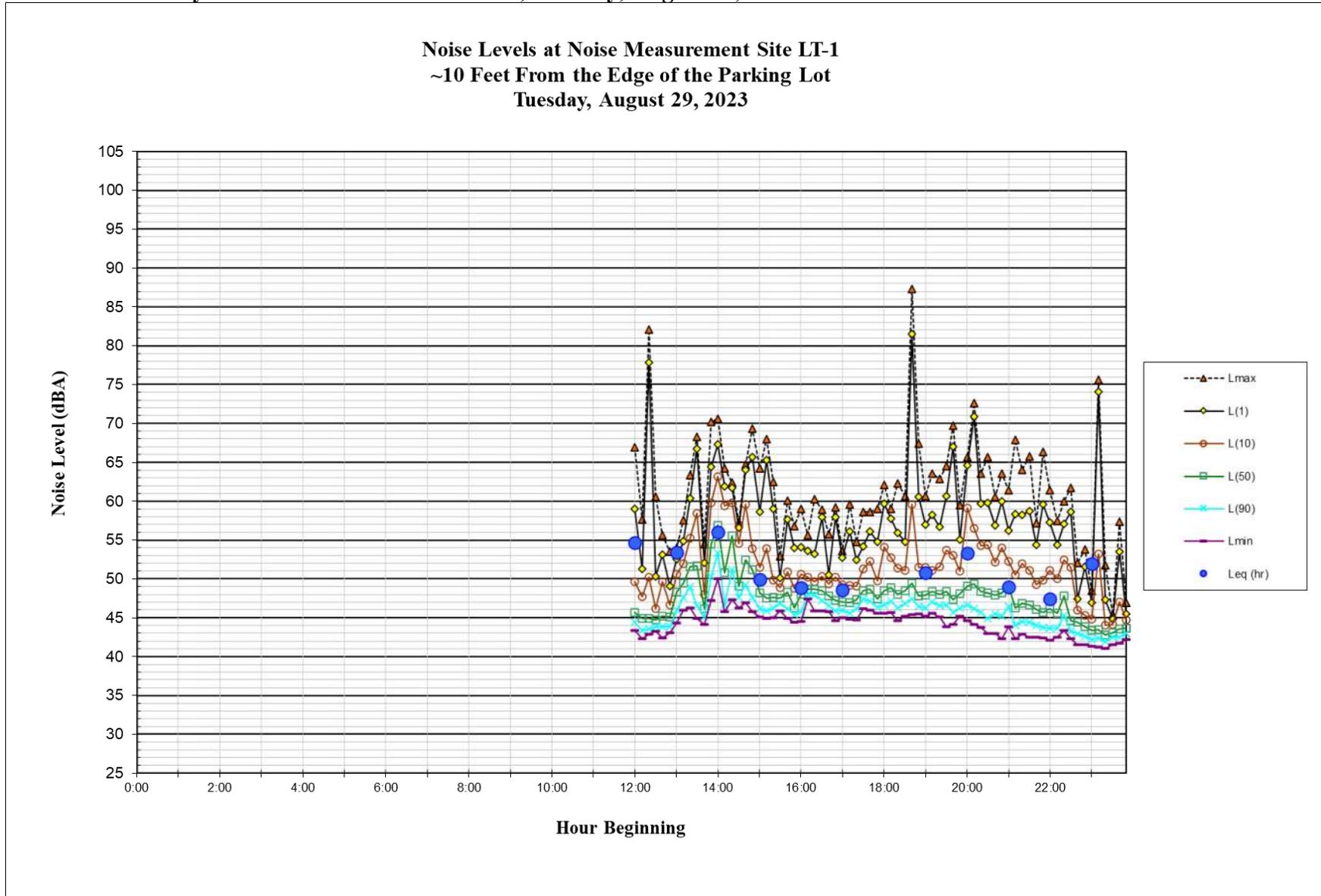


FIGURE A-6 Daily Trend in Noise Levels at LT-2, Wednesday, August 30, 2023

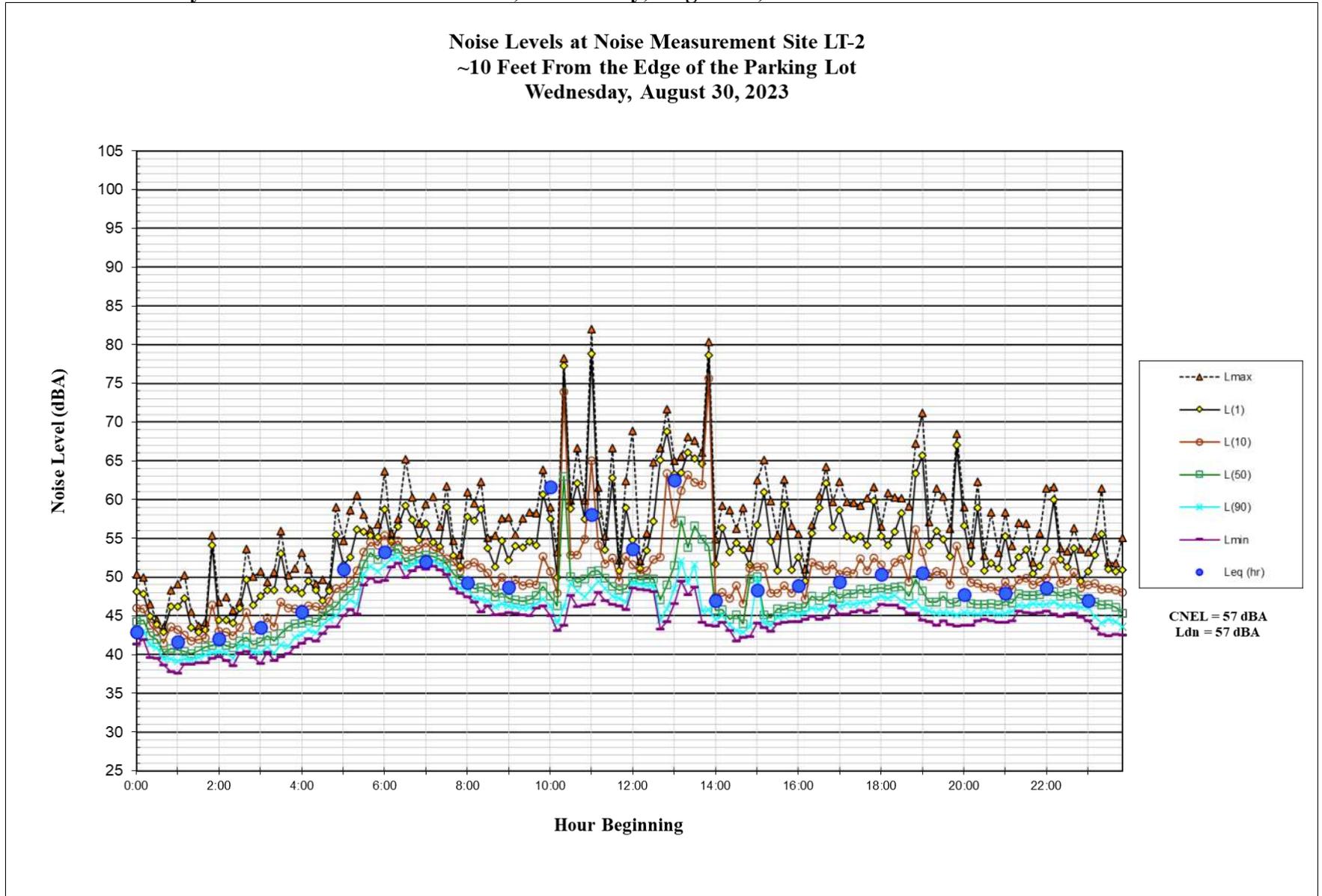


FIGURE A-7 Daily Trend in Noise Levels at LT-2, Thursday, August 31, 2023

**Noise Levels at Noise Measurement Site LT-2
~10 Feet From the Edge of the Parking Lot
Thursday, August 31, 2023**

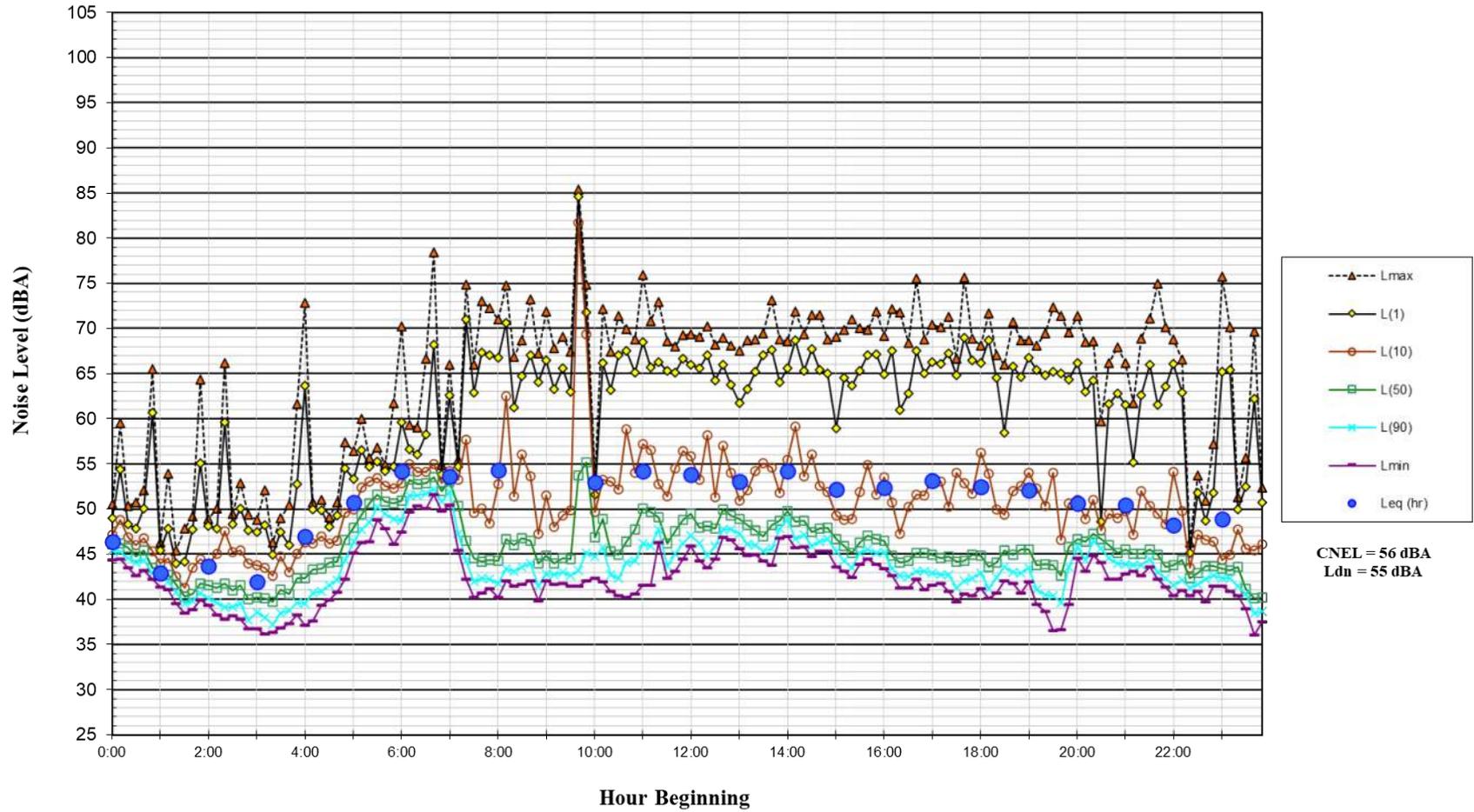
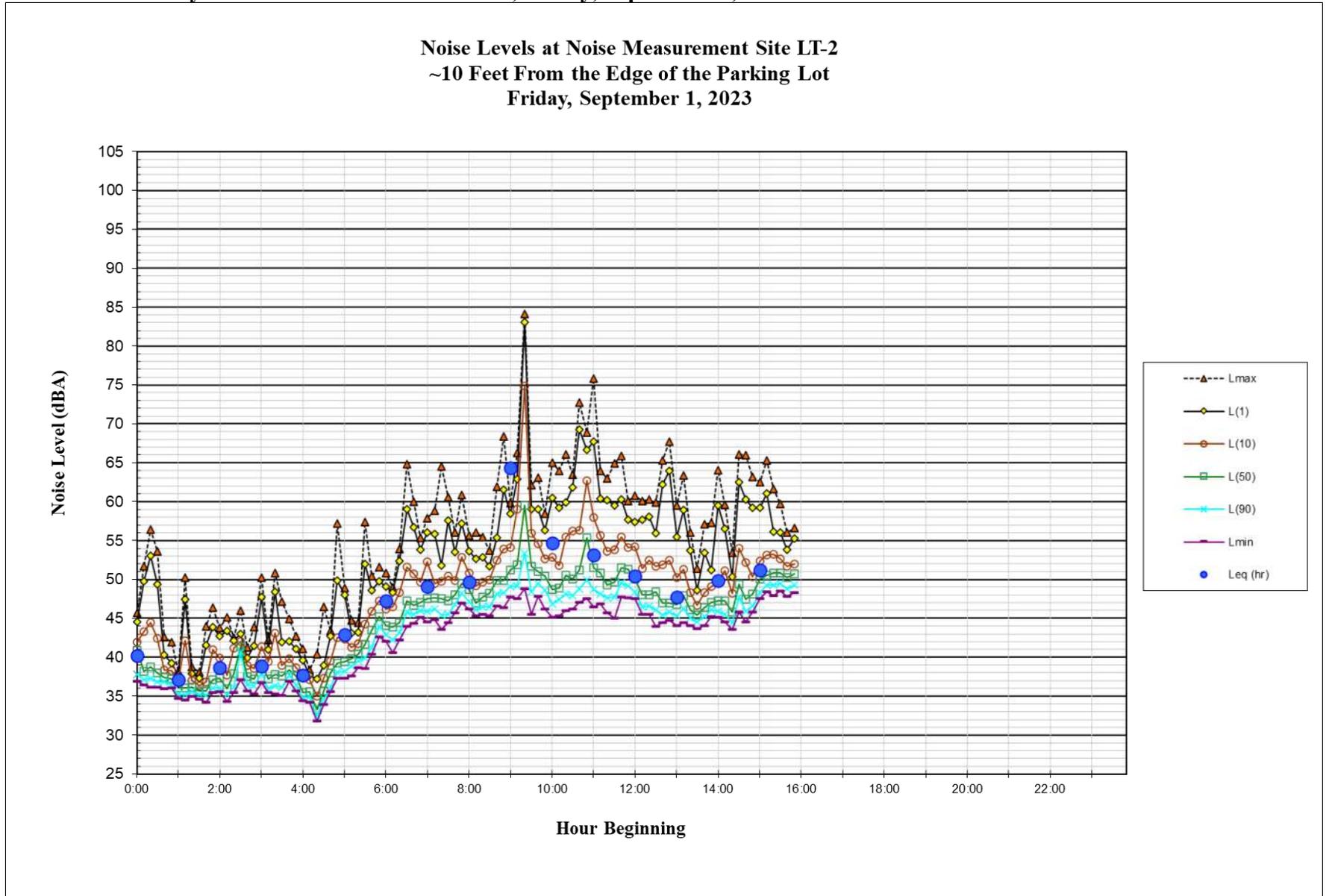


FIGURE A-8 Daily Trend in Noise Levels at LT-2, Friday, September 1, 2023





TECHNICAL MEMORANDUM

Date: August 2, 2023
To: Michael Freitag
Gates & Associates
From: Renee Reavis
TJKM
Subject: Trip Generation for New Parking Lot at Cupertino Memorial Park in Cupertino, CA

The purpose of this memorandum is to present the results of the trip generation analysis conducted for a proposed parking lot to be constructed at the Cupertino Memorial Park in Cupertino, California. The park currently provides separate parking areas accessed from Mary Avenue and Alves Drive. A new parking lot accessed from Anton Way is proposed. It is expected that the new Anton Way lot, located near the Alves Drive lot, will have similar operational characteristics. Driveway counts collected at the Alves Drive lot were used to estimate the number of new trips generated by the new Anton lot. Based on its location, it is expected that all vehicles using the Anton Way parking lot would access Anton Way from Stevens Creek Boulevard.

Data Collection

Driveway counts were collected at the Alves Drive parking lot on Thursday, June 8 (10 a.m. – 6 p.m.) and Saturday, June 10 (10 a.m. – 1 p.m.), 2023. These periods were selected based on prior occupancy surveys conducted at the Anton lot, which showed the highest parking occupancy for midday through mid-afternoon on a weekday and during midday on a Saturday. Data collection worksheets are attached in the **Appendix**.

Trip Generation

The existing Alves Drive parking lot provides a total of 50 parking spaces, including two accessible spaces. The peak weekday trip generation was 40 inbound and 45 outbound vehicles (85 total), between 4:15 – 5:15 p.m., which is during the typical p.m. peak analysis period (4 – 6 p.m.). This works out to 1.7 trips per parking space on weekdays. On weekends, the peak trip generation was 30 inbound and 28 outbound vehicles (58 total), between 11:30 a.m. – 12:30 p.m. This works out to 1.16 trips per parking space on weekends.

The proposed Anton Way parking lot would provide a total of ten spaces, including two accessible spaces. The new parking lot is expected to generate 17 new weekday peak hour trips (8 in, 9 out), and 12 new weekend midday trips (6 in, 6 out).

Use	Size	Weekday PM				Weekend Midday			
		Rate	In	Out	Total	Rate	In	Out	Total
Anton Parking Lot	10 Spaces	1.7	8	9	17	1.16	6	6	12

Appendix

Driveway Counts

Trip Gen Study

Location: Parking Lot |
City: Cupertino, CA

Date: 6/8/2023
Day: Thursday

Spaces: 50

TIME	IN	OUT	Trip
			OUTCOME
10:00 AM	8	4	4
10:15 AM	2	7	-5
10:30 AM	3	1	2
10:45 AM	6	5	1
11:00 AM	2	4	-2
11:15 AM	5	3	2
11:30 AM	4	6	-2
11:45 AM	3	5	-2
12:00 PM	2	4	-2
12:15 PM	1	2	-1
12:30 PM	3	3	0
12:45 PM	7	6	1
1:00 PM	2	6	-4
1:15 PM	6	6	0
1:30 PM	4	8	-4
1:45 PM	10	2	8
2:00 PM	16	9	7
2:15 PM	13	7	6
2:30 PM	2	1	1
2:45 PM	6	4	2
3:00 PM	7	5	2
3:15 PM	5	7	-2
3:30 PM	8	9	-1
3:45 PM	7	4	3
4:00 PM	9	4	5
4:15 PM	6	14	-8
4:30 PM	9	15	-6
4:45 PM	12	11	1
5:00 PM	13	5	8
5:15 PM	12	7	5
5:30 PM	7	12	-5
5:45 PM	3	6	-3
Totals	203	192	11

Hourly In	Hourly Out	Hourly total	Hour Start	Trips/Space	In %	Out %
19	17	36	10:00 AM			
13	17	30	10:15 AM			
16	13	29	10:30 AM			
17	18	35	10:45 AM			
14	18	32	11:00 AM			
14	18	32	11:15 AM			
10	17	27	11:30 AM			
9	14	23	11:45 AM			
13	15	28	12:00 PM			
13	17	30	12:15 PM			
18	21	39	12:30 PM			
19	26	45	12:45 PM			
22	22	44	1:00 PM			
36	25	61	1:15 PM			
43	26	69	1:30 PM			
41	19	60	1:45 PM			
37	21	58	2:00 PM			
28	17	45	2:15 PM			
20	17	37	2:30 PM			
26	25	51	2:45 PM			
27	25	52	3:00 PM			
29	24	53	3:15 PM			
30	31	61	3:30 PM			
31	37	68	3:45 PM			
36	44	80	4:00 PM			
40	45	85	4:15 PM	1.7	47%	53%
46	38	84	4:30 PM			
44	35	79	4:45 PM			
35	30	65	5:00 PM			

Trip Gen Study

Location: Parking Lot

Date: 6/10/2023

City: Cupertino, CA

Day: Saturday

Spaces: 50

TIME	IN	OUT	Trip
			OUTCOME
10:00 AM	3	4	-1
10:15 AM	7	1	6
10:30 AM	10	8	2
10:45 AM	7	5	2
11:00 AM	5	8	-3
11:15 AM	10	4	6
11:30 AM	5	10	-5
11:45 AM	5	2	3
12:00 PM	11	10	1
12:15 PM	9	6	3
12:30 PM	7	3	4
12:45 PM	1	8	-7
Totals	80	69	11

Hourly In	Hourly Out	Hourly total	Hour Start	Trips/Space	In %	Out %
			10:00 AM			
27	18	45	10:15 AM			
29	22	51	10:30 AM			
32	25	57	10:45 AM			
27	27	54	11:00 AM			
25	24	49	11:15 AM			
31	26	57	11:30 AM			
30	28	58	11:45 AM	1.16	52%	48%
32	21	53	12:00 PM			
28	27	55				