



City of Sunnyvale

Notice and Agenda - Final Planning Commission

Monday, February 11, 2019

7:00 PM

Council Chambers, City Hall, 456 W. Olive
Ave., Sunnyvale, CA 94086

Study Session Cancelled | Special Meeting - Public Hearing 7 PM

STUDY SESSION CANCELLED

7 P.M. PLANNING COMMISSION MEETING

CALL TO ORDER

Call to Order in the Council Chambers

SALUTE TO THE FLAG

ROLL CALL

ORAL COMMUNICATIONS

This category provides an opportunity for members of the public to address the commission on items not listed on the agenda and is limited to 15 minutes (may be extended or continued after the public hearings/general business section of the agenda at the discretion of the Chair) with a maximum of up to three minutes per speaker. Please note the Brown Act (Open Meeting Law) does not allow commissioners to take action on an item not listed on the agenda. If you wish to address the commission, please complete a speaker card and give it to the Recording Secretary. Individuals are limited to one appearance during this section.

CONSENT CALENDAR

1. A [19-0197](#) Approve Planning Commission Meeting Minutes of January 28, 2019

Recommendation: Approve Planning Commission Meeting Minutes of January 28, 2019 as submitted.

PUBLIC HEARINGS/GENERAL BUSINESS

2. [18-0984](#) **Proposed Project:** Related applications on a 16.82-acre site:

SPECIAL DEVELOPMENT PERMIT: Demolish seven existing industrial buildings, two commercial buildings, and construct a new mixed-use project. Project consists of a three-to-five-story apartment/commercial building with a wrapped seven-level parking structure (including one underground level); two two-to-seven-story condominium buildings above podium parking structures; and 20 two-to-three-story townhome buildings with individual garages.

Residential: 741 total units (412 rental /329 ownership) at a density of 44 du/ac.

Commercial: 1,500 sq. ft. on the ground floor of the apartment building.

Publicly-Accessible, Privately-Owned Open Space: 2.3 acres

VESTING TENTATIVE MAP: Create two lots for condominium purposes (and associated common areas) and one lot for the apartments/commercial space.

Location: 1155-1175 Aster Avenue (APNs: 213-01-032; 213-01-033; 213-01-034)

File #: 2018-7513

Applicant / Owner: Olympic Residential Group / JJ & W LLC

Environmental Review: No additional review required as per CEQA Guidelines 15168(c)(2) and (4) - environmental impacts of the project are addressed in the Lawrence Station Area Plan (LSAP) Program Environmental Impact Report (EIR).

Project Planner: George Schroeder, (408) 730-7443, gschroeder@sunnyvale.ca.gov

Recommendation: Alternative 1: Make the required Findings to approve the CEQA determination that the environmental impacts of the project are addressed in the Lawrence Station Area Plan Program (LSAP) Environmental Impact Report (EIR) and no additional environmental review is required; and approve the Special Development Permit with Sunnyvale Municipal Code (SMC) deviations for building height and distance between main buildings, and Vesting Tentative Map subject to the recommended conditions of approval and LSAP Mitigation Monitoring and Reporting Program (MMRP) in Attachment 4.

3. [19-0173](#)

Proposed Project: Related applications on a 0.29-acre site:

DESIGN REVIEW: to allow demolition of the existing home and construct a new two-story single-family home resulting in 5,667 square feet (5,173 square feet living area and 494 square feet garage) and 47.6% floor area ratio (FAR). Project includes a new pool and spa.

Location: 1019 Edmonds Court (APN: 320-12-008)

File #: 2018-7655

Zoning: Low Density Residential (R-1)

Applicant / Owner: Bekom Design, Inc. (applicant) / Alon Matas and Hila Matas-Magen (owner)

Environmental Review: A Class 3 Categorical Exemption relieves this project from California Environmental Quality Act (CEQA) provisions. Class 3(a) Categorical Exemption includes construction of one single-family residence in a residential zoning district.

Project Planner: Kelly Cha, (408) 730-7408, kcha@sunnyvale.ca.gov

Recommendation: Recommend Alternative 1: Approve the Design Review in accordance with the Findings in Attachment 3 and Conditions of Approval in Attachment 4.

STANDING ITEM: CONSIDERATION OF POTENTIAL STUDY ISSUES

NON-AGENDA ITEMS AND COMMENTS

-Commissioner Comments

-Staff Comments

ADJOURNMENT

Notice to the Public:

Any agenda related writings or documents distributed to members of the Planning Commission regarding any open session item on this agenda will be made available for public inspection in the Planning Division office located at 456 W. Olive Ave., Sunnyvale CA 94086 during normal business hours, and in the Council Chambers on the evening of the Planning Commission meeting pursuant to Government Code §54957.5.

Agenda information is available by contacting Katherine Hall at (408) 730-7440. Agendas and associated reports are also available at sunnyvaleca.legistar.com or at the Sunnyvale Public Library, 665 W. Olive Ave., 72 hours before the meeting.

*Planning a presentation for a Planning Commission meeting?
To help you prepare and deliver your public comments, please review the "Making Public Comments During City Council or Planning Commission Meetings" document available on the City website.*

PLEASE TAKE NOTICE that if you file a lawsuit challenging any final decision on any public hearing item listed in this agenda, the issues in the lawsuit may be limited to the issues which were raised at the public hearing or presented in writing to the City at or before the public hearing.

PLEASE TAKE FURTHER NOTICE that Code of Civil Procedure section 1094.6 imposes a 90-day deadline for the filing of any lawsuit challenging final action on an agenda item which is subject to Code of Civil Procedure section 1094.5.

Pursuant to the Americans with Disabilities Act, if you need special assistance in this meeting, please contact the Planning Division at (408) 730-7440. Notification of 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting. (28 CFR 35.160 (b) (1))



City of Sunnyvale

Agenda Item 1.A

19-0197

Agenda Date: 2/11/2019

SUBJECT

Approve Planning Commission Meeting Minutes of January 28, 2019

RECOMMENDATION

Approve Planning Commission Meeting Minutes of January 28, 2019 as submitted.



City of Sunnyvale

Meeting Minutes - Draft Planning Commission

Monday, January 28, 2019

5:00 PM

Library Program Room, Council
Chambers, West Conference Room, City
Hall, 456 W. Olive Ave., Sunnyvale, CA
94086

Special Meeting - Study Session - 5:00 PM | Special Meeting - Public Hearing 7 PM

5:00 P.M. STUDY SESSION

Call to Order in the Library Program Room

Roll Call

Study Session

- A. [19-0175](#) Downtown Projects and Process Overview
 Project Planners:
 Michelle King, (408) 730-7463, mking@sunnyvale.ca.gov
 David Hogan, (408) 730-7444, dhogan@sunnyvale.ca.gov

Public Comment on Study Session Agenda Items

Adjourn Study Session

7 P.M. PLANNING COMMISSION MEETING

CALL TO ORDER

Chair Howard called the meeting to order at 7:00 PM in the Council Chambers.

SALUTE TO THE FLAG

Chair Howard led the salute to the flag.

ROLL CALL

Present: 6 - Commissioner Carol Weiss
Chair Daniel Howard
Commissioner John Howe
Vice Chair David Simons
Commissioner Ken Rheaume
Commissioner Sue Harrison
Absent: 1 - Commissioner Ken Olevson

Status of absence; Commissioner Olevson's absence is excused.

ORAL COMMUNICATIONS

CONSENT CALENDAR

Commissioner Howe moved and Vice Chair Simons seconded the motion to approve the Consent Calendar. The motion carried by the following vote:

Yes: 6 - Commissioner Weiss
Chair Howard
Commissioner Howe
Vice Chair Simons
Commissioner Rheaume
Commissioner Harrison

No: 0

Absent: 1 - Commissioner Olevson

1. A [19-0176](#) Approve Planning Commission Meeting Minutes of January 14, 2019

PUBLIC HEARINGS/GENERAL BUSINESS

2. [19-0047](#) **Proposed Project:** Related applications on a 3.54-acre site:
 PEERY PARK PLAN REVIEW PERMIT AND VESTING
 TENTATIVE PARCEL MAP: to redevelop three sites into an
 office development consisting of a new 123,000 square foot,
 four-story office building with a 4.5-level parking structure and
 associated site work and landscaping. The project will result in
 80% FAR.
 Location: 275 N. Mathilda Avenue (APNs: 165-27-007, 008, 009)
 File #: 2018-7432
 Zoning: Peery Park Specific Plan - Innovation Edge and Mixed Industry
 Core

Applicant/Owner: Irvine Company

Environmental Review: The project is exempt from CEQA review per CEQA Guidelines Section 15168 (c)(2) and (4) Public Resources Code Section 21094 (c). The project is within the scope of the Peery Park Specific Plan Program EIR as no new environmental impacts are anticipated and no new mitigations are required.

Project Planner: Margaret Netto, (408) 730-7628, mnetto@sunnyvale.ca.gov

Contract Planner Margaret Netto presented the staff report.

Commissioner Weiss asked staff if the proposed project calculations assume that a majority of the employees who would work at the site would use public transportation. Contract Planner Netto stated that the project calculations are based on net new trips and that the calculations were derived from a traffic analysis that was prepared for the proposed project.

Commissioner Weiss stated that the parking garage appears taller than the main building in the proposed project plans and asked staff if the garage is subordinate in height to the main building as required in the Peery Park Specific Plan. Assistant Director Andrew Miner stated that the term subordinate refers to the height of a structure and its location on a given property and that the garage is subordinate in location in this instance as it is behind the main building. Contract Planner Netto further clarified that the highest point of the garage is 57 feet and the highest point of the main building is 65 feet.

Commissioner Rheume asked staff if the property extending down to Central Expressway would be entirely landscaped. Assistant Director Miner stated that most of the trees along the Central Expressway are on County of Santa Clara property and that they will remain there.

Commissioner Rheume asked staff about street lights shown in the applicant plans. Assistant Director Miner stated that the Peery Park sense of place guidelines dictate the type of lights to be installed.

Vice Chair Simons asked staff what the recommendation was at the Study Session for integration of the orange accent color into the proposed project. Vice Chair Simons asked if the color was integrated into the main building at that time as it is now absent from the current plans. Contract Planner Netto added that the color was part of the signage at the time of the study session.

Chair Howard opened the Public Hearing.

Carlene Matchniff, representing Irvine Company, thanked the Planning Commission and stated that the various proposed project experts are present.

Commissioner Weiss asked the applicant about the metal accent color above the parking garage that she had previously requested be incorporated into the main building. Ms. Matchniff introduced John Koga, representing Irvine Company, to address Commissioner Weiss's questions. Mr. Koga stated that the study session issue regarding color was about how consistently it would be used throughout the site and that the color would be minimally and tastefully used on the signage and at the canopy lines.

Commissioner Weiss confirmed with the applicant that the smoking patio will remain as part of the project.

Vice Chair Simons asked the applicant about adding color in locations at the building, such as the windows. Vice Chair Simons asked the applicant about the location of the planned art. Mr. Koga stated that the location of the art has not yet been determined and mentioned that there is a current proposal to add a sculpture to the Mathilda Avenue frontage.

Vice Chair Simons asked where else the color would be incorporated into the building. Mr. Koga stated that the color would be used on the underside of the south side entryway canopy.

Chair Howard closed the Public Hearing.

MOTION: Commissioner Rheume moved and Commissioner Howe seconded the motion for Alternative 1 - Make the required Findings to approve the California Environmental Quality Act (CEQA) determination that the project is within the scope of the Peery Park Specific Plan (PPSP) Environmental Impact Report (EIR) and no additional environmental review is required in Attachment 5; make the Findings for the Peery Park Plan Review Permit, Vesting Tentative Parcel Map , and Sense of Place Fee in Attachment 3; and approve the Peery Park Plan Review Permit and Vesting Tentative Parcel Map subject to the PPSP Mitigation Monitoring and Reporting Program in Attachment 6 and recommended conditions of approval noted in Attachment 4.

Commissioner Rheume stated that he can make the findings that the proposed project is within the scope of the PPSP EIR. Commissioner Rheume stated his opinion that it is a nice, clean proposed project that does not request any deviations and that it would be a good addition to the City.

Commissioner Howe stated that he can make the findings. Commissioner Howe stated that the proposed project would be an improvement for the area and added his support for the comments Commissioner Rheume provided.

FRIENDLY AMENDMENT: Vice Chair Simons offered a friendly amendment to suggest that the applicant integrate art in the building and greatly increase the number of native trees that meet low water requirements. Commissioner Rheume and Commissioner Howe accepted the friendly amendment.

Vice Chair Simons stated that an artistic focal point visible by pedestrians and vehicles would enhance the modern architecture.

Assistant Director Miner stated a correction in response to Vice Chair Simon's friendly amendment that the zoning code that refers to art in private development specifically states that the location of art should be on the building façade or on the exterior and not in the interior of the building. Vice Chair Simons stated that he is only making a recommendation.

Commissioner Weiss stated her intention to support the motion and added that she likes that there are no deviations requested and that there would be a food truck plaza with tables and chairs. Commissioner Weiss stated that the proposed project would encourage new businesses, different types of cuisine, and that it would bring people together.

The motion carried by the following vote:

Yes: 6 - Commissioner Weiss
Chair Howard
Commissioner Howe
Vice Chair Simons
Commissioner Rheume
Commissioner Harrison

No: 0

Absent: 1 - Commissioner Olevson

Assistant Director Miner stated that this decision is final unless appealed to the City Council within 15 days or called up the City Council within 15 days.

3. [18-1054](#) **Proposed Project:** Consideration of an application for a 6.4-acre site:
 MOFFETT PARK-SPECIAL DEVELOPMENT PERMIT: to
 allow expansion of an existing 173-room hotel through partial
 demolition and construction of a new 11-story tower resulting in a
 total of 358 rooms, new meeting areas, spa facility, restaurants
 and bars; and a new 3-level parking structure.
Location: 1100 N. Mathilda Ave. (APN:110-27-025)
File #: 2017-8044
Zoning: MP-C (Moffett Park - Commercial)
Applicant / Owner: DoveHill Capital Management LLC (applicant) / S
 of-X Sunnyvale Owner LP (owner)
Environmental Review: Mitigated Negative Declaration
Project Planner: Shétal Divatia, (408) 730-7637,
 sdivatia@sunnyvale.ca.gov

Senior Planner Shetal Divatia presented the staff report.

Commissioner Howe asked staff if the proposed project requires the use of any of the development reserve of the Moffett Park Specific Plan. Assistant Director Andrew Miner stated that hotels are not counted as part of the development reserve.

Commissioner Weiss asked staff if they have considered the effect of the 11-story tower on the nearby neighborhood's television reception. Assistant Director Miner stated that the City is not required to address this issue; it is government by the Federal Communications Commission.

Commissioner Weiss asked staff if they have studied the impact of vehicle emissions from nearby roads on guests of the hotel and if the HVAC units would filter out pollutants. Assistant Director Miner stated that the HVAC units must meet certain building and Title 24 standards but was unsure by how much the HVAC system would need to reduce air pollutants.

Commissioner Weiss asked staff what elements of the modern project are considered farmhouse style. Senior Planner Divatia stated that the proposed project has use elements of a modern farmhouse like a Napa setting and added that the applicant could better clarify the architectural style.

Commissioner Rheume expressed his concern to staff that the inspirational photos presented at the study session are not incorporated into the proposed project. Assistant Director Miner stated that the staff role is to ensure that the construction drawings represent what is built and that the applicant can better address how the architectural inspiration evolved.

Commissioner Rheume expressed his concern to staff that he cannot see the details of the smaller buildings part of the proposed project. Commissioner Rheume stated that he would like to see the barn lofts on page 43 and the barbershop and treatment room on page 44 depicted in the farmhouse style and that more details about the materials are needed. Commissioner Rheume stated that he wants more details about the batten board, the windows, and the materials planned for the multipurpose pavilion on page 45.

Vice Chair Simons asked staff if the installation of a landscaping strip is possible to separate vehicles from pedestrians on Mathilda Avenue. Senior Planner Divatia stated that on page 56 the standard requires a monolithic sidewalk on Mathilda Avenue and a landscaping strip on Borregas Avenue. Vice Chair Simons stated that the landscaping strip is better placed on Mathilda Avenue as Borregas Avenue will soon be more pedestrian friendly. Senior Planner Divatia confirmed that the project design includes a park strip along Mathilda Avenue.

Vice Chair Simons asked staff if estate sized trees could be added to the south side to help screen the 130 foot towers from residents south of Highway 237. Senior Planner Divatia stated that estate sized trees are a possibility that the applicant and landscape architect can address.

Vice Chair Simons asked staff what material is used for the wall along the Borregas Avenue side of the proposed project.

Chair Howard opened the Public Hearing.

Jake Wurzak, representing Dove Hill Capital Management, presented images and information about the proposed project.

Bruce Wright, representing SB Architects, presented images and information about the proposed project.

Chair Howard stated that the applicant provided handouts and a material board available for members of the public to review.

Vice Chair Simons asked the applicant about art work location. Vice Chair Simons also asked the applicant if the wall along the Moffett Park Drive side of the proposed project would be made of white stucco. Vice Chair Simons stated his opinion that the material appears out of place with the rest of the proposed project. Mr. Wright stated that the wall may appear to be white in the renderings and that a color more consistent with the palette of the proposed project would be used. Vice Chair Simons confirmed with the applicant that the Mathilda Avenue wall would be made of stone.

Vice Chair Simons asked the applicant about the possibility of including estate sized trees along the south side landscaping. Mr. Wurzak stated that the landscape architect has been directed to use trees that would create canopies wherever possible.

Commissioner Weiss asked the applicant if the proposed project would use permeable pavers.

Commissioner Weiss asked the applicant if the HVAC system would filter out polluted air from vehicle emissions in the surrounding area. Mr. Wright stated that he does not know the exact level of filtration and that the HVAC system must pass Title 24 and that the proposed project is following LEED building standards for air quality.

Commissioner Rheume asked the applicant where the wood slat would be used on the proposed project. Mr. Wright stated that the wood slat would be used on the parking garage and for the meeting space on top of the ballroom and that highly texturized bark would be used for the porte cochere. Mr. Wright stated that natural materials would be used as much as possible for the low scale buildings and reiterated that the project is a highly articulated architectural statement. Commissioner Rheume stated that he hopes that the materials used are as high in quality as stated in the proposed project designs. Mr. Wurzak stated that the hotel patrons demand such quality.

Commissioner Rheume asked the applicant if they have used trees on balconies in any other project. Mr. Wurzak stated that they have spent time ensuring that the trees would be properly supported and that the balconies would be constructed

such that the trees will grow and thrive.

Comissioner Rheaume asked the applicant if the windows would be constructed with sectioned panels. Mr. Wright stated that that design would be used on the 1- and 2-story buildings.

Commissioner Howe asked the applicant approximately how tall the tower would be from the sidewalk. Mr. Wright stated that the tower is approximately 130 feet tall from Mathilda Avenue and that the tower reduces in height by approximately 14 feet as the grade ascends. Mr. Wright stated that the building never appears to be its full height intentionally to break down the scale of the tower.

Commissioner Howe asked the applicant if there is a view available from the top of the occupied part of the building looking south into the residential neighborhood. Mr. Wright stated that the view provided on page 29 of the handout is from a guest room but not from the tallest portion of the building. Commissioner Howe asked the applicant for the distance between the guest room view on page 29 of the handout and the single-family homes. Mr. Wright stated that he did not know the distance. Assistant Director Miner stated that the distance is approximately 350 feet to 380 feet. Commissioner Howe asked staff if they foresee any privacy concerns for the single-family residences across Highway 237. Assistant Director Miner stated that he does not have any concerns as there are existing buildings closer to the single-family homes, and it is located across the freeway from the homes.

Chair Howard asked if there are any members of the public who wished to speak. Chair Howard asked the applicant if there is any further information they would like to provide.

Vice Chair Simons asked the applicant if the trees on the balconies would be approximately 15 feet to 25 feet tall and if bushes would be used. Mr. Wurzak stated that they intend to use mostly bushes and trees when no structure is above. Vice Chair Simons asked the applicant what types of trees would be used. Mr. Wurzak stated that white birch trees or olive trees in planters are planned. Mr. Wright stated that the landscape architect, Roche and Roche, would be selecting olive trees that appear to be established. Vice Chair Simons stated that olives trees thrive in Sunnyvale while birches do not grow as well and stated his opinion that the landscape would benefit from trees varying in height.

Chair Howard closed the Public Hearing.

Commissioner Harrison stated her desire to visit the site when it opens.

Chair Howard stated that he agreed with Commissioner Harrison.

Vice Chair Simons asked staff if it is possible to add a condition for an existing element to ensure it is built. Assistant Director Miner stated that he invites any conditions to the motion that are within the City's code and standards.

Commissioner Rheume asked staff if the proposed project would be the first 5-star hotel in Sunnyvale. Assistant Director Miner stated that he did not believe there are any other 5-star hotels in Sunnyvale. The applicant stated that this project would be the first 5-star hotel.

MOTION: Vice Chair Simons moved and Commissioner Weiss seconded the motion for Alternative 2 - Make the findings required by CEQA in Attachment 3, adopt the Mitigated Negative Declaration; approve the Moffett Park - Special Development Permit with modified findings or conditions –

1. Specify that estate sized trees will be included along the south side landscaping;
2. Specify that the color and texture of the wall along Moffett Park Drive will match the rest of the proposed project;
3. Indicate that the stone wall along Mathilda Avenue will be constructed as depicted in the site plans; and,
4. Specify that the use of permeable materials will be maximized, as feasible.

Vice Chair Simons moved with a condition to specify that Planning staff work with Department of Public Works to place a planting strip on the Mathilda Avenue side of the project to better protect pedestrians from vehicles. Assistant Director Miner stated that the planting strip is the existing requirement. Vice Chair Simons retracted the condition.

Vice Chair Simons stated that neighbors surrounding the project may feel a lack of privacy at night time and stated his opinion that the addition of certain landscaping would help mitigate some of the potential concerns from neighbors on the other side of the freeway. Vice Chair Simons added that he has visited hotels built by the developer and that this proposed project would be a nice addition to Sunnyvale. He stated that there is a market for this hotel, that he appreciates the use of existing buildings in the project, and that he intends to support the proposed project.

Commissioner Weiss stated her excitement for the proposed project and its location at a gateway to Sunnyvale. Commissioner Weiss added that she likes the architectural beauty, the amenities, the farm-to-table garden, the exhibition kitchen, and the additional meeting rooms that would be available in Sunnyvale. Commissioner Weiss stated her opinion that she appreciates the many details that make this an excellent proposed project that she intends to support.

Commissioner Rheume stated his intention to support the proposed project and stated his opinion that it is one of the nicest proposed projects he has reviewed while on the Planning Commission. Commissioner Rheume stated his opinion that the proposed project is a great addition to the City and that it would hopefully raise the expectation for other projects. Commissioner Rheume commented that he also hopes to visit the site once it is open.

Commissioner Harrison stated that she can make the findings with respect to the Moffett Park Special Development Permit and that she supports the proposed project.

The motion carried by the following vote:

Yes: 6 - Commissioner Weiss
Chair Howard
Commissioner Howe
Vice Chair Simons
Commissioner Rheume
Commissioner Harrison

No: 0

Absent: 1 - Commissioner Olevson

Assistant Director Miner stated that this decision is final unless appealed to the City Council within 15 days or called up the City Council within 15 days.

STANDING ITEM: CONSIDERATION OF POTENTIAL STUDY ISSUES

NON-AGENDA ITEMS AND COMMENTS

-Commissioner Comments

Vice Chair Simons stated that the stone boulders outside of the Bright Horizons

project at Sunnyvale-Saratoga Road and Remington Drive do not appear to have met the specifications of the COA in terms of size. Commissioner Weiss stated that the trees planted were not the sizes requested.

Commissioner Weiss suggested that the Planning Commission read Generation Priced Out: Who Gets to Live in the New Urban America by Randy Shaw.

Commissioner Howe stated that the size of the boulders that were used for the Bright Horizons project are not substantial enough to protect children from vehicles who might run up onto the property and that he believes the project has not met the COA.

-Staff Comments

Assistant Director Miner introduced the Planning Commission to the new Planning Commission Secretary, Bonnie Filipovic, and thanked Joey Mariano for his assistance. Assistant Director Miner informed the Commission that the Summit Public School proposed project appeal and sign code amendment for the downtown theatre and grocery store will be heard at the City Council meeting the following evening.

Chair Howard closed the Public Hearing.

Chair Howard stated that the meeting will reconvene in the West Conference Room after a brief recess to rank study issues.

ADJOURN PUBLIC HEARING TO THE WEST CONFERENCE ROOM

Chair Howard adjourned the meeting to the West Conference Room for the selection and ranking of potential 2019 study issues.

4. [19-0153](#) Selection and Ranking of Potential 2019 Study Issues

ADJOURNMENT

Chair Howard adjourned the meeting at 10:30 PM.



City of Sunnyvale

Agenda Item 2

18-0984

Agenda Date: 2/11/2019

REPORT TO PLANNING COMMISSION

SUBJECT

Proposed Project: Related applications on a 16.82-acre site:

SPECIAL DEVELOPMENT PERMIT: Demolish seven existing industrial buildings, two commercial buildings, and construct a new mixed-use project. Project consists of a three-to-five-story apartment/commercial building with a wrapped seven-level parking structure (including one underground level); two two-to-seven-story condominium buildings above podium parking structures; and 20 two-to-three-story townhome buildings with individual garages.

Residential: 741 total units (412 rental /329 ownership) at a density of 44 du/ac.

Commercial: 1,500 sq. ft. on the ground floor of the apartment building.

Publicly-Accessible, Privately-Owned Open Space: 2.3 acres

VESTING TENTATIVE MAP: Create two lots for condominium purposes (and associated common areas) and one lot for the apartments/commercial space.

Location: 1155-1175 Aster Avenue (APNs: 213-01-032; 213-01-033; 213-01-034)

File #: 2018-7513

Applicant / Owner: Olympic Residential Group / JJ & W LLC

Environmental Review: No additional review required as per CEQA Guidelines 15168(c)(2) and (4) - environmental impacts of the project are addressed in the Lawrence Station Area Plan (LSAP) Program Environmental Impact Report (EIR).

Project Planner: George Schroeder, (408) 730-7443, gschroeder@sunnyvale.ca.gov

REPORT IN BRIEF

General Plan: Lawrence Station Area Plan- Transit Mixed-Use (TMU)

Specific Plan: Lawrence Station Area Plan (LSAP)

Zoning: MXD-III (Flexible-Mixed Use III)

Existing Site Conditions: Building materials manufacturing and storage with retail sales buildings.

Surrounding Land Uses

North: Industrial/office/research and development (R&D) across the Caltrain railroad tracks

South: Multi-family residential (townhomes)

East: Multi-family residential (apartments) across Lawrence Expressway (in the City of Santa Clara)

West: Multi-family residential (apartments)

Issues: Height and distance between main buildings.

Staff Recommendation: Alternative 1 - Make the required Findings to approve the CEQA determination that the environmental impacts of the project are addressed in the Lawrence Station Area Plan Program (LSAP) Environmental Impact Report (EIR) and no additional environmental review is required; and approve the Special Development Permit with Sunnyvale Municipal Code (SMC) deviations for building height and distance between main buildings and Vesting Tentative Map

subject to the recommended conditions of approval and LSAP Mitigation Monitoring and Reporting Program (MMRP) in Attachment 4.

BACKGROUND

Description of Proposed Project

The applicant, Olympic Residential Group, representing the property owner, JJ & W LLC, is proposing to redevelop the existing site with a master-planned community of different residential unit types with varying heights, scale and massing with a coordinated architectural design concept. The proposed project consists of demolishing all existing buildings and structures and constructing a mixed-use project consisting of a total of 741 ownership and rental residential units and 1,500 square feet of ground floor retail space. A publicly-accessible, privately-owned open space area of 2.3 acres is also proposed as part of the project and will be located primarily along the Aster Avenue frontage. The residential units are broken into separate buildings on the site, including:

- *Apartment Building*: Located at the eastern end of the site and immediately adjacent to the Caltrain platform, this building is the largest and is the highest density of the three elements of the project. The 412-unit, three-to-five-story apartment building places the highest density of the project closest to the station and provides a strong corner element at the intersection of Aster Avenue and Willow Avenue.
- *Condominium Building*: There are two separate condominium buildings ranging from two to seven stories totaling 189 units in the center portion of the site. One building continues the street orientation along Aster Avenue as the apartment building, and the other has a frontage along a new pedestrian corridor between the two condominium buildings and a presence along the railroad side of the property.
- *Townhomes*: On the west side of the property between the condominium buildings and the existing adjacent apartment complex are 20 two-to-three-story townhome buildings totaling 140 units.

The retail space is located within the ground floor of the apartment building at the corner of Aster and Willow Avenue. All units within the apartment building would be rental and all condominium and townhome units would be for sale. The project is required to provide 41 below market rate (BMR) units in accordance with the City's affordable housing program. A Vesting Tentative Map is also proposed to create two lots for condominium purposes and one for the apartment building/commercial space.

See Attachment 1 for a map of the vicinity and mailing area for notices and Attachment 2 for the project data table.

Special Development Permit

The site is within the LSAP, which was adopted by the City Council on December 6, 2016. The site is the largest individual property in the LSAP. The LSAP designates the site as Mixed-Use Transit Supporting South, within the Peninsula urban design subarea, and is zoned MXD-III - Flexible Mixed Use III. The zoning allows a mix of land uses, including office and residential uses. Retail as part of a mixed-use development is also allowed and encouraged along the Willow Avenue frontage. The MXD-III zoning district only applies to the project site, and has a lower density allowance than other LSAP zoning districts north of the tracks, given its proximity to existing residential uses. Residential in MXD-III is permitted up to 36 dwelling units per acre (du/ac) without incentives, and up to 54 du/ac with

incentives per the LSAP Development Incentives Program. A tenant has not yet been identified for the ground-floor retail space, but a café tenant is envisioned. Future uses would be subject to individual permitting prescribed in the MXD-III use table.

A Special Development Permit (SDP) is required for site and architectural review of new construction in the MXD-III zoning district. An SDP allows for consideration of deviations from specified development standards (e.g. siting, bulk, parking) in exchange for superior design, environmental preservation, or public benefit. The applicant is requesting a deviation to exceed the maximum building height limit for the apartment and condominium buildings and a deviation to reduce the minimum distance between certain townhome buildings. A detailed discussion is included later in the report.

Vesting Tentative Map

A Tentative Map is required prior to recording a Final Map to create two new lots for condominium purposes and a separate lot for the apartment building. There are three existing lots, and the Tentative Map would include a lot line adjustment to relocate two of the property lines to establish new lots for the townhomes, condominiums, and apartments. The condominium and townhome lots would be further subdivided to create airspaces for each unit, while there would be one physical lot for each land use. Covenants, Conditions, and Restrictions (CC&Rs) and formation of homeowners' associations are required for the condominium and townhome uses.

The Tentative Map shows the location of the proposed lot lines, public and private streets and other improvements (see Sheets C2.0 and C3.0 - C3.2 in Attachment 5). The applicant has requested a Vesting Tentative Map to vest their right to build the project for the life of the map and secures the approved project against future Sunnyvale Municipal Code (SMC) amendments that might otherwise affect the project. The Vesting Tentative Map is valid only in conjunction with the approved site plan and conditions of approval. The Vesting Tentative Map conditions of approval are listed in Attachment 4. The Final Map is approved by the Director of Public Works and must be in substantial conformance to the Vesting Tentative Map.

Present Site Conditions

The project site is 16.82 acres in size and is currently developed with building material storage yards, including manufacturing and retail sales operations. The eastern half of the site nearest the Lawrence Caltrain Station is occupied by Peninsula Building Materials Co. The western half is occupied by Calstone. Both companies process and sell masonry and landscaping products onsite. There is a total of nine buildings onsite - 10,685 square feet of retail (two buildings) and 55,010 square feet of industrial (seven buildings). There is an existing wireless telecommunications monopole on the site, which must be removed prior to use of the site for residential purposes. The owner and applicant are aware of that requirement and have made plans for its removal.

Most of the site consists of impervious surface containing exterior storage space and vehicular access areas, but there are sizeable landscaping planters with mature trees lining the street frontages.

The site is bounded by Aster Avenue to the south, the railroad tracks to the north, Willow Avenue to the east, and the Willowbend Apartments to the west. The site is also located just west of the Lawrence Expressway overpass that extends over the Lawrence Caltrain Station.

Entry to the station platform is immediately adjacent at the northeast corner of the project site, although there are no sidewalks on the Willow Avenue frontage leading to the station or on the Aster Avenue frontage. There are four driveways that access the existing site, all on Aster Avenue.

Previous Actions on the Site

The site was originally developed by Peninsula Building Materials in 1967. The facility was expanded in 1973 with a block producing and curing plant and three warehouse/office buildings. Subsequent planning approvals include additional storage buildings (1976 & 1985); a cement conveyor and storage system (1978); a warehouse building (1980); a concrete storage yard and vehicle service facility (1981); an expanded outdoor unenclosed storage area (1986); and other minor site improvements. The site and others on the south side of Aster Avenue were rezoned in 1993 with an Industrial to Residential (ITR) combining district (Housing Site 4B). In 2006, as residential units were being constructed near the site, Calstone and Peninsula Building Materials received approval for a variance to exceed the maximum allowable noise levels necessary to their business activities.

The 65-foot tall wireless telecommunications monopole and associated ground equipment was approved in 2002, and subsequent applications were approved for different companies to collocate on the monopole. The Municipal Code prohibits wireless telecommunications facilities on private property in all residential zoning districts, and the conditions of approval require the facilities to be removed as part of the project.

EXISTING POLICY

General Plan and LSAP Goals and Policies

Attachment 3 contains relevant General Plan and LSAP goals and policies, as well as design guidelines. The purpose of the LSAP is to promote greater use of the Lawrence Caltrain Station and guide the development of a new urban neighborhood centered around the station with a mix of land uses that allow people to access their homes, jobs, recreational facilities, and neighborhood goods and services within proximity of one another, reducing their dependence on the automobiles. To support transit use, the plan allows the highest development intensity within walking distance of the station. The plan is based on guiding principles of allowing diverse and flexible land uses, dense station area development, improved connectivity, and establishing unique neighborhood character and identity. Staff has determined the project is consistent with the General Plan and LSAP.

ENVIRONMENTAL REVIEW

A Program-level EIR was prepared for the overall LSAP (State Clearinghouse No. 2013082030) in 2016 per the California Environmental Quality Act (CEQA), which identified broad environmental impacts resulting from the proposed development intensities. Certification of the LSAP EIR included a mitigation monitoring program (MMRP) with provisions to reduce the potentially significant impacts to a less than significant level, although some impacts of the LSAP were significant and unavoidable after mitigation. A Statement of Overriding Considerations was adopted in conjunction with the LSAP in acknowledgment of the presence of the remaining significant and unavoidable impacts.

An environmental checklist was prepared to determine whether the environmental impacts of the proposed project are within the scope of the LSAP EIR, or if changed environmental conditions result in new or substantially more severe environmental impacts, as compared to those considered in the LSAP EIR. The checklist also considered whether there is new information of substantial importance showing that new or substantially more severe environmental impacts would occur compared to that evaluated in the LSAP EIR (Attachment 7). Several technical studies were prepared to analyze site

and project-specific environmental conditions, such as a noise study, transportation impact analysis, Phase I and II environmental site assessments, a geotechnical investigation, biological study, air quality and greenhouse gas study, health risk analysis, and arborist report.

Review of the project, including technical studies, confirmed the project is consistent with the certified LSAP EIR analysis and did not reveal new impacts that warranted further investigation. Therefore, staff finds that the environmental impacts of the project are addressed in the LSAP EIR and no additional review is required as per CEQA Guidelines 15168(c)(2) and (4).

DISCUSSION

Residential Density and LSAP Incentive Program

The LSAP Incentive Program provides a list of community benefits that reflect LSAP goals that applicants can choose from to maximize the buildout of their properties. The MXD-III zoning district requires a minimum residential density of 24 units per acre (du/ac) and a maximum of 36 du/ac without incentives, or a minimum of 403 units and maximum of 605 units for the project site. With incentives proposed, the density may be increased up to 54 du/ac, or 908 units for the project site. The applicant proposes 741 units (44 du/ac), and the project achieves 22 incentive points. The proposed density is slightly less than what could be built, but is still consistent with General Plan policy to build at least 75% of the maximum density, or 579 units for the project site. The incentive points are described further below.

Mixed-Use - 3 points

Per the LSAP Incentive Program, a project qualifies for the mixed-use incentive if more than 20 percent of the building area is devoted to retail or service uses, or any use which includes at least 50 percent housing. The retail space equates to less than one percent of the apartment building area, but more than 50 percent of the building includes housing, thereby qualifying for the points.

Open Space, Publicly Accessible - 10 points

The most notable community benefit proposed is the 2.3-acre publicly-accessible community open space at the southwest corner and along the west property line of the site. The LSAP includes many policies to encourage provision of park space in this underserved residential area. Additionally, the LSAP open space framework diagram shows a conceptual park at this location. The open space would be privately owned and maintained by the homeowners' association. A public access easement is required as a condition of approval, offering residents of the surrounding neighborhood the opportunity to enjoy the community open space. The siting of the open space will help to further activate the street setting on Aster Avenue, and the positioning of townhomes along the rear will provide "eyes" on it. A conceptual plan of the community open space shows a playground, seating areas, a dog park, a Class I bicycle/pedestrian trail, and a multi-purpose lawn area. Final design will be a part of the first residential building permits for the project.

Structured Parking - 3 points

The LSAP encourages structured parking because it reduces the land area devoted to surface parking lots and allows more landscaping and open space on a site. The required parking supply for each residential use is provided in parking structures or private garages. There are surface parking spaces along the new roads within the site, but no dedicated surface parking lots.

Open Space/Private Amenities beyond Code requirements - 3 points

The proposed useable open space area and amenities exceed the SMC requirements, even when

excluding the community open space discussed above. The townhomes provide 44,457 square feet when 7,000 is required; the condominiums provide 63,763 square feet when 9,450 is required; and 56,695 square feet is provided for the apartments when 20,600 is required. Clubhouse space for each residential use also exceeds the code requirements.

Retail within 1/8 mile of Caltrain - 3 points

The retail space would be located 340 feet from the Lawrence Caltrain Station, which is within 1/8 mile or 660 feet. There would also be a new sidewalk and streetscape improvements installed along the path of travel.

Potential Future Rail Crossing

A key element of the LSAP's circulation framework is to improve access between the northern and southern portions of the plan area. Circulation diagrams within the LSAP show a pedestrian/bicycle crossing over or under the railroad tracks at the northwest corner of the site. This linkage would allow a direct north-south pedestrian/bicycle connection from Aster Avenue to the western end of Sonora Court, which would eventually connect to Kifer Road through a new loop road and/or pedestrian/bicycle trail on properties currently being developed by Intuitive Surgical.

Staff and the applicant studied the feasibility of the crossing, either by an aerial structure above the tracks, or below the tracks in an underground tunnel. There are challenges with incorporating the crossing in either scenario. The presence of an existing 39-inch diameter storm drain line along the north property line, serving a large geographic area that extends beyond the project site, impedes either option. The bottom of the storm drain line is located at least six feet beneath the surface, and an underpass connection would require a minimum excavation depth of approximately 16 to 18 feet with a lengthy access ramp, given ADA requirements. The storm drain line also constrains the area where an aerial structure could be located because of clearance space needed for maintenance of the line. The aerial option, either through a switchback ramp structure or continuous and linear ramp structure would take up a significant amount of space onsite, and may impose safety and privacy concerns for future residents due to the proximity of the townhomes. There also are concerns about the lack of space needed on the north side of the tracks to land the structure to street level at Sonora Court.

Staff is not pursuing a requirement for the developer to construct a crossing, given the preliminary issues and costs associated with it, outside agency approval timelines, and the presence of an existing undercrossing nearby at the Lawrence Caltrain Station. However, staff is requiring the provision of a Class I bicycle/pedestrian trail along the west side of the site and an irrevocable offer of dedication on the land area that would be needed for either crossing option, should there be the funding and demand to construct a crossing in the future. The proposed plans show the trail and irrevocable offer of dedication. These provisions are not on the LSAP Development Incentive Program, but are considered as a potential benefit to the community.

LSAP Development Capacity

The adopted LSAP allows for a maximum residential development capacity of 2,323 net new housing units and 1.2 million net new square feet of office/R&D development. This buildout level was studied in the EIR for the LSAP to ensure that long-term development within the plan area would not adversely impact the environment or exceed the capacity of infrastructure systems necessary for the growth. A temporary capacity was also established to provide an opportunity to periodically review residential and office/R&D development in the LSAP to ensure a balance of use types. Subsequent to

adoption of the plan, a mixed-use project with 520 residential units was approved at 1120-1130 Kifer Road in 2016. The remaining balance is 1,803 units, and approval of this project would result in a balance of 1,062 units.

The City is in the process of studying an amendment to the LSAP to increase housing potential throughout the plan area. On June 26, 2018, the City Council selected the preferred housing study alternative to increase the density allowance for MXD-I and MXD-II zoned areas up to 100 du/ac and to expand the area allowed for housing to the M-S/LSAP zoning district (up to 100 du/ac) and to the O-R district (up to 54 du/ac). The potential number of net new units is 3,612. No increases are proposed to the office/R&D development capacity of 1.2 million square feet. When the LSAP was adopted in 2016, a temporary development capacity of 1,160 residential units and 650,000 square feet of office/R&D was established to periodically review residential and office/R&D development in the LSAP to ensure a balance of land use types. Staff advised the City Council on the exceedance of the temporary cap with this project at the time, which showed that residential and office/R&D are relatively in balance. Refer to Attachment 9 for the LSAP Housing Study's Planning Commission staff report with more information on the development capacity.

Site Layout and Circulation

Site Layout

The applicant has master-planned the site layout with the highest residential densities at the east end closest to the Lawrence Caltrain Station, then transitioning to medium densities on the west end and along Aster Avenue. These are identified as the "apartment building" closest to the station, "condominium buildings" in the middle of the site, and "townhomes" for the townhomes at the west end of the site close to the existing apartment complex.

The arrangement of buildings gives the appearance of a small village within the site with varying urban forms and designs moving in different directions. A total of 23 main residential buildings are proposed, with an additional freestanding clubhouse building. Three large parcels would be assigned to each residential land use, which are visually separated from one another by internal roads or open space buffers. The proposed property divisions would not be noticeable as the overall layout provides seamless access in between buildings. The project meets or exceeds all minimum setback requirements contained in the LSAP, including the minimum 10-foot side yard setback to each new internal lot line within the site. All buildings are buffered from the railroad tracks by a new internal road along the north property line. Most the site is currently in the AO flood zone, and these areas would be graded up to two feet higher to remove the site from the flood zone per the requirements of the Federal Emergency Management Agency (FEMA).

Apartment Building: The apartment building is the largest building and is at the east end of the site, next to the station. This building is setback the minimum 10 feet from the Willow Avenue property line with active ground floor uses lining the street frontage on the path to the station - creating a sense of enclosure to enhance the pedestrian experience. The building wraps around the corner to Aster Avenue with a ground floor retail space anchoring the street corner. Along Aster Avenue, the building is setback the minimum 15-feet and includes pockets of deeper setbacks towards the west. The apartment building has the largest building footprint, as it includes the most units and a large parking garage wrapped by the apartment building. The parking garage is connected to the apartment building and surrounded on three sides by residential units. The garage is seven levels with one underground level. The height of the garage follows the height of the five-story portion of the apartments. Atop the garage are amenity spaces - a clubhouse and fitness room with a pool deck.

The footprint of the apartment building is broken up by four large landscaped courtyards that provide additional amenity space for the residents. Two of the courtyards are surrounded by building area, and the other two have frontage on Aster Avenue.

Condominium Buildings: The two condominium buildings (buildings “A” and “B”) are in the center portion of the site and placed in front of each other with Building A along Aster Avenue and Building B closer to the railroad tracks. Building A meets the minimum 15-foot front setback on Aster Avenue and includes ground floor entry porches. The condominium buildings are separated from the apartment building by a new north-south internal driveway, and from the townhomes by an open space area with varying widths. Each building features a two-level podium parking garage which are surrounded completely or on three sides by units and common areas. On top of the garages are additional stories of units and podium open spaces. A clubhouse for Building A is located above the two-story section along Aster Avenue. The clubhouse for Building B is located within the building.

Townhomes: The townhomes are laid out in a new rectangular street grid that are clustered around open space areas and paseos. Each townhome building includes six to eight units with individual two-car garages along the new internal roads. The townhome buildings are setback considerably further from Aster Avenue than the apartment and condominium buildings, but still have presence on the community open space and Aster Avenue by lining the community open space along the street. A freestanding clubhouse building also faces the street. The community open space area on the west side of the site also provides a sizeable buffer between the townhomes and the existing apartments to the west.

Circulation

Vehicular access to the site will be provided by the Caltrain rail service, and from Willow Avenue and Aster Avenue. There is a right-in, right-out only driveway on Willow Avenue, next to the Lawrence Caltrain Station; and two full access driveways on Aster Avenue, with one separating the condominium and apartment buildings, and the other west of Condominium Building A that also aligns with an existing driveway to the south at Tea Tree Terrace. All three driveways also serve as emergency vehicle access (EVA) routes. All driveway throat clearances meet the depth recommended by the City’s Traffic and Transportation Division, which ensures safety and minimization of vehicle spillback on the road. As mentioned above, there are new internal roads that provide direct vehicle access to the parking areas for each land use. Smaller roads serving the townhomes feed into collector roads at the northern and southern portions of the site. Vehicle entrances to the parking garages for the condominiums and apartments are located internal to the project with minimal visibility from Aster and Willow Avenues. Vehicular access to Willow Avenue is only obtained through the apartment parking garage. The project includes a minimal number of surface spaces. There are 41 spaces provided on site, with most parking in structured parking or private garages (for the townhomes).

Designated loading zones for deliveries and moving trucks are provided along the north property line near the condominium and apartment buildings. A loading space will also be reserved within the apartment parking garage for smaller trucks. Signage would be used to direct delivery drivers to loading areas and the walkway to the retail space.

New public sidewalks in accordance with LSAP standards will be installed along the entire Willow and Aster Avenue frontages. The new sidewalk on Willow Avenue would provide a direct connection to the Lawrence Caltrain Station. There would be multiple pedestrian entry walkways and entry points

into each land use from these new sidewalks. There are also many internal pathways that traverse the site in any direction. Decorative paving is provided on walkways that cross drive aisles. There is a notable east-west landscaped promenade that splits the site between townhomes and the condominium buildings. The promenade connects the Class I pedestrian and bicycle trail on the west side of the site to another walkway along the apartments that leads to Willow Avenue next to the station. A walkway would also be provided along the perimeter of the community open space with access points to the new Aster Avenue sidewalk.

Architecture

The proposed architectural concept draws inspiration from the industrial and agricultural history of Sunnyvale and the site, with timeless building forms and use of detailed, high-quality materials. The architectural style of each land use is different, but unified in urban form and use of colors and materials. The design draws upon the existing site context by mimicking elements from the existing building materials site through use of natural warm colors and application of brick, tile, and wood-appearance siding. Some buildings are intended to create the feel of a warehouse that may have existed onsite.

The buildings step down in height towards the existing residential area, which is discussed in detail later in the report. Taller building elements frame the building corners and project above longer rooflines. Townhome roofs alternate between flat and pitched to distinguish the different styles. There are three-dimensional wall and balcony elements to add visual depth and articulation on the facades, and blank walls are treated with wide loft-style window fenestration. Longer facades are broken up by recessing wall planes at different building modules. Heavier cornices along the rooflines also reduce wall area and provide a prominent “top” to the buildings. Ground floor facades are treated with expansive, transparent glazing area, and entries are emphasized with awnings, porch covers, and stoops.

The buildings maintain the same level of design and detailing on all four sides, even the side facing the railroad tracks. Of note is a large metal screen over the majority of the apartment garage along the railroad tracks. The screen conceals most of the parking levels from view, and includes a graphic of the original Sunnyvale rail station and sense of place signage for Lawrence Station.

Staff finds that the proposed architectural design is consistent with the guidelines contained in the LSAP through use of high quality materials, attention to detail at focal points, urban forms that vary in height and depth, and interesting pedestrian-scale elements that help to promote street activity. Staff also supports the graphic element on the side of the parking garage elevation facing the tracks because it does not advertise the project, but identifies the Lawrence Station rail stop.

Requested Deviations from Development Standards

The project complies with most of the applicable development standards in the SMC, except for two items:

1. Maximum building height (SMC Table 19.35.060); and,
2. Distance between buildings (SMC Section 19.48.030).

The applicant is requesting deviations to these standards as part of the SDP application.

Height

The project includes a deviation request to exceed the MXD-III zoning district's 55-foot maximum building height. The deviation is requested for the apartment building (up to 77 feet) and both condominium buildings (up to 85 feet). All townhome buildings are within the height limit, with a maximum height of 42 feet. The proposed heights take into account the grading of the site up to two feet to remove it from the flood zone. All heights are measured from the top of the nearest street curb.

The LSAP states that heights south of the tracks will be lower to be compatible with nearby low-scale residential uses. There are higher height limits north of the tracks in the MXD-I and MXD-II zoning districts (up to 85 feet) because of the higher densities allowed, and the physical separation the railroad tracks provide from the existing southern residential area. The LSAP Building Height Guidelines also call for stepping down building heights to two or three stories adjacent to existing residential to provide a transition in scale. The guidelines encourage taller buildings or building elements at corner intersections to achieve greater visual interest. Moreover, the guidelines state that heights should be varied within parcels in order to provide variety and avoid a blocky, uniform appearance.

The proposed heights of the apartment and condominium buildings increase in height from south to north, with two-to-four-story massing along Aster Avenue and up to five-to-seven-story massing along the railroad tracks. Building elements project above the predominant rooflines in all buildings to provide variation in the roofline form. Refer to Attachment 6 for an exhibit that shows where the ranges in height occur. The same attachment also shows drone photographs taken from different heights of the proposed buildings to show what persons standing in the buildings would see towards the southern residential area. Below is a discussion of the apartment and condominium heights.

Apartments

The heights of the apartment building range from 35 feet and three stories along Aster Avenue (across the street from the existing three-story townhomes) to 73 feet and five stories (along the railroad tracks). The predominant fifth story roofline ranges from 57 to 61 feet, with intermittent building elements that project above. The clubhouse on top of the wrapped parking garage has a maximum height of 77 feet. A prominent corner tower element at 67 feet frames the intersection of Aster and Willow Avenue, and a similar 73-foot corner element announces the entry to the project from the Lawrence Caltrain Station. The closest four-story elements for the apartment building along Aster Avenue are setback 15 feet to the front property line near the intersection, then recede to a 25 feet setback towards the west. The fifth story near the intersection is setback 25 feet to the property line, then increases to a 55-foot setback towards the west.

Condominiums

The heights of both condominium buildings range from 32 feet and two stories along Aster Avenue, to 85 feet and seven stories in the middle and back of site. The predominant seventh story roofline is 81 to 82 feet. The closest fourth/fifth story element is setback 45 feet from Aster Avenue, which is where the height deviation occurs. The closest sixth and seventh story elements are both setback 70 feet from Aster Avenue. The condominium buildings significantly step down in building massing from the seventh floor to the second floor, providing an appropriate transition to the existing residential on the south side of Aster Avenue.

Interface with Existing Residential

The existing townhomes on the south side of Aster Avenue are all three stories. The proposed

apartments and condominium buildings are located across Aster Avenue from existing townhomes on Wild Cherry Terrace to Teak Terrace. The existing townhomes are separated by Aster Avenue's right-of-way width of 66 feet, plus a 15-foot building setback on the project site. This combined width of 81 feet is similar to the 90-foot railroad track right-of-way. Except for a four-story portion of the apartment building and its corner tower near the intersection, all building massing along the street is two or three stories, then steps up to other levels beyond immediate street view. The four-story portion is also within the height limit at 46 feet. The corner tower is setback 10 feet behind the four-story portion, is at the far edge of the site, does not overshadow existing townhomes, and is consistent with LSAP building height design guideline to provide a prominent corner feature.

The existing apartments to the west are also three stories, and located approximately 685 feet away from the nearest point of the proposed condominium buildings. The proposed two-to-three-story townhomes interface with the existing apartments. Given the distance and interface with a similar height, the proposed height deviation for the apartment and condominium buildings is not expected to impact the existing apartments to the west.

Staff supports the height deviations given that the building massing steps down to be compatible with existing residential, and the higher heights occur along the railroad tracks at a significant distance from existing residential. The taller building elements mainly occur at building corners and do not overwhelm the predominant roofline. The maximum 85-foot height proposed is the same as the maximum that is allowed on properties north of the tracks. Although Aster Avenue is not as wide as the tracks, it does provide a buffer from the project site. There is variation, relief, and visual interest with the proposed heights, which are consistent with the LSAP Building Height Guidelines. Moreover, the heights help to achieve the proposed density that is within with the MXD-III zoning district's maximum density allowed with incentives, and allow more units to be located closer to the Lawrence Caltrain Station. Greater building height also allows more of the site to be open space, especially at the community open space.

Distance between Main Buildings

The SMC requires minimum distances between main buildings on the same lot, which starts at 20 feet from ground level and increase in distance by three feet for the second and each additional building story. The apartment and condominium buildings meet this standard, but there are several townhome buildings that do not. Per the standard, distances between two-story townhomes must be at least 23 feet and distances between three-story townhomes must be at least 26 feet. Refer to Attachment 6 for a diagram showing where the deviations occur. The distances that do not meet the standard range from 18-25 feet. These occur at the central promenade, at the corner units along two internal streets and two paseos, and between buildings along the community open space.

Deviations from this requirement are not uncommon for townhome projects. Reducing the distance between buildings helps to concentrate the mass of the townhomes towards the center of its lot and makes more land available for open space along Aster Avenue and in the west side yard setback area. Most of the deviations occur internal to the townhome lot with minimal visibility to Aster Avenue. Additionally, many of the deviations occur at corners of the buildings, while the main massing meets or exceeds the standard. Therefore, staff finds that the requested deviation is reasonable and will not result in a visual impact from the street or neighboring properties.

Parking

The LSAP contains parking requirements that are specific to the plan area and includes a residential

parking maximum, not found in other parking requirements in the City. The intent is to reduce private vehicle ownership and encourage the use of transit. Similar to other residential parking requirements, the number of spaces required is based on the number of bedrooms. Retail parking within a mixed-use development also has a lower parking rate that factors in the ability to share parking.

The parking provided for each land use exceeds the minimum required and is within the maximum allowed. A parking management plan is required for each land use, which includes specifying assigned spaces, retail spaces, and guest parking; and parking lot maintenance.

In the early stages of the project, the applicant proposed on-street parking on the north side of Aster Avenue, which was received positively by some community meeting attendees. However, staff determined this was infeasible due to a lack of space to accommodate street parking along with the City requirement for improved bicycle lanes and a center two-way left turn lane.

Apartments/Retail

The parking garage for the apartment building includes 572 spaces, and there are also 15 surface parking spaces proposed along the north and west property lines of the new apartment lot. At least three spaces within the parking garage would be allocated to the retail use, which is the minimum required. The proposed parking supply of 587 spaces is consistent with the 450 minimum spaces required and within the maximum of 693.

Class I bicycle parking is provided within a secured bicycle storage room along Willow Avenue and includes the minimum 103 required spaces. A total of 56 Class II bicycle rack spaces are placed near building entrances and exceed the required minimum of 27 spaces. To further promote bicycle use, a bicycle repair lounge is provided for use by apartment tenants.

Condominiums

Parking for each condominium building is provided in a two-level podium parking garage. There are also six surface spaces along the north side property line of the new condominium lot. The garage for Condominium Building A includes 146 parking spaces, which exceeds the minimum 117 spaces and is within the maximum 167. The garage for Condominium Building B proposes 158, which also exceeds the minimum of 121 spaces and does not exceed the maximum of 174.

The second level of each garage includes stacker parking, which is allowed to satisfy the parking requirement for up to 50 percent of the units. Stacker spaces proposed within both podium garages are just below 50 percent of the units' parking requirement. The stackers are single platforms with two vehicles stacked on top of each other that fit within a standard parking space with a total clearance height just over 12 feet. The lower parking space must be vacated in order for the platform to be lowered and access the upper vehicle. The time to access the top vehicle is estimated to take up to one minute. The applicant proposes to assign all stacker stalls to two- and three-bedroom units, provided they are owned by the same persons that live in the unit. The condominium homeowners' association would be responsible for the maintenance and repair of the stacker parking, which would be memorialized in the CC&Rs.

Class I bicycle parking for both buildings are provided within secured bicycle storage rooms near the podium garages and include the minimum 48 required spaces. The 26 Class II bicycle rack spaces exceed the minimum of 14 spaces and are placed around each building.

Townhomes

There are 20 surface parking spaces proposed along the north property line of the new townhome lot. Every townhome unit is provided with a two-car garage, either in a side-by-side or tandem format, which add up to a total of 240 garage spaces. Similar to the stacker parking, tandem spaces may satisfy parking requirements for up to 50 percent of the units, and the project proposes them for 29 percent of the units. Garages are at least 450 square feet, which is the standard size to accommodate solid waste and recycling bins. The garage sizes also allow adequate space for bicycle parking. Class II bicycle racks are provided in open spaces near the townhomes and can also be accessed by users of the community open space.

Traffic and Off-Site Improvements

Traffic Study

A Transportation Impact Analysis (TIA) was conducted to identify potential near-term traffic impacts related to the proposed project because more than 100 net new peak hour trips would be generated (Attachment 8). The intersection level of service (LOS) analysis concluded that the project would generate a significant intersection impact at the unsignalized intersection of Willow and Reed Avenue located south of the site during the AM and PM peak hours. The recommended mitigation measure to reduce the impact to less than significant would be to install a sign restricting left turns from southbound Willow Avenue onto Reed Avenue during the AM (7-9 AM) and PM (4-6 PM) peak periods. With this measure, the intersection would operate at an acceptable level of service. The applicant is required to install the sign per the conditions of approval. The TIA did not find project impacts to existing freeway segment LOS or freeway ramp capacity.

Other Off-Site Improvements

The applicant is required to install new curbs, gutters, and sidewalks along both street frontages in accordance with LSAP standards. New street lighting and street trees will be provided along the new sidewalks. An ADA-compliant curb ramp will also be installed at the corner of Aster and Willow Avenue with a crosswalk to the south side of the intersection. The applicant is also proposing a mid-block crosswalk across Aster Avenue at the western end of the site, where the new onsite Class I bicycle/pedestrian trail would be located. A subsequent engineering study would be conducted by the Traffic and Transportation Division on the feasibility of the mid-block crossing.

There is an existing Class II bicycle lane along the Aster Avenue, and it would be upgraded to include green striping near the intersection for safety and visibility purposes. New Class II bicycle lanes would also be installed on either side of Willow Avenue along the project frontage.

A new two-way left turn lane would also be striped in the center of Aster Avenue to provide safe left turn turning movements into the project site and existing townhomes on the south side.

Transportation Demand Management

The project is subject to the City's multi-family residential TDM requirements, with a minimum of 10 points required from the adopted TDM Strategies list. The project's proximity to the Lawrence Caltrain Station and commercial uses; pedestrian and bicycle access improvements; TDM communication strategies to residents; and provision of an onsite wayfinding station totals 13.5 points, which exceeds the TDM requirements.

Solid Waste and Recycling Access

Apartments and Condominiums

Solid waste and recycling service for the apartments and condominium buildings is provided through chutes on each floor that dispose into trash rooms within or adjacent to the parking structure for each building, completely enclosed from ground level view. The retail space would have its own trash room. Solid waste and recycling bins will be staged by apartment and condominium association management behind the buildings in two designated areas along the north property line during pickup days. There would be no exterior trash enclosures.

SMC Section 19.38.030 (e)(1)(k) requires all residential units to be located within 150 feet of a recycling and solid waste enclosure. In the case of the apartment and condominium units, the distance is measured from the trash room or chutes on each floor. All units meet the distance requirement, except for eight within the apartment building, which are 169 feet to a chute. The City's Solid Waste Division supports this request given the minimal increase in distance for a few units, and that the overall project provides efficient recycling and solid waste access and management.

Townhomes

Individual cart service is proposed for the townhomes, where each unit will have two carts for waste and food scraps and recyclables. Residents would store the carts in their garages and stage them in front of the garages on pickup days. The sizes of the individual garages are a minimum of 450 square feet to accommodate the cart storage.

Open Space/Landscaping and Tree Removal/Preservation

Useable Open Space

The LSAP requires a minimum of 50 square feet of usable open space for each residential unit. Balconies with a minimum of six feet in any dimension and a total of 50 square feet can qualify towards the useable open space requirement. Credit is not given to the community open space along Aster Avenue and the west property line because it is publicly-accessible and was included in the incentive aspect of the project. Most of the usable open space is provided in the main east-west promenade, paseos between townhome buildings, courtyards, and rooftop deck space. Private patios and balconies on all residential land uses also contribute towards this requirement. A portion of the emergency vehicle access road near Willow Avenue also counts as usable open space by serving as a cordoned-off pedestrian and bicycle plaza when not in use.

Useable open space provided for each land use exceeds the minimum required by the LSAP. The townhomes provide 44,457 square feet when 7,000 is required; the condominiums provide 63,763 square feet when 9,450 is required; and 56,695 square feet is provided for the apartments when 20,600 is required. Part of the reason for this increased open space is because the buildings are taller than often found, which provides more opportunity for open space.

In addition to useable open space, each residential land use is required to provide a community room/clubhouse with a minimum meeting space size of at least 450 square feet. The minimum size is provided for the townhomes; 1,600 and 1,560 square feet spaces are provided for the condominiums; and 4,695 square feet is provided in the apartment building.

Landscaping

The proposed plans show 28 percent of the project site to be landscaped, or 206,983 square feet while the LSAP requires a minimum of 20 percent, or 146,539 square feet. Landscaping is comprised of groundcover, shrubs, native grasses, and trees. Decorative paving is provided along walkways, large portions of driveways and along the entire stretch of some new townhome streets. Pedestrian-

scale lighting is provided throughout the project site. The proposed landscaping concept will also reduce impervious surface area by 23 percent over existing conditions.

Tree Removal and Preservation

An arborist report was prepared and evaluated a total of 134 existing trees. The most common trees are Bottlebrush, which have a shrub-like appearance and grow between more prominent tree species. Deodar Cedar trees are the second most common tree, followed by Carob trees. The project includes the proposed removal of 44 trees - 24 of which are "protected" per SMC Chapter 19.94 with trunks that are at least 38 inches in circumference. Three additional protected trees are proposed to be transplanted to the community open space area. The trees proposed for removal are either within the proposed improvement area or have low to moderate suitability for preservation. The City Arborist and Planning Division and Public Works Department staff walked the project area on two occasions with the applicant to verify proposed removals. The proposed tree preservation plans and final arborist report reflect the approved course of action. The project is subject to the City's tree replacement policy and proposes 391 new trees to be planted.

The majority of the Deodar Cedar trees along Aster Avenue will be preserved, which currently form a dense canopy screening the site from the street. The new driveways have been placed in locations to avoid removal of these trees. New sidewalks will also be strategically placed around the trees. All existing Bottlebrush trees would be removed given their poor suitability for retention.

Management of Existing Soil and Groundwater Contamination

The Phase I and II Environmental Site Assessments for the project site found existing onsite soil and groundwater contamination associated with gasoline and diesel underground storage tanks. The analysis concluded the potential for vapor intrusion was low, but groundwater contamination exceeds screening levels. The applicant has entered into a Voluntary Cleanup Program with the Santa Clara County Department of Environmental Health (DEH), who will serve as the oversight agency for management of existing contamination. A site management plan, with approval by the DEH, is required prior to grading activities.

Noise Attenuation

The project site is located along the railroad tracks, next to the Lawrence Caltrain Station, and near Lawrence Expressway. While the project is not anticipated to significantly increase noise levels in the area, a noise study was conducted to assess project design measures to meet the General Plan interior and exterior noise goals for the new residences and common useable open spaces. To achieve the General Plan goals, the study includes recommendations for sound-rated windows and exterior doors in specified locations, and a new sound wall along the north property line, which is included in the proposed plans. The conditions of approval require the project noise consultant to review the construction plans and confirm their recommendations have been met. Follow-up field verification testing is also required prior to occupancy of the units.

Lockable Storage

SMC Section 19.38.040 requires a minimum of 200 cubic feet of lockable storage per studio/one-bedroom unit and 300 cubic feet for all other units. There are also certain minimum dimensions the interior of the storage space must meet. The required storage is provided in each apartment and condominium unit or in an adjacent corridor. The required storage for the townhomes is permitted to be located in each two-car garage. All residential uses in the project meet the lockable storage requirements.

Solar Access and Shadow Analysis

SMC Section 19.56.020 limits shading caused by proposed buildings to a maximum of ten percent of the roof area of nearby properties during the hours of 9 AM to 3 PM during the solar cycle. The applicant's shadow study (Sheet A-10.0 of Attachment 5) demonstrates that shadows cast by the proposed buildings do not shade more than ten percent of the roof area on existing buildings on nearby properties. Shadows are cast primarily on the railroad tracks.

Stormwater Management

The City of Sunnyvale complies with stormwater management requirements through participation in the Santa Clara Valley Urban Runoff Pollution Prevention Program (SCVURPPP). The stormwater management goals are achieved by incorporating Best Management Practices into the project design. Stormwater runoff is typically reduced using 100% Low Impact Development (LID) treatment measures such as rain harvesting and infiltration.

A preliminary stormwater management plan was submitted by the applicant to provide treatment to the entire development site. The project site qualifies as a Special Project under the Santa Clara Valley Urban Runoff C3 Requirements because of the proposed density and location adjacent to the Lawrence Caltrain Station. This allows Low Impact Development (LID) reduction credit and non-LID treatment measures. As a result, up to 40 percent of the runoff from the impervious area on the site would be treated through BMP measures such as flow through planters and bio-retention swales and basins. The remaining 60 percent of the total impervious area of the site would be routed and treated through mechanical treatment devices. A third-party expert will review the final plan prior to building permit issuance.

Green Building

A minimum of 80 points on the GreenPoint Rated checklist are required for new multi-family construction. With 110 points or greater, the project may increase building height, lot coverage, or density. A preliminary checklist was prepared by the applicant with 114 points targeted. While the project is eligible for a five-foot height increase, a deviation to the maximum building height is still needed for the proposed apartment and condominium building heights. The retail space is only subject to CALGreen building code mandatory measures.

FISCAL IMPACT

No fiscal impacts other than normal fees and taxes are expected. Standard fees, such as traffic impact, park in-lieu, housing mitigation, and school impact fees are required prior to issuance of a building permit and are included in Attachment 4. The publicly-accessible open space would be privately owned and not require City funds for maintenance or programming.

PUBLIC CONTACT

Staff has received general inquiries about the project details and timeline throughout the review process. Since the mailing of public hearing notices, staff received a phone call from a resident with concerns about the level of development activity in the area and associated traffic impacts. Staff also received a written comment outlining concerns with the proposed density and water supply available for the project. Staff conducted standard noticing and posting below:

- Published in the *Sun* newspaper
- Posted on the site in multiple locations

- Posted on the City's website
- Provided at the Reference Section of the City's Public Library
- Posted on the City's official notice bulletin board
- A total of 5,224 notices mailed to Sunnyvale and Santa Clara property owners and residents within 2,000 feet of the project site
- Notices were also sent to the project interested parties list, including the Ponderosa Park Neighborhood Association, VTA, County of Santa Clara, and City of Santa Clara.

Community Outreach Meeting - October 10, 2018

The applicant conducted a community outreach meeting in the Peninsula Building Materials showroom on October 10, 2018. The meeting was attended by 20 neighboring residents. The applicant gave a presentation with an overview of the project, then broke into an open house format with boards of project images around the room. There was general support for the redevelopment of the site with this project. However, some attendees noted that the project may exacerbate existing issues with the lack of available street parking and traffic congestion, particularly on Lawrence Expressway. Other comments included a desire for more retail and a traffic signal at Willow and Reed Avenue, concerns about height, and security concerns associated with the retail space. There were also questions about improvements to Aster Avenue, the construction timeline, and the programming of the community open space.

Planning Commission Study Session - October 22, 2018

Staff presented the project to the Planning Commission at a study session on October 22, 2018. The Planning Commissioners were generally supportive of the project and provided comments on bicycle facilities, trees, the townhome design, architectural and paving details, the height deviation, and inquired about the retail space and community open space. Two members of the public also provided comments on the size of the retail space, number of affordable units, and traffic impacts.

In response to the comments, the applicant has revised their plans to redesign the look of the townhomes, including a different roof style, a similar red brick as the apartment building, and larger windows; added more architectural variety to the Willow Avenue façade of the apartment building; revisited the planting palette; and expanded the use of permeable paving.

A Planning Commissioner asked staff to research whether there is an existing pedestrian connection and/or easement to the west-adjacent Willowbend Apartments. Staff reviewed the original 1983 approval of the project and subsequent approvals and did not find a requirement for a pedestrian connection. There was a requirement to construct a masonry wall along the entire property line separating the two sites because of noise from the project site's business operations at the time.

ALTERNATIVES

1. Make the required Findings to approve the CEQA determination that the environmental impacts of the project are addressed in the Lawrence Station Area Plan Program (LSAP) Environmental Impact Report (EIR) and no additional environmental review is required; and approve the Special Development Permit with Sunnyvale Municipal Code (SMC) deviations for building height and distance between main buildings, and Vesting Tentative Map subject to the recommended conditions of approval and LSAP Mitigation Monitoring and Reporting Program (MMRP) in Attachment 4.
2. Make the required Findings to approve the CEQA determination that the environmental

impacts of the project are addressed in the Lawrence Station Area Plan Program (LSAP) Environmental Impact Report (EIR) and no additional environmental review is required; approve the Special Development Permit with Sunnyvale Municipal Code (SMC) deviations for building height and distance between main buildings, and Vesting Tentative Map subject to the recommended conditions of approval and LSAP Mitigation Monitoring and Reporting Program (MMRP) in Attachment 4 and modified conditions of approval as required by the Planning Commission.

3. Do not make the CEQA Findings and direct staff as to where additional environmental analysis is required.
4. Deny the Special Development Permit and Vesting Tentative Map and provide direction to staff and applicant on where changes should be made.

STAFF RECOMMENDATION

Alternative 1: Make the required Findings to approve the CEQA determination that the environmental impacts of the project are addressed in the Lawrence Station Area Plan Program (LSAP) Environmental Impact Report (EIR) and no additional environmental review is required; and approve the Special Development Permit with Sunnyvale Municipal Code (SMC) deviations for building height and distance between main buildings, and Vesting Tentative Map subject to the recommended conditions of approval and LSAP Mitigation Monitoring and Reporting Program (MMRP) in Attachment 4.

The proposed transit-oriented project fulfills the LSAP's vision for this site by being primarily residential with a publicly-accessible open space area and a small amount of supporting retail. The proposed connectivity improvements on and offsite will enhance the pedestrian and bicycle experience to the Lawrence Caltrain Station in the neighborhood south of the tracks. The proposed density concentrates more people closer to the station with the potential to increase transit ridership. The proposed building scale respects existing residential uses by stepping down in height, and the architectural character includes elements of the existing industrial use with modern touches. Most of the mature cedar trees along Aster Avenue will be preserved. The proposed landscaping and open spaces will also significantly improve onsite aesthetics. Although there are buildings that exceed the height requirement, the design minimizes the impact to surrounding uses, and the result of the greater height is high density on the site and more open space at the site.

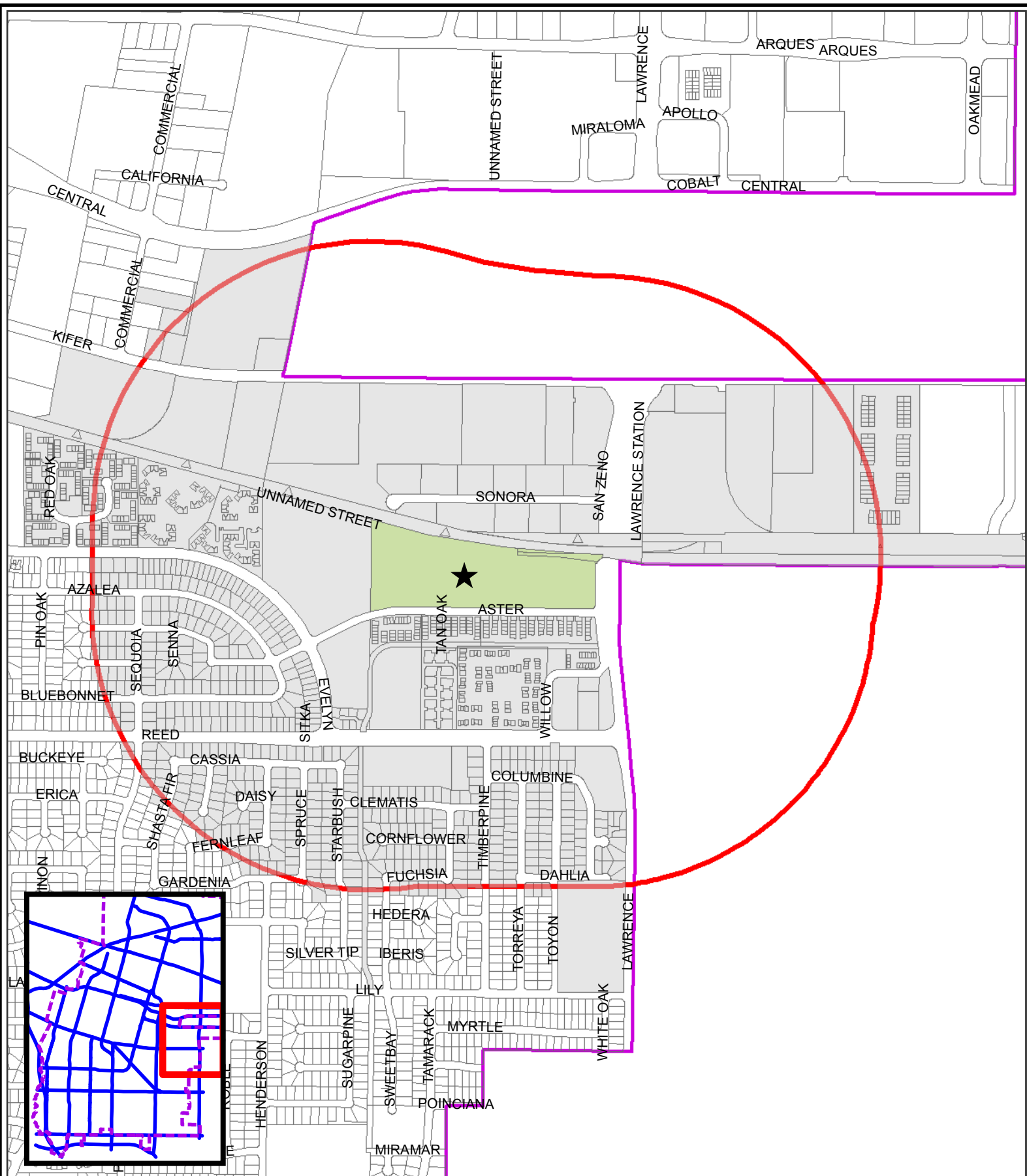
Prepared by: George Schroeder, Senior Planner

Reviewed by: Amber Blizinski, Principal Planner

Approved by: Andrew Miner, Assistant Director of Community Development

ATTACHMENTS

1. Vicinity and Noticing Map
2. Project Data Table
3. Recommended Findings
4. Standard Requirements, Recommended Conditions of Approval, and LSAP Mitigation Monitoring and Reporting Program (MMRP)
5. Site and Architectural Plans
6. Deviations Exhibit and Drone Views
7. CEQA Checklist for Lawrence Station Area Plan (LSAP) EIR Compliance
8. Transportation Impact Analysis (TIA)
9. Link to RTC 18-0259 (LSAP Housing Study Preferred Alternative)
10. Public Correspondence



2018-7513

1155 Aster Ave (APN's: 213-01-032, 213-01-033, and 213-01-034)

Special Development Permit

Tentative Map

2000-ft Area Map

0 285 570 1,140 Feet



PROJECT DATA TABLE – 1155-1175 ASTER AVENUE

	EXISTING	PROPOSED	REQUIRED/ PERMITTED
General Plan	Transit Mixed Use	Same	Transit Mixed Use
Zoning District	MXD-III	Same	MXD-III
Lot Size (s.f.)	732,694 (16.82 ac)	Lot 1 – 372,509 Lot 2 – 138,263 Lot 3 – 221,922	22,500 min.
Gross Floor Area (s.f.)	55,010 (industrial) 10,685 (retail)	998,325 (residential) 23,067 (amenity areas) 1,650 (retail)	No max.
Lot Coverage (%)	9%	49%	No max.
Floor Area Ratio (FAR)	9%	140%	No max.
No. of Units	N/A	<i>Apartments</i> Studio - 50 1 Bed- 212 2 Bed- 150 Subtotal- 412 <i>Condominiums</i> 1 Bed- 74 2 Bed- 72 3 Bed- 43 Subtotal- 189 <i>Townhomes</i> 2 Bed- 41 3 Bed- 65 4 Bed- 34 Subtotal- 140 Total - 741	Minimum density at 24 du/ac (403) + 22 du/ac incentive points proposed = <u>773 max.</u>
Density (units/acre)	N/A	44 (w/ incentives)	24 du/ac min. 36 du/ac max. or 54 du/ac (with incentives)
Meets 75% max?	N/A	Yes	579 min.



	EXISTING	PROPOSED	REQUIRED/ PERMITTED
Unit Sizes (s.f.)	N/A	<i>Apartments</i> (536 – 1,398; 880 avg.) <i>Condominiums</i> (800 – 1,679; 1,118 avg.) <i>Townhomes</i> (1,441 – 2,150; 1,738 avg.)	N/A
Building Height (ft.)	Unknown	<i>Apartments:</i> 34' - 72'-9" (77' to clubhouse) <i>Condos:</i> 27' - 85' <i>Townhomes:</i> 40'	55'
No. of Stories	1	<i>Apartments:</i> 3-5 (club room is on top of garage) <i>Apartment Parking</i> <i>Garage</i> – 7 (6 above grade) <i>Condos:</i> 2-7 <i>Townhomes:</i> 2-3	No max.
No. of Buildings Onsite	9	<i>Apartments:</i> 1 <i>Condos:</i> 2 <i>Townhomes:</i> 20	N/A
Distance Between Buildings	Unknown	<i>Apartments and</i> <i>Condos:</i> 66' <i>Condos and</i> <i>Townhomes:</i> 40' <i>Townhomes:</i> 18' - 34'	<i>Apartments and</i> <i>Condos:</i> 38' min. <i>Condos and</i> <i>Townhomes:</i> 38' min. <i>Townhomes:</i> 26' min.
Solar Shading	N/A	0%	10% max.
Lockable Storage	N/A	200 cu. ft. min. for studio/1 bed and 300 cu. ft. min. for all other	200 cu. ft. min. for studio/1 bed and 300 cu. ft. min. for all other



	EXISTING	PROPOSED	REQUIRED/ PERMITTED
Setbacks			
Front (ft.) – Aster Ave.	Approx. 40'	<i>Apartments: 15'-5"</i> <i>Condos: 15'-7"</i> <i>Townhomes: 68'-9"</i>	15' min.
Front (ft.) – Willow Ave.	Approx. 255'	<i>Apartments: 10'-4"</i>	10' min.
Left Side (ft.) – West	Approx. 280'	<i>Townhomes: 38'-5"</i>	20' min.
Rear (ft.) – North	Approx. 20'	<i>Apartments: 58'-3"</i> <i>Condos: 47'-2"</i> <i>Townhomes: 50'</i>	10' min.
Landscaping			
Total Landscaping (s.f.)	2,970	206,983/28%	146,539/20% min. of lot area
Usable Open Space/Unit (s.f.)	N/A	221	50 min.
Frontage Width (ft.) (Aster Avenue only)	N/A	15	15 min.
Parking Lot Shading (%)	Unknown	50	50% min. in 15 years
Water Conserving Plants	Unknown	82%	80% min. or Water Budget
Recreation Building (s.f.)	N/A	<i>Apartments: 4,695</i> <i>Condos: 1,600 and</i> <i>1,560</i> <i>Townhomes: 450</i>	450 min.
Parking			
Total Spaces	Unknown	<i>Apartments: 572</i> <i>Retail/ Shared: 40</i> <i>Condos: 304</i> <i>Townhomes: 280</i> Total: 1,196	<i>Townhomes: 220</i> <i>min.; 280 max.</i> <i>Condos: 238 min.;</i> <i>341 max.</i> <i>Apartments: 450</i> <i>min.; 693 max.</i> <i>Retail: 3 min.; 6</i> <i>max.</i> Total: 911
Tandem % of required covered	0	<i>Apartments: N/A</i> <i>Condos: 49%</i> <i>Townhomes: 29%</i>	Up to 50% of the units
Driveway Width	Unknown	26'-28'	20' min.

	EXISTING	PROPOSED	REQUIRED/ PERMITTED
Parking Lot Aisle Width	Unknown	24'-26'	24' min.
Bicycle Parking	Unknown	<i>Apartments: 103 Retail: 4 Class II Condos: 48 Class I; 26 Class II Class I; 52 Class II</i>	<i>Condos and Apartments: 151 min. secured (Class I); 41 min. rack (Class II) Retail: 4 min. rack (Class II)</i>
Impervious Surface Area (s.f.)	729,724	556,424	No max.
Impervious Surface (%)	99%	76%	No max.

★ Starred items indicate deviations from Sunnyvale Municipal Code requirements.

RECOMMENDED FINDINGS

CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) FINDINGS FOR PROJECTS CONSISTENT WITH THE LAWRENCE STATION AREA PLAN (LSAP) ENVIRONMENTAL IMPACT REPORT (EIR)

The Planning Commission hereby makes the following findings:

1. The Planning Commission has independently reviewed the programmatic Final Environmental Impact Report for the Lawrence Station Area Plan, State Clearinghouse #2013082030, certified on December 6, 2016 ("Program EIR").
2. The Lawrence Station Area Plan ("LSAP") anticipates construction of an additional 1.2 million square feet of office and R&D, 16,600 square feet of retail, and 2,323 residential units within the 319-acre LSAP neighborhood through 2035.
3. In addition to serving as the environmental document for the approval of the LSAP, the Program EIR was intended by the City to serve as the basis for compliance with CEQA for future discretionary actions to implement the LSAP, in accordance with Public Resources Code Section 21094 and Section 15168 of the CEQA Guidelines.
4. The Program EIR identified measures to mitigate, to the extent feasible, the significant adverse project and cumulative impacts associated with the buildout anticipated by the LSAP. In addition, the Program EIR identified significant and unavoidable impacts with regard to construction air quality, cumulative air quality and traffic operations.
5. On December 6, 2016, the City Council made Findings, adopted a Statement of Overriding Considerations and a Mitigation Monitoring and Reporting Program, certified the Program EIR and adopted the LSAP.
6. The City has analyzed the proposed Project pursuant to Public Resources Code Section 21094(c) and Section 15168(c)(2) and (4) of the CEQA Guidelines to determine if the Project may cause significant effects on the environment that were not examined in the Program EIR and whether the Project is within the scope of the Program EIR.
7. The Planning Commission finds that the Project will not result in environmental effects that were not adequately examined in Program EIR. As demonstrated by the City's analysis of the Project, the Project will incrementally contribute to, but

will not increase the severity of, significant environmental impacts previously identified in the Program EIR.

8. For the reasons discussed in Section ENVIRONMENTAL REVIEW of the PLANNING COMMISSION Staff Report for the proposed Project dated February 11, 2019, the Planning Commission finds that the proposed Project is consistent with the LSAP.
9. In accordance with Public Resources Code Section 21094(b) and Section 15168(c)(2) and (4) of the CEQA Guidelines, none of the conditions or circumstances that would require preparation of subsequent or supplemental environmental review pursuant to Public Resources Code Section 21166 and CEQA Guidelines Section 15162 exists in connection with the Project:
 - a) The Project does not include any substantial changes in the LSAP and no substantial changes have occurred with respect to the circumstances under which the Project is to be undertaken consistent with the LSAP, so the Program EIR does not require any revisions due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
 - b) No new information of substantial importance, which was not known and could not have been known at the time that the Program EIR was certified as complete, shows that the Project would cause new or substantially more severe significant environmental impacts as compared against the impacts disclosed in the Program EIR, that mitigation measures or alternatives found infeasible in the Program EIR would, in fact be feasible, or that different mitigation measures or alternatives from those analyzed in the Program EIR would substantially reduce one or more significant environmental impacts found in the Program EIR.
10. All significant effects on the environment due to the implementation of the Project have been eliminated or substantially lessened where feasible through the Program EIR mitigation measures adopted in connection with the City Council's approval of the Program EIR. All Program EIR mitigation measures applicable to the Project are hereby made a condition of the Project's approval.
11. In accordance with Public Resources Code Section 21094(d), the Planning Commission finds that any significant and unavoidable impacts of the Project with regard to construction air quality, cumulative air quality and traffic operation are outweighed by overriding considerations as set forth in the Program EIR and in the Findings adopted by the City Council in connection with the approval of the Program EIR, as incorporated by reference and reaffirmed herein.

12. Based upon the testimony and information presented at the hearing and upon review and consideration of the environmental documentation provided, the Planning Commission, exercising its independent judgment and analysis, finds that the Project is consistent with the LSAP, falls within the environmental parameters analyzed in the Program EIR, and would not result in any new significant environmental effects or a substantial increase in the severity of any previously identified effects beyond those disclosed and analyzed in the Program EIR, nor would new mitigation be required for the Project.
13. The Department of Community Development, Planning Division, is the custodian of the records of the proceedings on which this decision is based. The records are located at Sunnyvale City Hall, 456 West Olive Ave., Sunnyvale, CA 94086.

SPECIAL DEVELOPMENT PERMIT

In order to approve the Special Development Permit, the Planning Commission must be able to make at least one of the following findings:

Required Findings:

1. The proposed project attains the objectives and purposes of the General Plan and Lawrence Station Area Plan (LSAP) of the City of Sunnyvale. (*Finding met*).
Key goals, objectives, and policies from the General Plan and LSAP are listed below:

General Plan Land Use and Transportation Element

Regional Participation

Policy LT-1.2: Minimize regional sprawl by endorsing strategically placed development density in Sunnyvale and by utilizing a regional approach to providing and preserving open space for the broader community.

Policy LT-1.2a: Promote transit-oriented and mixed-use development near transit centers such as Lawrence Station...

Bordering Cities

Policy LT-1.4: Coordinate with adjacent cities on local land use and transportation planning.

Effective Integration of Transportation and Land Use Planning

Policy LT-3.1: Use land use planning, including mixed and higher-intensity uses, to support alternatives to the single-occupant automobile such as walking and bicycling and to attract and support high investment transit such as light rail, buses, and commuter rail.

Protected, Maintained, and Enhanced Residential Neighborhoods

Policy LT-6.2: Limit the intrusion of incompatible uses and inappropriate development in and near residential neighborhoods, but allow transition areas at the edges of neighborhoods.

Policy LT-6.2a: Where appropriate, use higher-density residential and higher-intensity uses as buffers between neighborhood commercial centers and transportation and rail corridors.

Diverse Housing Opportunities

Policy LT-7.2: Determine the appropriate residential density for a site by evaluating the site planning opportunities and proximity of services (such as transportation, open space, jobs, and supporting commercial and public uses).

Policy LT-7.3: Encourage the development of housing options with the goal that the majority of housing is owner-occupied.

Policy LT-7.5: Consider the impacts of all land use decisions on housing affordability and on the housing needs of special needs groups in Sunnyvale.

Adequate and Balanced Recreation Facilities

Policy LT-9.18: Improve accessibility to parks and open space by removing barriers.

Supportive Economic Development Environment

Policy LT-11.4: Participate in regional efforts to respond to transportation and housing problems caused by economic growth in order to improve the quality of life and create a better environment for businesses to flourish.

Policy LT-11.4a: Support land use policies to achieve a healthy relationship between the creation of new jobs and housing.

Healthy City

Policy LT-8.4: Promote compact, mixed-use, and transit-oriented development in appropriate neighborhoods to provide opportunities for walking and biking as an alternative to auto trips.

Special and Unique Land Uses to Create a Diverse and Complete Community

Policy LT-14.2: Support the Lawrence Station Area Plan, and update it as needed to keep up with evolving values and new challenges in the community.

Policy LT-14.5: Use the Industrial-to-Residential (ITR) combining district to help meet the community's housing needs for all ages and economic sectors and balance its use with maintaining a healthy economy and employment base. ITR areas include the Lawrence Station Area.

Policy LT-14.5b: During the transition from industrial to residential uses, anticipate and monitor compatibility issues between residential and industrial uses. Identify appropriate lead departments and monitoring strategies for each compatibility issue.

Goal LT-14.8: Ensure that development projects provide appropriate improvements or resources to meet the City's future infrastructure and facility needs, and provide development incentives that result in community benefits and enhance the quality of life for residents and workers.

Goal LT-14.8b: Establish zoning incentives, density bonuses, or other land use tools where higher development potential may be allowed based on contributions toward desired community benefits.

General Plan Housing Element

Policy HE-1.1: Encourage diversity in the type, size, price and tenure of residential development in Sunnyvale, including single-family homes, townhomes, apartments, mixed-use housing, transit-oriented development and live-work housing.

Policy HE-4.1: Provide site opportunities for development of housing that responds to diverse community needs in terms of density, tenure type, location and cost.

Policy HE-4.2: Continue to direct new residential development into specific plan areas, near transit, and close to employment and activity centers.

Policy HE-4.6: Provide expanded areas for higher density housing through the conversion of underutilized industrial areas to residential use, if the sites are fit for residential uses (i.e. no health hazards exist).

Policy HE-6.1: Continue efforts to balance the need for additional housing with other community values, including preserving the character of established neighborhoods, high quality design, and promoting a sense of identity in each neighborhood.

Lawrence Station Area Plan

Goal LU-G11: Respect the scale and character of the existing residential uses.

Policy LU-P1: Buffer/transition new development located adjacent to existing residential neighborhoods through site planning, land use, and design strategies.

Goal H-G1: Provide sufficient housing in the Plan area to support an increase rail transit ridership.

Goal H-G2: Provide a range of housing types in the station area to provide for all income groups and lifestyles.

Goal H-G3: Encourage and support development of affordable housing in the Plan area.

Policy H-P1: Encourage a diverse mix of housing types, including ownership, rental, affordable and housing for seniors.

Goal OSG-1: Establish a system of parks and public spaces connected by green corridors and linear parks that serve and connect both new residential development and new non-residential development.

Goal OSG-2: Provide open space within a five-to-ten minute walk of all residents and employees.

Goal D-G2: Target minimum development of at least 2,000 new housing units and 5,960 jobs within the Sunnyvale portion of the Plan by the horizon year of 2035 in order to support a critical mass of retail services in the area and support existing and improved transit infrastructure.

Goal CF-G3: Create a street and block framework that provides a variety of vehicular access options and is scaled to pedestrians.

Policy CF-P1: In the residential areas south of the Caltrain tracks, retain the existing framework of streets and blocks. Improve street connections to the residential areas south of the Caltrain tracks to provide safer street crossings and minor access improvements for pedestrians, bicycles and transit users.

Policy CF-P2: Prioritize the provision of improved north-south access for all modes of travel between the northern and the southern portions of the Plan area.

Policy P-P2: Provide two new Caltrain track crossings for pedestrians and bicyclists: one at the Calabazas Creek Trail (per study by the City of Santa Clara); the other west of Lawrence Expressway aligning with and connecting to the Loop near the western end of Sonora Court.

Policy P-P10: For new sidewalks in areas of increased pedestrian activity and along all primary pedestrian corridors, provide a minimum sidewalk width of 15 feet inclusive of a minimum paved pedestrian travel zone of six feet.

Policy B-P1: Require property development to provide Class I and Class II bicycle facilities to fill in the gaps in the existing and planned bicycle network.

Policy B-P2: Provide direct Class I and Class II bicycle connections to the future Calabazas Creek Trail from The Loop.

Goal U-G5: Avoid flooding of new development by requiring flood prevention measures for those developments located in the flood zone.

Policy U-P5: Require all proposed habitable structures' finished floors to have at least 0.5-feet freeboard to the 1% Flood Elevation.

Policy U-P11: A regional study and Conditional Letter of Map Revision by Fill (CLOMR-F) shall be submitted and approved by FEMA for each development.

Goal BSP-G1: As properties redevelop incrementally, establish a publicly-accessible framework of streets and blocks scaled to pedestrian and bicycle users and accessible to all modes of travel.

Goal BSP-UDG3: To the extent feasible, add publicly-accessible pathways in existing development areas where street connectivity is limited.

Goal BSP-UDG6: In instances where creating a new public street is not immediately feasible, reserve space for future implementation and provide an initial pedestrian/bicycle path.

Goal SP-UDG2: For the San Ysidro Way Extension (retail street) and the retail area on Willow Street (south of the station), locate the primary building façade at the street right-of-way/property line (0 feet setback). As shown in Figure 6.1, exceptions to this rule are allowed and encouraged to emphasize the retail zone and widen the sidewalk as follows:

- Up to 10 feet maximum setback from the property line.
- Contiguous with the sidewalk grade and accessible to the public.
- Upper levels of the building may extend over the setback area to create arcades and overhangs

Goal SP-UDG4: Up to 15 percent of the horizontal length of the building façade may be stepped back beyond the setback. This allows entry courts, public plazas, and building articulation at the ground level, which must be publicly accessible.

Goal BH-UDG1: Restrict building heights in the following situations:

- Around parks and public open spaces to maintain a pedestrian scale and maximize daylight/sky exposure.
- Along pedestrian walkways and sidewalks to provide a comfortable pedestrian scale.
- Adjacent to existing residential neighborhoods, stepping down to two or three stories to provide a transition in scale.

Goal BH-UDG2: Place taller buildings or building elements at corner intersections to achieve greater visibility, scale relationships, and architectural massing and interest.

Goal BH-UDG4: Vary building heights within blocks and parcels in order to provide visual interest and variety and to avoid a blocky, uniform appearance.

Goal BMA-UDG2: The taller portion of a building (i.e., the tower) shall not occupy more than 25 percent of the length of a lot.

Goal BMA-UDG3: Accentuate major gateways in the Plan area with architectural modulation.

Goal BMA-UDG4: Reinforce street corners with changes in architectural massing and height.

Goal BO-G1: Activate the street and sidewalk by providing active ground floor uses, locating building entries and windows in appropriate locations, and providing pedestrian-scaled elements.

Goal BO-UDG1: Orient buildings to ensure that the primary façades and entrance areas of all buildings face the street, open space areas, or other pedestrian-oriented circulation areas.

Goal BO-UDG2: Place windows and storefronts at the street level and ground floor.

Goal BO-UDG3: Use clear, non-reflective glazing on all windows at street level.

Goal BO-UDG4: Emphasize building entries with small entry plazas, vertical massing, and architectural elements such as awnings, arcades, or porticos.

Goal BO-UDG5: Design entries so that they are clearly identifiable from the street.

Goal BO-UDG6: Provide a walkway leading from the street to the building entrance if the building is not located directly on a public sidewalk.

Goal BO-UDG7: Enhance building entries and the adjoining pedestrian realm with plazas and landscaping.

Goal BO-UDG9: On pedestrian retail streets and other designated retail areas, design the floor-to-ceiling height of the first floor to be greater than that of upper floors to accommodate ground-floor retail space. Generally, the height should be a minimum of 14 feet.

Goal BO-UDG10: Include features that add depth, shadow and architectural interest, such as balconies, recesses, cornices, bay windows, and step-backs at upper floors, consistent with the building's style and scaled for pedestrians.

Goal BO-UDG1 1: Limit blank walls along pedestrian-oriented streets and pathways to no greater than 30 linear feet without being interrupted by a window or entry.

Goal RB-G1: Ensure that residential buildings contribute activity to public streets and open spaces.

Goal RB-G2: Ensure that residential buildings provide privacy for residents.

Goal RB-UDG1: Provide entries to residential buildings that are accessed directly from the street or public open spaces.

Goal RB-UDG2: For residential development, design ground-floor units to have a direct relationship with the street and pedestrian realm.

Goal RB-UDG5: Use balconies, stoops, windows, and courtyards to provide architectural interest.

Goal RB-UDG6: Employ variation in scale and form for residential development, allowing for both pedestrian-scaled and larger-scaled massing.

Goal RB-UDG7: For residential development facing onto local residential streets or public open space, use lower-scale residential forms such as townhomes up to three stories in height at the street. Buildings should step back to add an additional story.

Goal MU-UDG1: Orient building entrances to the street and space no more than 50 feet apart.

Goal MU-UDG2: Clearly address the public realm by providing glazing on at least 70 percent of the ground floor retail façade facing the street or public space.

Goal MU-UDG3: Utilize architectural elements such as recesses, awnings, colonnades, and pronounced entrances.

Goal MU-UDG4: Where entries orient to parking areas, provide continuous sidewalks from the street directly to the doorway.

Goal BM-G2: Use building materials to define the functional levels of a building and its relationship to the public realm (particularly at the street level).

Goal BM-G3: Ensure that materials avoid excessive monumentality or a monolithic character.

Goal BM-G4: Ensure that materials fit with the character and context of the existing development.

Goal BM-G5: Prioritize sustainability as a key consideration.

Goal BM-UDG1: Use high-quality, durable architectural materials and finishes that provide a sense of permanence.

Goal BM-UDG2: Use materials that express their true properties; faux reproductions of stone, for example, are discouraged.

Goal BM-UDG3: Give preference to sustainable materials, buildings systems, and technologies.

Goal BM-UDG4: Use materials that improve building envelope performance through insulation values and thermal mass.

Goal BM-UDG5: Avoid highly reflective surfaces and materials that can cause heat or glare for pedestrians.

Goal BM-UDG6: Avoid dark materials that absorb heat and reduce solar reflectivity.

Goal BM-UDG7: Use glazing that is as clear and non-reflective as possible in order to provide transparency and visibility while meeting energy and daylighting performance requirements.

Goal BM-UDG9: Employ accent materials such as tile insets or natural stone at the ground level to add texture, color, and visual interest at the pedestrian level along all pedestrian corridors.

Goal BM-UDG10: Employ color to differentiate between building elements and to moderate the scale of buildings.

Goal OS-G1: Ensure that open space provided by new development is publicly accessible and attractive.

Goal OS-UDG5: The cross-section dimension of a plaza, courtyard, or mid-block pedestrian connection should be a minimum of 20 feet.

Goal OS-UDG6: Do not exceed a grade differential greater than four feet between an open space or plaza area and the adjacent sidewalk grade.

Goal OS-UDG8: For residential uses, provide private and semi-private open space

in accordance with the Sunnyvale Zoning Code.

Goal PK-UDG9: Provide a ratio of one tree per three (3) parking spaces on the perimeter of the lot and one tree per six (6) parking spaces on the interior of the lot. Ensure trees are equally spaced to maximize shade cover over the entire parking lot.

Goal PK-UDG10: Accommodate pedestrians and bicycle traffic with pedestrian-only pathways and bicycle facilities through parking areas. Shade these areas with trees and architectural elements such as trellises and awnings.

Goal PK-UDG11: Design parking structure access lanes to have the character of an attractive, well-landscaped small urban street.

Goal PK-UDG12: Locate parking structures away from primary pedestrian corridors.

Goal PK-UDG14: Create visual interest and reduce the mass of parking structures through the use of:

- Variation in the dimension and proportion of openings of the façade.
- Decorative screens, railings, and trellis elements of durable, high-quality materials.
- Materials and designs that are similar to surrounding buildings on site.
- Awnings, arcades, trellises, or porticos along street-facing façades and pedestrian connections.
- Provide parking access lanes and driveways at spacing along the street of not less than 100 feet.
- Where parking lanes or courts are visible from the street, planter beds with trees or potted plants should be located between garage doors.
- Create shared, unallocated parking spaces, such as carports, in order to maximize site area for new building development and open space.

Goal PK-UDG16: For lower density residential development, such as row houses or townhouses:

- Multiple at-grade garage doors, aligned in a row, shall not directly face the street.
- Arrange at-grade garages around well-landscaped parking lanes and/or parking courts leading to individual garages.

Goal PS-UDG1: Incorporate pedestrian access lanes, on a spacing similar to the townhouses across Aster, in order to provide convenient pedestrian movement through the subarea.

Goal PS-UDG2: Locate tallest buildings and highest densities along the train tracks, transitioning to lower scale buildings to the south and west, where they adjoin or face nearby apartments and townhouses.

Goal PS-UDG3: For buildings adjacent to the tracks, incorporate landscape and building design measures to mitigate the negative effects of noise and vibration from train operations.

Goal PS-UDG5: Concentrate small-scale retail uses, providing coffee, sandwiches or other services, at the eastern end of the subarea along Willow Avenue and around the expanded station plaza in order to serve residents as well as train passengers.

Goal PS-UDG6: Locate public open space to be directly visible and accessible from Aster Avenue as well as from the west boundary pedestrian/bicycle linkage.

Goal SR-G1: Protect and enhance the character and quality of the existing residential neighborhoods with an emphasis on pedestrian and bicycle enhancements and the provision of a new neighborhood- serving local park or open space.

Goal LRW-UDG3: Locate retail uses along Willow and Reed Avenues in conformance with General Site Planning Guidelines earlier in this chapter.

Goal ST-G3: Create a pedestrian environment of streets and pathways that is:

- Interesting, with appealing things to see, touch, hear and smell that makes one's time in the area a positive experience and encourages return visits.
- Attractive, with building and landscape improvements that create a beautiful setting in which people can walk, drive, shop, work, and live.
- Safe, allowing people to feel comfortable and secure, whether alone or in a group, during the day, evening and night.
- Successful, where walking becomes a primary means of local transportation, enhancing transit ridership and supporting a thriving neighborhood and retail climate.

Goal SW-UDG3: Use special paving materials, such as unit pavers made of brick, stone, or concrete, at special nodes, plaza areas and streets, within sidewalk extensions and other special pedestrian areas in order to differentiate them from the sidewalk and define a specific place.

Goal STP-UDG4: Use pedestrian-scaled, ornamental trees to define small-scaled pedestrian ways.

Goal SF-UDG2: Incorporate unique, specially-designed street furnishing elements to provide a unique character in special areas, such as gateways, nodes, pedestrian corridors and retail districts, and gathering places.

Goal SF-UDG5: Provide two trash receptacles at diagonally opposite corners of each intersection in areas with high pedestrian circulation.

Goal SF-UDG6: Provide trash receptacles with recycling options.

Goal SF-UDG3: Design and/or finish utility and service devices to either visually recede or, as appropriate, match other furnishing items.

Goal SF-UDG7: In retail areas, provide three bicycle racks on each side of the street in each block.

Goal SF-UDG8: Place bicycle racks in the curb zone such that locked bicycles do not obstruct the sidewalk pedestrian path of travel.

Goal SF-UDG12: Provide tree grates for all new or transplanted trees that are located in paved pedestrian areas in order to increase the usable sidewalk area and protect the tree's roots.

Goal OSW-UDG2: Include the following features in the planning and installation of the signage and wayfinding system:

- Direct pedestrians, bicyclists and motorists to major area destinations, especially Lawrence Station.
- Promote transit use by indicating the location of bus and shuttle stops and system routing.
- Facilitate efficient traffic flow by directing drivers to destinations such as important roadways and parking facilities.
- Select typography, graphics, form, illumination and mounting to be compatible with the design of area street furnishings.
- Avoid visual clutter through the creation of efficient and clear signage that does not require a large amount of repetition.
- Consolidate information on a single pole, whenever feasible.
- Design directional signage in a consistent manner throughout the Plan area, regardless of the street type or land use.
- Design signage and way finding system to be appropriately- scaled to the various modes and speeds of travel.

Goal ID-UDG1: Provide highly visible crosswalks on all intersections in accordance with City standards.

Goal PB-UDG5: Provide continuous pedestrian-scaled lighting on all pedestrian ways to ensure a feeling security.

Goal PB-UDG7: Plantings may be of a design that is either consistent with the palette of adjoining properties or of a design that delineates the pedestrian way.

Goal PB-UDG8: Ensure that plantings do not obscure visibility of the pedestrian way from surrounding properties and public spaces and do not interfere with emergency vehicle access.

Goal WS-G1: Design Willow Street to be safe and attractive for residents of the study area and those south of Reed who walk or ride to the station. Design Guidelines for Lawrence Expressway

Goal WS-UDG1: Provide continuous sidewalks on both sides of Willow Street, with a minimum 6-foot dimension.

Goal WS-UDG2: Provide improved pedestrian lighting to give a sense of safety along Willow Street.

Goal WS-UDG3: Improve signage to the station and expand to include signage on Reed and Monroe Avenues as well as Lawrence Expressway.

Goal WS-UDG4: Accommodate bicycles in the roadway. The narrow right of way suggests that a shared lane is necessary. Install bicycle notations and warning systems such as “sharrows” and “Share the Road” signs to indicate bicycles will be welcome.

The proposed project is consistent with the goals and objectives contained in the General Plan and LSAP by redeveloping the Calstone/Peninsula Building Materials site with a transit-oriented, mixed-use residential and retail development that respects the scale and character of existing residential uses. The high-density project contributes to the goal of increasing transit ridership by introducing a variety of ownership and rental housing types within close walking distance to the Lawrence Caltrain Station. The retail use will provide a convenience for residents and transit riders. The visual impacts of parking are minimized by containing most parking within enclosed structures. Direct pedestrian and bicycle access to the station is provided through pathways and roadways within the site, and with new public sidewalks and bicycle lanes in the public right-of-way will better connect to the existing residential area to the south of the site. The variety of landscaping and open spaces will significantly improve onsite aesthetics. The project will also preserve mature trees to the maximum extent possible. An irrevocable offer of dedication is provided onsite for a potential future north-south pedestrian/bicycle

connection across the railroad tracks. The publicly-accessible community open space will fill a void in a neighborhood underserved by park space.

The proposed land uses improve compatibility with the neighborhood, and the proposed building scale respects existing residential uses by stepping down in height. Although a deviation to the maximum height allowance is proposed, the height increase occurs closer to the railroad tracks and occurs mainly at building corners. There is also variation, relief, and visual interest in the proposed architectural design that utilizes thematic elements from the existing industrial use. The deviation for distances between townhome buildings occur internal to the site and do not impact the streetscape. Aside the deviations to maximum height and distances between townhome buildings, the project meets or exceeds all development standards, such as parking, setbacks, landscaping and usable open space. There are adequate environmental mitigation measures in place as part of the LSAP MMRP to reduce construction-related impacts to the neighborhood. There is also a requirement to properly address any contaminated soils and groundwater and noise attenuation for future residents.

2. The proposed project ensures that the general appearance of proposed structures, or the uses to be made of the property to which the application refers, will not impair either the orderly development of, or the existing uses being made of, adjacent properties. (*Finding met*).

The project site is located within the adopted LSAP which specifically permits mixed-use development onsite, including residential and retail uses. The proposed project will improve the character of the site, surrounding neighborhood, and community by providing housing options and a small retail space within walking distance to the Lawrence Caltrain Station; and beautifying existing industrial conditions with vast landscaping and open space, including a publicly-accessible community open space. The project has been designed to complement the adjacent neighborhood through high quality architecture and building materials with appropriate massing and scale. The requested deviations are reasonable and not anticipated to negatively affect adjacent properties. Potential environmental impacts can be mitigated to less than significant levels with the measures included in the LSAP MMRP. The traffic impact at Willow and Reed Avenue will be addressed by a required sign installation prohibiting left turns.

VESTING TENTATIVE MAP

Vesting Tentative Map: In order to approve the Vesting Tentative Map, the proposed subdivision must be consistent with the General Plan and Lawrence Station Area Plan (LSAP). Staff finds that the Vesting Tentative Map is in conformance with the General Plan and LSAP. However, if any of the following findings can be made, the Vesting Tentative Map shall be denied.

1. That the proposed map is not consistent with the General Plan and LSAP.
2. That the design or improvement of the proposed lot merger is not consistent with the General Plan and LSAP.
3. That the site is not physically suitable for the proposed type of development.
4. That the site is not physically suitable for the proposed density of development.
5. That the design of the subdivision or proposed improvements are likely to cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat.
6. That the design of the subdivision or type of improvements is likely to cause serious public health problems.
7. That the design of the subdivision or the type of improvements will conflict with easements, acquired by the public at large, for access through or use of property within the proposed subdivision.
8. That the map fails to meet or perform one or more requirements or conditions imposed by the "Subdivision Map Act" or by the Municipal Code.

Staff was not able to make any of the following findings and recommends approval of the Vesting Tentative Map.

**RECOMMENDED CONDITIONS OF APPROVAL AND
STANDARD DEVELOPMENT REQUIREMENTS
FEBRUARY 11, 2019**

Planning Application 2018-7513
1155-1175 Aster Avenue (APNs 213-01-032, -033, -034)

Special Development Permit to redevelop a 16.82-acre property. Demolish seven existing industrial buildings, two commercial buildings, and construct a new mixed-use project. Project consists of a four-to-five-story apartment/commercial building with a wrapped above-grade parking structure; (2) two-to-seven-story condominium buildings above podium parking structures; and (20) two-to-three-story townhome buildings with individual unit garages.

Residential: 741 total units (412 rental /329 ownership) at a density of 44 du/ac.

Commercial: 1,500 sq. ft. on the ground floor of the apartment building.
Publicly-Accessible, Privately-Owned Open Space: 2.3 acres

Vesting Tentative Map to create two lots for condominium purposes, one lot for the apartments and associated common area lots.

The project includes the following Sunnyvale Municipal Code deviations:

- Maximum building height [SMC Table 19.35.060]
- Minimum distance between buildings [SMC Section 19.48.030]

The following Conditions of Approval [COA] and Standard Development Requirements [SDR] apply to the project referenced above. The COAs are specific conditions applicable to the proposed project. The SDRs are items which are codified or adopted by resolution and have been included for ease of reference, they may not be appealed or changed. The COAs and SDRs are grouped under specific headings that relate to the timing of required compliance. Additional language within a condition may further define the timing of required compliance. Applicable mitigation measures are noted with "Mitigation Measure" and placed in the applicable phase of the project.

In addition to complying with all applicable City, County, State and Federal Statutes, Codes, Ordinances, Resolutions and Regulations, Permittee expressly accepts and agrees to comply with the following Conditions of Approval and Standard Development Requirements of this Permit:

GC: THE FOLLOWING GENERAL CONDITIONS AND STANDARD DEVELOPMENT REQUIREMENTS SHALL APPLY TO THE APPROVED PROJECT.

GC-1. CONFORMANCE WITH APPROVED PLANNING APPLICATION:

- All building permit drawings and subsequent construction and operation shall substantially conform with the approved planning application, including: drawings/plans, materials samples, building colors, and other items submitted as part of the approved application. Any proposed amendments to the approved plans or Conditions of Approval are subject to review and approval by the City. The Director of Community Development shall determine whether revisions are considered major or minor. Minor changes are subject to review and approval by the Director of Community Development. Major changes are subject to review at a public hearing. [COA] [PLANNING]
- GC-2. ENTITLEMENTS – DISCONTINUANCE AND EXPIRATION:
The entitlements shall expire if discontinued for a period of one year or more. [SDR] (PLANNING)
- GC-3. ENTITLEMENTS- EXERCISE AND EXPIRATION:
The approved entitlements shall be null and void two years from the date of approval by the final review authority at a public hearing if the approval is not exercised, unless a written request for an extension is received prior to expiration date and is approved by the Director of Community Development. [SDR] [PLANNING]
- GC-4. INDEMNITY:
The applicant/developer shall defend, indemnify, and hold harmless the City, or any of its boards, commissions, agents, officers, and employees (collectively, "City") from any claim, action, or proceeding against the City to attack, set aside, void, or annul, the approval of the project when such claim, action, or proceeding is brought within the time period provided for in applicable state and/or local statutes. The City shall promptly notify the developer of any such claim, action or proceeding. The City shall have the option of coordinating the defense. Nothing contained in this condition shall prohibit the City from participating in a defense of any claim, action, or proceeding if the City bears its own attorney's fees and costs, and the City defends the action in good faith. [COA] [OFFICE OF THE CITY ATTORNEY]
- GC-5. NOTICE OF FEES PROTEST:
As required by California Government Code Section 66020, the project applicant is hereby notified that the 90-day period has begun as of the date of the approval of this application, in which the applicant may protest any fees, dedications, reservations, or other exactions imposed by the city as part of the approval or as a condition of approval of this development. The fees, dedications, reservations, or other exactions are described in the approved plans, conditions of approval, and/or adopted city impact fee schedule. [SDR] [PLANNING / OCA]

- GC-6. PREVIOUS USES SUPERSEDED:
Once the allowed use as approved for this planning application is exercised, the previously approved planning applications shall be null and void with no further action required by any reviewing authority. [COA] [PLANNING]
- GC-7. ON-SITE AMENITIES:
Swimming pools, pool equipment structures, play equipment and other accessory utility buildings, except as otherwise subject to Planning Commission review, may be allowed by the Director of Community Development subject to approval of design, location and colors. [COA] [PLANNING]
- GC-8. PUBLIC ACCESS EASEMENT ON COMMUNITY OPEN SPACE:
There shall be a public access easement recorded on the entirety of the community open space as shown in the approved plans along Aster Avenue and the western property line. The community open space shall be open to the public and shall not be restricted in use. The community open space shall be included on the final map and maintained in perpetuity by the association responsible for maintaining the parcel on which it is located. [COA] [PLANNING]
- GC-9. APARTMENT GROUND FLOOR RETAIL SPACE USES:
SMC Table 19.35.050, "Permitted, Conditionally Permitted, and Prohibited Uses in LSAP Districts," under the MXD-III zoning district applies to all future uses in the ground floor retail space in the apartment building. [COA] [PLANNING]
- GC-10. BMR OWNERSHIP HOUSING COMPLIANCE:
This project is subject to the City's Below Market Rate (BMR) Housing requirements as set forth in Sunnyvale Municipal Code Chapter 19.67 and the BMR Program Guidelines, both as may be amended. Developer shall enter into a BMR Developer Agreement in a form provided by the City, to be recorded against the property before issuance of building permits or recordation of a final map, whichever occurs first. When dwelling units in the project are made available for sale, the project shall provide 12.5% of the total units in the project for sale as BMR homeownership units. For the subject project, that equals **41** Below Market Rate dwelling units for sale and payment of a fractional in-lieu fee of **0.13 units** in compliance with the BMR requirements set forth in SMC 19.67 and the BMR Program Guidelines. [SDR][HOUSING]
- GC-11. BELOW MARKET RATE PROGRAM/CONDO CONVERSION:
Any future conversion of the apartment project into 8 or more condominium units for sale to individual home buyers will require

compliance with SMC 19.67, Below Market Rate Ownership Housing, including the requirement to enter into a BMR Developer Agreement to provide BMR units, as well as compliance with SMC 19.70, regarding condominium conversion. [SDR] [PLANNING]

GC-12. RECREATION FACILITIES:

The recreation facilities serving each land use shall be installed in connection with the first phase of that land use and included on the building permit plans for the first phase. [COA] [PLANNING]

GC-13. STORMWATER MANAGEMENT PLAN:

Project is subject to Provision C3, of the Municipal Regional Stormwater Permit Order No. R2-2009-0074, as determined by a completed "Stormwater Management Plan Data Form", and therefore must submit a Stormwater Management Plan as per SMC 12.60.140 prior to issuance of the building permit. [SDR] [PLANNING]

GC-14. COMPLIANCE WITH TRANSPORTATION IMPACT ANALYSIS (TIA) RECOMMENDATIONS:

The applicant shall incorporate all recommendations in the final Transportation Impact Analysis for the project, subject to the review and approval of the Director of Public Works. [COA] [PUBLIC WORKS] [PLANNING]

GC-15. SIGNAGE:

Signage is not approved as part of this permit. Signage shall be reviewed as part of a separate Master Sign Program. [COA] [PLANNING]

GC-16. REMOVAL OF EXISTING WIRELESS COMMUNICATIONS FACILITIES:

All existing wireless telecommunication facilities and associated equipment shall be removed upon redevelopment of the site, prior to final occupancy of any residential units, or alternate timeline as determined by the Director of Community Development. Demolition permits shall include the removal of these facilities. [COA] [PLANNING]

GC-17. TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN:

The project is subject to the Multi-Family Residential Transportation Demand Management (TDM) Plan program per Chapter 19.45 of the Sunnyvale Municipal Code (SMC). The project must achieve the 13.5 points as provided on the approved TDM program. Verification of compliance is subject to approval by the Director of Community Development prior to occupancy and shall be demonstrated (when applicable) on building permit plans. The Director may require the onsite TDM coordinator to send to the City annual confirmation that the specified TDM measures are provided to residents. [SDR] [PLANNING]

GC-18. FINAL MAP RECORDATION:

This project is subject to, and contingent upon the approval of a vesting tentative map and recordation of a final map. The submittal, approval and recordation of the final map shall be in accordance with the provisions of the California Subdivision Map Act and Sunnyvale Municipal Code Title 18 Subdivision requirements. All existing and proposed property lines, easements, dedications shown on the vesting tentative map are subject to City's technical review and approval during the final map process prior to any grading or building permit. Sheets C1.0 through C10.1 of the Vesting Tentative Map package dated 1/29/19 are subject to change during plan check process. [COA] [PUBLIC WORKS]

GC-19. MULTIPLE MAPS:

If multiple maps are filed, all public improvement plans shall be approved prior to first map recordation. All public improvements shall be completed prior to first building occupancy, unless otherwise approved by the Department of Public Works. [COA] [PUBLIC WORKS]

GC-20. PUBLIC IMPROVEMENTS:

The developer is required to install, per Sunnyvale Municipal Code Sections 18.08, all public improvements, which may include but not be limited to, curb & gutter, sidewalks, driveway approaches, curb ramps, street pavements, utility extensions and connections, meters/vaults, trees and landscaping, signage, striping, street lights, etc.

All public improvements shall be designed and constructed in accordance with current City design standards, standard details and specifications, and Americans with Disabilities Act (ADA) requirements where applicable, unless otherwise approved by the Department of Public Works.

The developer is required to complete the installation of all public improvements and other improvements deemed necessary by the Public Works Department, prior to occupancy of the first building, or to the satisfaction of the Department of Public Works.

If the developer desires to phase the off-site improvement construction without completing the entire project frontage improvements associated with the first building occupancy, a construction phasing plan for the off-site improvements shall be submitted for review and approval by the Department of Public Works prior to first building permit issuance. [COA] [PUBLIC WORKS]

GC-21. OFF-SITE IMPROVEMENT PLANS:

Submit off-site improvement plans separate from the Building on-site improvement plans as the off-site improvement plans are approved through a Public Works Encroachment Permit process. Sheets C1.0 through C10.1 of the Vesting Tentative Map package dated 1/29/19 are subject to change during the plan check process. [SDR] [PUBLIC WORKS]

GC-22. OFF-SITE CONSTRUCTION PHASING PLAN:

The developer shall prepare a detailed off-site construction phasing plan for the subject property. The plan shall be subject to review and approval by the Department of Public Works prior to issuance of the encroachment permit. The plan shall have both exhibits and narratives that include, but not limited to, construction truck route, public vehicle access, pedestrian access, construction staging, limits of work and timeline for each of the phases. [COA] [PUBLIC WORKS]

GC-23. STORM DRAIN RELOCATION PLANS:

Submit improvement plans for the on-site public storm drain main relocation separate from the off-site improvement plans and the Building on-site improvement plans as the storm drain relocation plans are approved through a Public Works Encroachment Permit process. The storm drain relocation shall be completed and accepted by the City prior to approval of the first final map or issuance of the first building permit for parcels B and C. The storm drain relocation shown Sheet C6.0 through C6.1 dated 1/29/19 are subject to change during the plan check process. [SDR] [PUBLIC WORKS]

GC-24. ENCROACHMENT PERMIT:

Prior to any work in the public right-of-way, obtain an encroachment permit with insurance requirements for all public improvements including a traffic control plan per the latest California Manual on Uniform Traffic Control Devices (MUTCD) standards to be reviewed and approved by the Department of Public Works. The traffic control plan is also subject to LSAP Mitigation Measure 3.3.5 [COA] [PUBLIC WORKS]

PS: THE FOLLOWING CONDITIONS SHALL BE MET PRIOR TO SUBMITTAL OF BUILDING PERMIT, AND/OR GRADING PERMIT.

PS-1. REQUIRED REVISIONS TO PROJECT PLANS:

The plans shall be revised as described below:

- a) Provide trash receptacles along Willow Avenue and by the public open space in accordance with LSAP Goals SF-UDG5 and 6.
- b) Incorporate revisions required by the City's Solid Waste Division.

c) Per the TIA recommendations, ensure the parking structure spaces next to dead-end aisles are provided with sufficient turn-around space. [COA] [PLANNING]

PS-2. EXTERIOR MATERIALS REVIEW:

Final exterior building materials and color scheme are subject to review and approval by the Director of Community Development prior to submittal of a building permit. [COA] [PLANNING]

PS-3. SANITARY SEWER ANALYSIS:

Prior to first off-site plan check submittal, submit a focused sanitary sewer analysis, to be reviewed and approved by the City, identifying the overall project impact to the City's existing sanitary sewer main(s). This includes, but is not limited to, the following:

- a) A detailed estimate of water consumption in gallons per day or estimate of sanitary sewer discharge in gallons per day; and
- b) Any incremental impact that will result from the new project in comparison to the existing sewer capacity of the immediate downstream mainline as needed, and allocation of wastewater discharge from the project site to each of the proposed laterals. Any deficiencies in the existing system in the immediate vicinity of the project will need to be addressed and resolved at the expense of the developer as part of the off-site improvement plans. Sewer flow monitoring data may be required as needed. Any mitigation improvements needed shall be incorporated in the first plan check submittal. [COA] [PUBLIC WORKS]

MM: THE FOLLOWING CONDITION SHALL BE ADDRESSED AND MITIGATION MEASURES NOTED FOR THE LSAP EIR – MMRP AS RELEVANT TO THIS PROJECT

MM-1. LAWRENCE STATION AREA PLAN (LSAP) – MITIGATION, MONITORING & REPORTING PROGRAM (MMRP):

The project is subject to the applicable measures in the Mitigation and Monitoring Reporting Program (MMRP) as required in the City of Sunnyvale Lawrence Station Area Plan Environmental Impact Report (EIR). The applicable measures are indicated in the Environmental Checklist for the project and are listed in the BP section of these conditions. The LSAP MMRP has been included as Exhibit 1. [COA] [PLANNING/PUBLIC WORKS]

BP: THE FOLLOWING CONDITIONS SHALL BE ADDRESSED ON THE CONSTRUCTION PLANS SUBMITTED FOR FOUNDATION BUILDING PERMIT, GRADING PERMIT, AND/OR ENCROACHMENT PERMIT AND SHALL BE MET PRIOR TO THE ISSUANCE OF SAID PERMIT(S).

THESE CONDITIONS SHALL ALSO BE COMPLIED WITH DURING CONSTRUCTION APPROVED UNDER ANY SUBSEQUENT PERMITS, IF APPLICABLE.

BP-1. CONDITIONS OF APPROVAL:

Final plans shall include all Conditions of Approval included as part of the approved application starting on sheet 2 of the plans. [COA] [PLANNING]

BP-2. RESPONSE TO CONDITIONS OF APPROVAL:

A written response indicating how each condition has or will be addressed shall accompany the building permit set of plans. [COA] [PLANNING]

BP-3. NOTICE OF CONDITIONS OF APPROVAL:

A Notice of Conditions of Approval shall be filed in the official records of the County of Santa Clara and provide proof of such recordation to the City prior to issuance of any City permit, allowed use of the property, or Final Map, as applicable. The Notice of Conditions of Approval shall be prepared by the Planning Division and shall include a description of the subject property, the Planning Application number, attached conditions of approval and any accompanying subdivision or parcel map, including book and page and recorded document number, if any, and be signed and notarized by each property owner of record.

For purposes of determining the record owner of the property, the applicant shall provide the City with evidence in the form of a report from a title insurance company indicating that the record owner(s) are the person(s) who have signed the Notice of Conditions of Approval. [COA] [PLANNING]

BP-4. BLUEPRINT FOR A CLEAN BAY:

The building permit plans shall include a "Blueprint for a Clean Bay" on one full sized sheet of the plans. [SDR] [PLANNING]

BP-5. RECYCLING AND SOLID WASTE ENCLOSURE:

The building permit plans shall include details for the installation of recycling and solid waste enclosures that are consistent with SMC 19.38.030. The solid waste disposal and recycling facilities within the enclosure area or within buildings shall be designed with adequate size, space, and clearance based upon the City's latest guidelines. The required solid waste and recycling enclosures shall:

- a) Match the design, materials and color of the main building they serve;
- b) Be of masonry construction;

- c) Containers shall be metal or State Fire Marshall-listed non-metallic.
- d) Be screened from public view;
- e) All gates, lids and doors shall be closed at all times;
- f) Shall not conflict with delivery/receiving areas;
- g) Shall be consistent with the approved Solid Waste and Recycling Management Plan;
- h) Solid waste and recycling diversion systems shall be incorporated into the facilities and tenant improvements. [COA]
[PLANNING/ENVIRONMENTAL SERVICES]

BP-6. SOLID WASTE DISPOSAL AND RECYCLING PLAN:

A detailed recycling and solid waste disposal plan shall be submitted for review and approval by the Director of Community Development prior to issuance of building permit. The solid waste disposal plan and building permit plans shall demonstrate compliance with current City requirements and guidelines for residential/multi-family and nonresidential projects, including, but not limited to:

- a) Describe the service frequency for garbage and recycling receptacles;
- b) Provide pallet jack travel maps for hauling waste receptacles to and from the staging area;
- c) Keep trash disposal and receiving rooms, and staging areas clean and litter/debris free;
- d) Ensure waste receptacles are properly presented for service by 7 a.m. on service days and returned to trash receiving rooms after service.
- e) Swap the locations of the loading zones and trash staging zones on the plan.
- f) Provide paths of travel for waste receptacles while other phases are under construction. [COA] [PLANNING/ENVIRONMENTAL SERVICES]

BP-7. LOADING AND DELIVERY AREA PLAN:

A detailed loading and delivery area plan shall be submitted for review and approval by the Director of Community Development prior to issuance of building permit. The loading and delivery area plan and building permit plans shall demonstrate compliance with current City requirements and guidelines for nonresidential projects. [COA]
[PLANNING/TRAFFIC]

BP-8. ROOF EQUIPMENT:

Roof vents, pipes and flues shall be combined and/or collected together on slopes of roof or behind parapets out of public view as per Title 19 of the Sunnyvale Municipal Code and shall be painted to match the roof. [COA] [PLANNING]

BP-9. MECHANICAL EQUIPMENT (EXTERIOR):

Detailed plans showing the locations of individual exterior mechanical equipment/air conditioning units shall be submitted and subject to review and approval by the Director of Community Development prior to issuance of building permits. Proposed locations shall have minimal visual and minimal noise impacts to neighbors and ensure adequate usable open space. Individual exterior mechanical equipment/air conditioning units shall be screened with architecture or landscaping features. [PLANNING] [COA]

BP-10. FEES AND BONDS:

The following fees and bonds shall be paid in full prior to issuance of building permit.

- a) TRANSPORTATION IMPACT FEE - Pay Traffic Impact fee for the net new trips resulting from the proposed project, estimated at **\$1,211,633.23**, prior to issuance of a Building Permit. The actual fee paid will be the adopted fee rate in place at the time of building permit submittal. (SMC 3.50). [SDR] [PLANNING]
- b) HOUSING MITIGATION FEE - Pay Housing Mitigation fee estimated at **\$6,706,213**, prior to issuance of a Building Permit. The actual fee paid will be the adopted fee rate in place at the time of building permit submittal. (SMC 19.75). Credits to this fee may be given if low income or very low income units are provided. [SDR] [PLANNING]
- c) PARK IN-LIEU – Pay Park In-lieu fees estimated at **\$37,765,213.20**, prior to approval of the Final Map or Parcel Map. (SMC 18.10). [SDR] [PLANNING]
- d) ART IN PRIVATE DEVELOPMENT BOND – A bond, letter of credit, cash deposit or other similar security instrument for 1% of the construction valuation of the project will be required prior to issuance of a building permit. The bond will not be released until completion and installation of the artwork requirement including related landscaping, lighting, base work and commemorative plaque. [PLANNING] [SDR]

BP-11. ART IN PRIVATE DEVELOPMENT REVIEW:

An Art in Private Development application shall be submitted to the Director of Community Development subject to review and approval by the Arts Commission, prior to issuance of a Building Permit. The project shall provide publicly visible artwork per Chapter 19.52 of the Sunnyvale Municipal Code. [COA] [PLANNING]

BP-12. BMR DEVELOPMENT AGREEMENT:

Before issuance of building permits for the project, the developer shall enter into a Development Agreement with the City to establish the method by which the development will comply with the applicable BMR requirements. The form of the Developer Agreement will be provided by the City, with tables regarding unit characteristics and timing of

completion to be completed by the Developer, and is subject to the approval of the Community Development Director or his/her designee, consistent with the SMC. The completed Developer Agreement must be executed by both parties and recorded against the property, and will run with the land.

In the event that any Below Market Rate dwelling unit(s) or any portion thereof in the development is destroyed by fire or other cause, all insurance proceeds therefrom shall be used to rebuild such units, which will remain subject to the terms of the Developer Agreement and the BMR requirements. Grantee hereby covenants to cause the City of Sunnyvale to be named an additional insured party to all fire and casualty insurance policies pertaining to said assisted units. [SDR] [HOUSING/BMR Program Guidelines]

BP-13. LANDSCAPE PLAN:

Landscape and irrigation plans shall be prepared by a certified professional, and shall comply with Sunnyvale Municipal Code Chapter 19.37 requirements. Landscape and irrigation plans are subject to review and approval by the Director of Community Development through the submittal of a Miscellaneous Plan Permit (MPP). The landscape plan shall include the following elements:

- a) New tree planting will be of a species that matures in large trees to provide screening;
- b) All areas not required for parking, driveways or structures shall be landscaped;
- c) Provide trees at minimum 30 feet intervals along side and rear property lines, except where mature trees are located immediately adjoining on neighboring property;
- d) Ten percent (10%) shall be 24-inch box size or larger and no tree shall be less than 15-gallon size;
- e) Any “protected trees”, (as defined in SMC 19.94) approved for removal, shall be replaced in accordance with the City’s Tree Replacement standards;
- f) Provide minimum 15-foot wide landscape buffers along all public street frontages (except for Willow Ave);
- g) Ground cover shall be planted so as to ensure full coverage 18 months after installation; and
- h) Decorative paving as required by the Director of Community Development to distinguish entry driveways, building entries, pedestrian paths and common areas.
- i) Tree transplanting measures shall be clearly outlined and monitored by an ISA-certified arborist. Should any of the tree transplanting fail, appropriate replacements shall be provided subject to the approval of the Director of Community Development. [COA] [PLANNING]

BP-14. FINAL COMMUNITY OPEN SPACE DESIGN:

The final community open space design shall be reviewed and approved by the Director of Public Works prior to building permit issuance for any townhome, apartment, or condominium unit, whichever comes first. [COA] [PLANNING] [PUBLIC WORKS]

BP-15. LANDSCAPE MAINTENANCE PLAN:

Prepare a landscape maintenance plan subject to review and approval by the Director of Community Development prior to issuance of building permit. All landscaping within the corner and driveway vision triangles shall be properly maintained to ensure vision triangle clearance per Sunnyvale Municipal Code requirements. [COA] [PLANNING]

BP-16. TREE PROTECTION PLAN:

Prior to issuance of a Demolition Permit, a Grading Permit or a Building Permit, whichever occurs first, obtain approval of a tree protection plan from the Director of Community Development. Two copies are required to be submitted for review. The tree protection plan shall include measures noted in Title 19 of the Sunnyvale Municipal Code and at a minimum:

- a) An inventory shall be taken of all existing trees on the plan including the valuation of all 'protected trees' by a certified arborist, using the latest version of the "Guide for Plant Appraisal" published by the International Society of Arboriculture (ISA).
- b) All existing (non-orchard) trees on the plans, showing size and varieties, and clearly specify which are to be retained.
- c) Provide fencing around the drip line of the trees that are to be saved and ensure that no construction debris or equipment is stored within the fenced area during the course of demolition and construction.
- d) The tree protection plan shall be installed prior to issuance of any Building or Grading Permits, subject to the on-site inspection and approval by the City Arborist and shall be maintained in place during the duration of construction and shall be added to any subsequent building permit plans. [COA] [PLANNING/CITY ARBORIST]

BP-17. TOT LOT:

A "tot lot" shall be provided on-site to accommodate recreational needs of small children. These facilities shall incorporate active play structures and other amenities on a secured area of at least 1,500-sq. ft. The building permit plans shall include construction details for the "tot lot" and shall be subject to review and approval by the Director of Community Development. [COA] [PLANNING]

- BP-18. **STORMWATER MANAGEMENT CALCULATIONS:**
Submit two copies of the City of Sunnyvale Impervious Surface Calculation worksheet prior to issuance of a Building Permit. [COA] [PLANNING]
- BP-19. **STORMWATER MANAGEMENT PLAN:**
Submit two copies of a Stormwater Management Plan subject to review and approval by Director of Community Development and third party certification, pursuant to SMC 12.60, prior to issuance of building permit. The Stormwater Management Plan shall include an updated Stormwater Management Data Form. [COA] [PLANNING/ENVIRONMENTAL SERVICES]
- BP-20. **STORM WATER MANAGEMENT PLAN THIRD PARTY CERTIFICATION:**
Third party certification of the Storm Water Management Plan is required per the following guidance: City of Sunnyvale – Storm Water Quality BMP Applicant Guidance Manual for New and Redevelopment Projects - Addendum: Section 3.1.2 Certification of Design Criteria Third-Party Certification of Storm Water Management Plan Requirements. The third-party certification shall be provided prior to building permit issuance. [SDR] [PLANNING/ENVIRONMENTAL SERVICES]
- BP-21. **BEST MANAGEMENT PRACTICES - STORMWATER:**
The project shall comply with the following source control measures as outlined in the BMP Guidance Manual and SMC 12.60.220. Best management practices shall be identified on the building permit set of plans and shall be subject to review and approval by the Director of Public Works:
- a) Storm drain stenciling. The stencil is available from the City's Environmental Division Public Outreach Program, which may be reached by calling (408) 730-7738.
 - b) Landscaping that minimizes irrigation and runoff, promotes surface infiltration where possible, minimizes the use of pesticides and fertilizers, and incorporates appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping.
 - c) Appropriate covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas.
 - d) Covered trash, food waste, and compactor enclosures.
 - e) Plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's authority and standards:
 - i) Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants.

- ii) Dumpster drips from covered trash and food compactor enclosures.
- iii) Discharges from outdoor covered wash areas for vehicles, equipment, and accessories.
- iv) Swimming pool water, spa/hot tub, water feature and fountain discharges if discharge to onsite vegetated areas is not a feasible option.
- v) Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option. [SDR] [PLANNING]

BP-22. CITY STREET TREES (SUBDIVISION):

At the expense of the subdivider, City staff shall install required street trees of a species determined by the Public Works Department. Obtain approval of a detailed landscape and irrigation plan from the Director of Community Development (SMC 19.37) prior to issuance of a Building Permit. [SDR] [PLANNING/PUBLIC WORKS]

BP-23. EXTERIOR LIGHTING PLAN:

Prior to issuance of a Building Permit submit an exterior lighting plan, including fixture and pole designs, for review and approval by the Director of Community Development. Driveway and parking area lights shall include the following:

- a) Sodium vapor/LED (or illumination with an equivalent energy savings).
 - b) Pole heights to be uniform and compatible with the areas. Light standards shall not exceed 18 feet. Light standards near residential units shall not exceed 8 feet. Alternatives may be reviewed by the Director of Community Development.
 - c) Provide photocells for on/off control of all security and area lights.
 - d) All exterior security lights shall be equipped with vandal resistant covers.
 - e) Wall packs shall not extend above the roof of the building.
 - f) Lights shall have shields to prevent glare onto adjacent properties.
- [COA] [PLANNING]

BP-24. ONSITE PHOTOMETRIC PLAN:

Prior to issuance of a Building Permit submit a contour photometric plan for approval by the Director of Community Development. The plan shall meet the specifications noted in the Standard Development Requirements. [COA] [PLANNING]

BP-25. LIGHTING SPACING:

Installation of lights at a minimum of 50 feet intervals along all private streets. [COA] [PLANNING]

BP-26. PARKING MANAGEMENT PLAN:

A Parking Management Plan is subject to review and approval by the Director of Community Development prior to issuance of a building permit. The Parking Management Plan shall include the following:

- a) Submit a final parking plan, clearly showing parking spaces for assigned residential, residential guest, retail only, and shared use.
- b) Clearly define terms of shared use spaces, including specific uses and hours of use.
- c) A clear definition of “guest” as proposed by the property manager/homeowner’s association and subject to review and approval by the Director of Community Development.
- d) Clearly indicate that the property manager/homeowner’s association shall not rent unassigned spaces, except that a nominal fee may be charged for parking management.
- e) Tenants shall use their assigned parking spaces prior to using unassigned parking spaces.
- f) Prohibit tenants from parking RV’s, trailers, or boats in assigned spaces.
- g) Notify potential residents that number of parking spaces provided for each unit on-site as per the approved plans.
- h) Details on stacker parking. All stacker parking stalls shall be assigned to the same unit per the Sunnyvale Municipal Code.
[PLANNING] [COA]

BP-27. BICYCLE SPACES:

Provide a minimum of 151 Class I and 45 Class II bicycle parking spaces (per VTA Bicycle Technical Guidelines) as shown on the approved plans, subject to the review and approval by the Director of Community Development. [COA] [PLANNING]

BP-28. SOLAR ASSISTED HOT WATER:

Solar-assisted hot water shall be provided for all swimming pools and spas and provide 70% of hot water needs for summer months. [SDR] [PLANNING]

BP-29. NOISE REDUCTION:

Final construction drawings shall incorporate all mitigation measures related to interior and open space noise as set forth in the project’s environmental noise study. The project noise consultant shall provide written confirmation that the construction plans demonstrate compliance with the recommendations in the study. [COA] [PLANNING]

BP-30. GREEN BUILDING:

The project shall meet the following green building requirements:

- a) Residential: The plans submitted for building permits shall demonstrate the residential projects achieve a minimum of 80 points on the Green Point Rated checklist, or the minimum points required effective at the time of building permit submittal. The project plans shall be accompanied with a letter from the project's Green Point Rater/LEED AP verifying the project is designed to achieve the required points.
- b) Non-Residential: The plans submitted for building permits shall demonstrate that the non-residential space achieves, at a minimum, the applicable CALGreen Mandatory Measures. [COA] [PLANNING] [BUILDING]

BP-31. DEMOLITION/CONSTRUCTION/RECYCLING WASTE REPORT FORM:
To mitigate the impacts of large projects on local waste disposal and recycling levels, demolition waste weights/volumes, construction weights/volumes, and recycling weights/volumes are to be reported to the City using Sunnyvale.wastetracking.com, hosted by Green Halo. As part of the project's construction specifications, the developer shall track the type, quantity, and disposition of materials generated, and submit these records through the website both periodically and at project completion. [COA] [ENVIRONMENTAL SERVICES]

BP-32. CONSTRUCTION MANAGEMENT PLAN:
The project applicant shall implement a Construction Management Plan (CMP) to minimize impacts of construction on surrounding residential uses to the extent possible. The CMP shall be subject to review and approval by the Director of Community Development prior to issuance of a demolition permit, grading permit, or building permit. The CMP shall identify measures to minimize the impacts of construction including the following:

- a) Measures to control noise by limiting construction hours to those allowed by the SMC, avoiding sensitive early morning and evening hours, notifying residents prior to major construction activities, and appropriately scheduling use of noise-generating equipment.
- b) Use 'quiet' models of air compressors and other stationary noise sources where such technology exists.
- c) Equip all internal combustion engine-driven equipment with mufflers, which are in good condition and appropriate for the equipment.
- d) Locate all stationary noise-generating equipment, such as air compressors and portable power generators, as far away as possible from residences or other noise-sensitive land uses.
- e) Locate staging areas and construction material areas as far away as possible from residences or noise-sensitive land uses.

- f) Route all construction traffic to and from the project site via designated truck routes where possible. Prohibit construction-related heavy truck traffic in residential areas where feasible. Obtain approval of proposed construction vehicle truck routes from the Department of Public Works.
- g) Manage construction parking so that neighbors are not impacted by construction vehicles. When the site permits, all construction parking shall be on-site and not on the public streets.
- h) Prohibit unnecessary idling of internal combustion engine-driven equipment and vehicles.
- i) Notify all adjacent business, residents, and noise-sensitive land uses of the construction schedule in writing. Notify nearby residences of significant upcoming construction activities at appropriate stages in the project using mailing or door hangers.
- j) Designate a “disturbance coordinator” who would be responsible for responding to any local complaints about construction noise. The disturbance coordinator will determine the cause of the noise complaint and will require that reasonable measures warranted to correct the problem be implemented. Conspicuously post a telephone number for the disturbance coordinator at the construction site and include it in the notice sent to neighbors regarding the construction schedule. [COA] [PLANNING]

BP-33. CONSTRUCTION MATERIAL AND STAGING:

All construction-related materials, equipment, and construction worker parking shall be managed onsite and not located in the public rights-of-way or public easements. [COA] [PUBLIC WORKS]

BP-34. FIRE PREVENTION CONDITIONS:

Prior to building permit issuance, the following Fire Prevention conditions shall be satisfied:

- a) Each residence shall be protected throughout with an approved automatic sprinkler system designed and installed in accordance with NFPA 13. (CFC/SMC 903).
- b) Provide an approved sign directory illustrating and identifying buildings, important site features and access roads per SMC 16.52.505. This shall be installed and maintained at multi-building complexes.
- c) The parking structure shall be equipped throughout with an approved automatic sprinkler system and standpipe system.
- d) Public garages consisting of two or more floors, including below grade levels, are required to be equipped throughout with approved emergency call boxes in accordance with the following:
 - A dedicated phone line is required for each call box.

- Call boxes shall be located at exit discharges - exterior of stairwells and approximately every 100 feet of travel distance (200' apart) for areas between exit discharges.
- Call boxes shall be accessible for all users.
- e) All buildings shall have approved radio coverage for emergency responders in accordance with Section 510 of the California Fire Code and local standards. Radio retransmission equipment may be required in areas lacking sufficient coverage. Refer to SMC 16.52.230, Emergency Responder radio coverage and CFC Appendix J for additional details. (SMC 510.1)
- f) Wherever a new structure obstructs the line of sight emergency radio communications to existing buildings or to any other locations, the developer of the structure is required to provide and install radio retransmission equipment necessary to restore communication capabilities. Such equipment shall be located in an approved space or area within the new structure. (SMC 510.1.1)
- g) Comply with CBC 1007.2.1 Elevators required.
- h) Trash enclosures, within 5 feet of building exterior walls or overhangs require fire sprinkler protection.
- i) Provide two-way communication system per CBC 1007.8.
- j) Knox boxes (key boxes) will be required in accordance with Sunnyvale Fire Prevention guidelines.
- k) Prior to any combustible construction or materials on site, provide fire access drives and operational on-site fire protection systems.
- l) Required means of egress during construction. Each level above the first story in new multi-story buildings that require two exit stairways shall be provided with at least two usable exit stairways after the floor decking is installed. The stairways shall be continuous and discharge to grade level. Stairways serving more than two floor levels shall be enclosed (with openings adequately protected) after exterior walls and windows are in place. Exception: In new multi-story buildings, one of the required exit stairs may be obstructed on not more than two contiguous floor levels for the purpose of stairway construction (i.e. installation of gypsum board, painting, flooring, etc.). [SMC 1411.1]
- m) Provide a written Fire Protection Construction Plan.
- n) Provide an approved electronic "Pre-Fire Survey" map prior to Public Safety Department final recommendation for Certificate of Occupancy.
- o) Provide the required number of approved fire extinguishers, smoke detectors, and carbon monoxide detectors. [COA][FIRE PREVENTION]

BP-35. BUILDING ADDRESSING:

The building permit plans shall include the following address information as specified by the Department of Public Safety:

- a) An address monument and complex map shall be erected which is illuminated during the hours of darkness and positioned so as to be readily readable from the street.
- b) Address numbers shall be easily readable from the street with a minimum of 12" height.
- c) Each distinct unit within the building shall have its address displayed on or directly above both the front and rear doors. [SDR] [PUBLIC SAFETY]

BP-36. FINAL MAP:

This project is subject to, and contingent upon recordation of a final map. The submittal, approval and recordation of the final map(s) shall be in accordance with the provisions of the California Subdivision Map Act and Sunnyvale Municipal Code Title 18 Subdivision requirements. Final map(s) shall be recorded prior to any grading or building permit issuance of any building located on that certain lot as shown on the corresponding final map. [COA] [PUBLIC WORKS]

BP-37. IRREVOCABLE OFFER OF DEDICATION:

As identified in the Lawrence Station Area Plan, the developer shall dedicate by recording separate instruments, an Irrevocable Offer of Dedication to the City for the two alternatives for access and future construction of a bike and pedestrian crossing over the Union Pacific Railroad (UPRR) and along the northern and western property limit to Aster Avenue. Dedication shall occur prior to the issuance of the first building occupancy. Acceptance of the Irrevocable Offer of Dedication will be reviewed and accepted by the City at a later date. [COA] [PLANNING/PUBLIC WORKS]

BP-38. BUILDING PERMIT ISSUANCE:

The existing 20' and 24' storm drain easement and public utility easement along the northern project limit shall be amended and recorded prior to issuance of the Building Permits for parcels B and C. [COA] [BUILDING/PUBLIC WORKS]

BP-39. UNDERGROUND UTILITIES:

All utilities shall be undergrounded per Sunnyvale Municipal Code Chapter 19.38.095. [COA] [PLANNING/PUBLIC WORKS]

BP-40. ON-SITE PRIVATE WATER METER(S):

The developer shall install individual private water meters for each residence, and for each ancillary building on-site. [COA] [BUILDING]

BP-41. AGENCY COORDINATION:

The developer shall coordinate with UPRR and/or Caltrain to obtain any necessary permits, including but not limited to temporary construction permits. [COA] [PUBLIC WORKS]

BP-42. BAAQMD CONSTRUCTION MITIGATION MEASURES

In accordance with LSAP EIR Mitigation Measure 3.5.3a, prior to the issuance of grading or building permits, the Bay Area Air Quality Management District's (BAAQMD) basic construction mitigation measures from Table 8-1 of the BAAQMD 2011 CEQA Air Quality Guidelines (or subsequent updates) shall be noted on the construction documents. These basic construction mitigation measures include the following:

- a) All exposed surfaces (e.g. parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- b) All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- c) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- d) All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- e) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- f) All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- g) A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

All off-road diesel-fueled equipment (e.g. rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors) shall be at least California Air Resources Board (CARB) Tier 4 Certified or better. [COA] [PLANNING]

BP-43. CONSTRUCTION POLLUTANT MITIGATION PLAN:

It shall be noted that the portion of LSAP EIR Mitigation Measure MM 3.5.5 requiring a project-specific construction-related dispersion modeling acceptable to BAAQMD to identify potential toxic air

contaminant impacts, including diesel particulate matter, has been completed and additional mitigation measures are not required.

In accordance with the remainder of LSAP EIR Mitigation Measure 3.5.5, in the case when a subsequent project's construction spans greater than 5 acres and is scheduled to last more than two years, the subsequent project shall be required to prepare a site-specific construction pollutant mitigation plan in consultation with the Bay Area Air Quality Management District (BAAQMD) staff prior to the issuance of grading permits. A project-specific construction-related dispersion modeling acceptable to BAAQMD shall be used to identify potential toxic air contaminant impacts, including diesel particulate matter. If BAAQMD risk thresholds (i.e., probability of contracting cancer is greater than 10 in 1 million) would be exceeded, mitigation measures shall be identified in the construction pollutant mitigation plan to address potential impacts and shall be based on site-specific information such as the distance to the nearest sensitive receptors, project site plan details, and construction schedule. The City shall ensure construction contracts include all identified measures and that the measures reduce the health risk below BAAQMD risk thresholds. Construction pollutant mitigation plan measures shall include, but not be limited to:

- a) Limiting the amount of acreage to be graded in a single day,
- b) Restricting intensive equipment usage and intensive ground disturbance to hours outside of normal preschool hours,
- c) Notification of affected sensitive receptors one week prior to commencing on-site construction so that any necessary precautions (such as rescheduling or relocation of outdoor activities) can be implemented. The written notification shall include the name and telephone number of the individual empowered to manage construction of the project. In the event that complaints are received, the individual empowered to manage construction shall respond to the complaint within 24 hours. The response shall include identification of measures being taken by the project construction contractor to reduce construction-related air pollutants. Such a measure may include the relocation of equipment. [COA] [PLANNING]

BP-44. BAT SURVEY:

In accordance with LSAP EIR Mitigation Measure 3.9.2, prior to the removal of trees or the demolition of buildings, a bat survey shall be performed by a qualified biologist no more than 3 days prior to the start of construction activities. If bat roosts are identified, the City shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed. If maternity roosts are identified during the maternity roosting season (typically May to September) they

must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur on-site, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites removed. If no bat roosts are detected, no further action is required if the trees and buildings are removed prior to the next breeding season.

If a female or maternity colony of bats is found on the project site, and the project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after July 31 and before March 1).

If an active nursery roost is documented on-site and the project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after July 31 and before March 1 to prevent the formation of maternity colonies. Nonbreeding bats shall be safely evicted, under the direction of a bat specialist. [COA] [PLANNING]

BP-45. BIOLOGICAL RESOURCES—BIRD NESTING:

In accordance with LSAP EIR Mitigation Measure 3.9.3, all construction and clearing activities shall be conducted outside of the avian nesting season (January 15 – August 31), when feasible. If clearing and/or construction activities occur during the nesting season, preconstruction surveys for nesting raptors, special-status resident birds, and other migratory birds protected by the Migratory Bird Treaty Act shall be conducted by a qualified biologist, up to 3 days before initiation of construction activities. The qualified biologist shall survey the construction zone and a 250 ft. radius surrounding the construction zone to determine whether the activities taking place have the potential to disturb or otherwise harm nesting birds.

If an active nest is located within 100 feet (250 feet for raptors) of construction activities, the project applicant shall establish an exclusion zone (no ingress of personnel or equipment at a minimum radius of 100 feet or 250 feet, as appropriate around the nest). Alternative exclusion zones may be established through consultation with the CDFW and the USFWS, as necessary. The City shall be notified if altered exclusion zone widths are authorized by these agencies prior to the initiation of work. The exclusion zones shall remain in force until all young have fledged. [COA] [PLANNING]

BP-46. DISCOVERY OF CULTURAL RESOURCES:

In accordance with LSAP EIR Mitigation Measure 3.10.2, the project shall include information on the improvement plans that if, during the course of grading or construction cultural resources (i.e., prehistoric or historic sites) are discovered, work will stop in that area and within 100 feet of the find until a qualified archaeologist can access the significance of the find and, if necessary, develop appropriate treatment measures as part of a treatment plan in consultation with the City and all other appropriate agencies. The treatment plan shall include measures to document and protect the discovered resource. Consistent with CEQA Guidelines Section 15126.4(b)(3), preservation in place will be the preferred method of mitigating impacts to the discovered resource. Pursuant to Government Code Section 6254.10, information on the discovered resource shall be confidential. [COA] [PLANNING]

BP-47. DISCOVERY OF FOSSILS:

In accordance with LSAP EIR Mitigation Measure 3.7.4, the project shall include information on the improvement plans that if, during the course of grading or construction fossils are discovered, work shall be halted immediately within 50 feet of the discovery, the City of Sunnyvale Community Development Department shall be notified, and the significance of the find and recommended actions are determined by a qualified paleontologist. In addition, prior to the commencement of a project site preparation, all construction personnel shall be informed of the potential to discover fossils and the procedures to follow. [COA] [PLANNING]

BP-48. SITE MANAGEMENT PLAN:

In accordance with LSAP EIR Mitigation Measure 3.3.3, a site management plan shall be prepared based on the findings of the Phase I and II Environmental Site Assessments (ESAs) consistent with applicable regulations and to the satisfaction of the appropriate regulatory agency. The regulatory agency must approve of the SMP prior to issuance of grading permits, and documentation shall be provided to the City. The project shall incorporate any additional required mitigation measures as specified by the regulatory agency, subject to the review of the Director of Community Development. [COA] [PLANNING]

BP-49. DEWATERING:

In accordance with LSAP EIR Mitigation Measure 3.3.3, if temporary dewatering is required during construction or if permanent dewatering is required for subterranean features, documentation shall be provided to the City that the Water Pollution Control Plant has approved the discharge to the sewer. Discharge of any groundwater removed from a construction site or storm drain shall be prohibited. [COA] [PLANNING]

BP-50. CONSTRUCTION NOISE MITIGATION MEASURES:

In accordance with LSAP EIR Mitigation Measure 3.6.4, the project shall employ site-specific noise attenuation measures during construction to reduce the generation of construction noise. These measures shall be included in a noise control plan that shall be submitted for review and approval by the City. Measures specified in the noise control plan and implemented during construction shall include, at a minimum, the following noise control strategies:

- a) Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds).
- b) Impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used.
- c) Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures.
- d) Noise and vibration reducing pile-driving techniques shall be employed during construction and will be monitored to ensure no damage to nearby structures occurs (i.e., vibrations above peak particle velocity (PPVs) of 0.25 inches per second at nearby structures). These techniques shall include:
 - Installing intake and exhaust mufflers on pile-driving equipment;
 - Vibrating piles into place when feasible, and installing shrouds around the pile-driving hammer where feasible;
 - Implementing “quiet” pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions;
 - Using cushion blocks to dampen impact noise, if feasible based on soil conditions. Cushion blocks are blocks of material that are used with impact hammer pile drivers. They consist of blocks of material placed atop a piling during installation to minimize noise generated when driving the pile. Materials typically used for cushion blocks include wood, nylon and micarta (a composite material); and

- At least 48 hours prior to pile-driving activities, notifying building owners and occupants within 600 feet of the project area of the dates, hours, and expected duration of such activities.

EP: THE FOLLOWING CONDITIONS SHALL BE ADDRESSED AS PART OF AN ENCROACHMENT PERMIT APPLICATION.

EP-1. LAWRENCE STATION AREA PLAN:

This project is in the Lawrence Station Area Plan (LSAP) area, therefore, the developer shall comply with any applicable design requirements as identified in the MPSP or as amended and approved by the City. [COA] [PUBLIC WORKS]

EP-2. BENCHMARKS:

The improvement plans shall be prepared by using City's latest benchmarks (NAVD88) available on City's website <https://sunnyvale.ca.gov/civicax/filebank/blobdload.aspx?BlobID=23803> Plans based on NGVD29 will not be accepted. [COA] [PUBLIC WORKS]

EP-3. COMPLETE OFF-SITE IMPROVEMENT PLAN SET:

A complete plan check set applicable to the project, which may include street improvement plans, streetscape plans, streetlight plans, photometric analysis, signing/striping plans, erosion control plans, traffic signal plans and traffic control plans shall be submitted as part of the first off-site improvement plans, including on-site and off-site engineering cost estimate and the initial Engineering and Inspection plan review fee. Joint trench plans may be submitted at a later date. No partial sets are allowed unless otherwise approved by the Department of Public Works. Sheets C1.0 through C10.1 of the Vesting Tentative Map package dated 1/29/19 are subject to change during plan check process. See Improvement Plan Checklist and Improvement Plan Submittal Checklist at the following 2 links:

<https://sunnyvale.ca.gov/civicax/filebank/blobdload.aspx?BlobID=24002>

<https://sunnyvale.ca.gov/civicax/filebank/blobdload.aspx?BlobID=23625> [COA] [PUBLIC WORKS]

EP-4. UPGRADE OF EXISTING PUBLIC IMPROVEMENTS:

As part of the off-site improvement plan review and approval, any existing public improvements to be re-used by the project, which are not in accordance with current City standards and are not specifically identified in the herein project conditions (such as backflow preventers, sign posts, etc.), shall be upgraded to current City standards and as required by the Department of Public Works. [COA] [PUBLIC WORKS]

EP-5. STREETSCAPE IMPROVEMENTS:

Along the Aster Avenue project frontage, from the western project limit to the west side of private street B, remove existing concrete gutter and curb and install new 2' concrete gutter, curb and 6' minimum detached sidewalk to save existing trees as identified in the Arborist Report.

Along the remaining Aster Avenue project frontage, from the east side of private street B to Willow Avenue, remove existing concrete gutter and curb and install new 2' concrete gutter, curb, and 15' attached sidewalk (measured from the back of curb) with 4'x5' tree wells per current City standards, unless otherwise directed by the Director of Public Works.

Along the Willow Avenue project frontage, remove existing concrete gutter and curb and install new 2' concrete gutter, curb and 10' attached sidewalk (measured from the back of curb) with 4'x5' tree wells per City standards, unless otherwise directed by the Director of Public Works. [COA] [PUBLIC WORKS]

EP-6. STREET PAVEMENT:

Apply Type II slurry seal from gutter to gutter along both Aster Avenue and Willow Avenue project frontage, unless otherwise directed by the Director of Public Works. [COA] [PUBLIC WORKS]

EP-7. STREET INTERSECTIONS:

Remove the existing curb return at the northwest corner of Aster Avenue and Willow Avenue and install a new curb return with a 30' radii. Relocation of storm drain inlet may be necessary. [COA] [PUBLIC WORKS]

EP-8. DRIVEWAY APPROACHES:

Install new driveway approaches along Aster Avenue and Willow Avenue to comply with Americans with Disabilities Act (ADA) requirements and City standard details and specifications. All unused driveway approaches shall be replaced with new curbs, gutters, and sidewalks per current City standards. [SDR] [PUBLIC WORKS]

EP-9. CURB RAMP:

Install new directional curb ramp at the northwest corner of Aster Avenue/Willow Avenue in accordance with the Americans with Disabilities Act (ADA) requirements and latest City standard details and specifications. Additional re-grading of asphalt may be required to ensure there are no localized low points and positive surface runoff occurs along the flow line. Relocation of storm drain inlet may be necessary. [COA] [PUBLIC WORKS]

- EP-10. MID-BLOCK CROSSWALK:
Within 6 months after 85% of the units are occupied, the developer shall pay for a study to determine the necessity to install a mid-block crosswalk at the western end of the project frontage along Aster Avenue. If warranted by the study, the developer shall pay for the design and installation of a mid-block crosswalk with enhanced traffic safety devices (i.e. rectangular rapid flashing beacon, or as directed by the study) including curb ramps on both sides of Aster Avenue. [COA] [PUBLIC WORKS]
- EP-11. DECORATIVE PAVEMENT:
All proposed decorative pavement and vertical curb pertaining to on-site development shall not be located within the City right-of-way. [COA] [PUBLIC WORKS]
- EP-12. POTHOLING OF EXISTING DRY UTILITIES:
Concurrent with the initial submittal of off-site improvement plans, obtain an encroachment permit for potholing purposes to locate existing dry utilities. Use pothole information to identify possible conflict between the proposed location of City trees and existing utilities, proposed joint trench, and proposed connection of gravity utilities. Potholing is to take place in a timely manner so that this does not hold up the review of the improvement plans. [COA] [PUBLIC WORKS]
- EP-13. UTILITY CONNECTION:
This project requires connection to all City utilities or private utilities operating under a City or State franchise which provide adequate levels of service. Required park utilities shall be installed and stubbed out to the property line during installation of utilities along Indian Wells and private streets. [COA] [PUBLIC WORKS]
- EP-14. UTILITY CONNECTION TO THE MAIN:
All sanitary sewer laterals connecting to the existing main line shall be at a new sanitary sewer manhole. All storm drain laterals connecting to the main shall be at a new storm drain manhole, except where a pipe to pipe connection is permitted if the mainline is 36" or larger, or a junction structure is permitted where the point of connection is within close vicinity of an existing down-stream manhole. Pursuant to City design standards, any new and retrofitted manholes require Sewpercoat, Mainstay or Sancon calcium aluminate cementitious mortar coating of the interior. [SDR] [PUBLIC WORKS]
- EP-15. STORM DRAIN RELOCATION:

This project requires the relocation of an existing 39" public storm drain main along the northern edge of the project. A public storm drain easement shall be recorded on the map, or by separate instrument or as directed by the Director of Public Works.

Submit improvement plans for the on-site public storm drain main relocation separate from the off-site improvement plans and the Building on-site improvement plans as the storm drain relocation plans are approved through a Public Works Encroachment Permit process. The storm drain relocation shown on sheets C6.0 through C6.1 dated 1/29/19 are subject to change during the plan check process. [COA] [PUBLIC WORKS]

EP-16. MODIFICATIONS TO EXISTING PUBLIC UTILITIES:

Developer is required to pay for all changes or modifications to existing City utilities, streets and other public utilities within or adjacent to the project site, including but not limited to utility facilities/conduits/vaults relocation due to grade change in the sidewalk area, caused by the development. [COA] [PUBLIC WORKS]

EP-17. EXISTING UTILITY ABANDONMENT/RELOCATION:

Developer is responsible for research on all existing utility lines to ensure that there are no conflicts with the project. All existing utility lines (public or private) and/or their appurtenances not serving the project and/or have conflicts with the project, shall be capped, abandoned, removed, relocated and/or disposed of to the satisfaction of the City. Existing public facilities within the street right-of-way shall be abandoned per City's Abandonment Notes and procedures, including abandonment by other utility owners. [COA] [PUBLIC WORKS]

EP-18. RE-USE OF EXISTING CITY UTILITY SERVICE LINES:

The re-use of existing City water service lines is not allowed. Re-use of existing City sanitary sewer and storm drain service lines and appurtenances is subject to City's review and approval. Developer's contractor shall expose the existing facilities during construction for City's evaluation or provide video footage of the existing pipe condition. Developer's contractor shall replace any deficient facilities as deemed necessary by the Department of Public Works. Sheets C1.0 through C10.1 of the Vesting Tentative Map package dated 1/29/19 are subject to change during plan check process. [COA] [PUBLIC WORKS]

EP-19. UTILITY METER/VAULT:

No existing or new utility meters or vaults shall be located within the new driveway approach. All existing or new utility vaults serving the

project site shall be located on-site and not within the public utility easement, if any. [COA] [PUBLIC WORKS]

EP-20. DRY UTILITIES:

Submit dry utility plans and/or joint trench plans (PG&E, telephone, cable TV, fiber optic, etc.) to the Public Works Department for review and approval prior to the issuance of any permits for utility work within any public right-of-way or public utility easements. Separate encroachment permits shall be required for various dry utility construction. [SDR] [PUBLIC WORKS]

EP-21. WET UTILITIES:

All wet utilities (water, sanitary sewer, storm drain) on private property shall be privately owned and maintained. The fire and domestic water systems shall be privately owned and maintained beyond the meter. [COA] [PUBLIC WORKS]

EP-22. DUAL CONNECTION WATER SERVICE SYSTEM:

Provide two service points of connections for the domestic water, with two separate radio-read domestic master water meters and two separate reduced pressure backflow preventer (RPBP), on private property, in accordance with current City standards for the apartments, condominiums and townhomes. Install a cut-in-tee gate valve between the two service hot taps. Backflows shall be the size as the water meters and must adhere to City's Cross-Connection Program. Backflow inspection permit and tags are required for all backflow devices. Install a separate point of connection for the retail/café domestic/fire water service, with a separate radio-read master water meter and RPBP, on private property. [COA] [PUBLIC WORKS/ENVIRONMENTAL SERVICES]

EP-23. IRRIGATION SERVICE LINE AND BACKFLOW PREVENTORS:

Install separate irrigation water service lines (separate from the domestic and fire water service lines) with a radio-read water meter and backflow prevention device for parcels A, B and C.

All landscape and irrigation systems, located in the public park strip areas shall be connected to the water system metered to the property owner. Install new reduced pressure backflow prevention devices on the discharge side of irrigation line on private property. Install backflow preventer enclosure where applicable. Backflows shall be the same size as the water meters and must adhere to City's Cross-Connection Program. Backflow inspection permit and tags are required for all backflow devices. [COA] [PUBLIC WORKS]

EP-24. PUBLIC FIRE HYDRANTS:

- Remove and replace the existing fire hydrant barrel(s) along the entire project frontage with current City standard Clow-Rich 865. New fire hydrant locations shall be per current City standard detail 2B and 2B-2. Public fire hydrant shall be maintained free and clear of all trees, vines, shrubs, bushes, ivy, etc. for a minimum of three feet. [COA] [PUBLIC WORKS/PUBLIC SAFETY-FIRE PROTECTION]
- EP-25. **SANITARY SEWER AND STORM DRAIN TRIBUTARY PATTERN:**
This project is required to follow the existing sanitary sewer and storm drain tributary pattern. Any deviations would require additional analysis and subject to approval by the Public Works Department as part of the off-site improvement plan review process. This project shall not cause any negative impact on the drainage pattern for adjacent properties. [COA] [PUBLIC WORKS]
- EP-26. **SANITARY SEWER AND STORM DRAIN MANHOLES:**
Install new sanitary sewer and storm drain manholes at the street right-of-way lines for all existing and proposed sanitary sewer laterals to be used for the project. [SDR] [PUBLIC WORKS]
- EP-27. **SANITARY SEWER VIDEO:**
The contractor shall make a video copy of the interior of the new sanitary sewer lateral installed prior to it is put into service. [COA] [PUBLIC WORKS]
- EP-28. **STORM DRAIN DESIGN:**
Provide storm drain hydrology and hydraulic calculations based upon a 10-year storm event to justify the size of the storm drain lateral flowing full. The new storm drain lateral shall be 12" and the main line shall be minimum 15" diameter in the public right-of-way.
- EP-29. **CATCH BASIN TRASH CAPTURE DEVICES AND BADGE/STENCILING:**
Pursuant to SMC 12.60.130, install full trash capture devices on the project site, prior to connecting to the City's storm drain collection system. The developer shall be responsible for perpetual maintenance of those trash capture devices. All storm drain inlet facilities located in the public right-of-way shall be stenciled and/or have a badge that read "NO DUMPING". Stencils/badges may be supplied by the Environmental Services Department if needed. [COA] [PLANNING/ENVIRONMENTAL SERVICES/PUBLIC WORKS]
- EP-30. **PHOTOMETRIC ANALYSIS:**
The developer is required to provide a photometric analysis based upon LED fixtures for Aster Avenue and Willow Avenue as to determine that the street lighting meets current City's Roadway Lighting Design

Criteria. Roadway, sidewalk and crosswalk illuminance calculations shall be calculated separately from each other.

The roadway and sidewalk illuminance values required to be met for Aster Avenue and Willow Avenue are:

1. Minimum Maintained Average Illuminance ≥ 0.7 fc
2. Uniformity Ratio (Avg/Min) ≤ 6.0
3. Max/Min ratio ≤ 20

Marked crosswalks at street intersection should have a desired minimum average illuminance value ≥ 2.2 fc. However, if this is not achievable the developer shall install at least one safety light on each side of the crosswalk.

Illuminance values for marked midblock crosswalks are as follows:

1. Minimum Maintained Average Illuminance ≥ 0.5 fc
2. Uniformity Ratio (Avg/Min) ≤ 4.0
3. Minimum vertical illuminance at 5' above pavement ≥ 0.2 fc

The limits of the photometric analysis shall be the entire length of Aster Avenue and the Willow Avenue (from the Lawrence Avenue overpass to the south side of the Aster Avenue/Willow Avenue intersection) project frontage and include all existing streetlights on both sides of the street along and adjacent to the project frontage, with streetlights being LED fixtures.

The developer shall upgrade all existing streetlight fixtures along the Aster Avenue and Willow Avenue project frontage to LED fixtures. All LED fixtures shall be of the same make and model (current approved manufacturer is Philips or approved equal that meet the current City of Sunnyvale LED roadway lighting specifications).

If the photometric analysis shows the need to relocate or install new streetlights, the developer shall also replace all existing streetlight conduits, wires and pull boxes with new ones along Aster Avenue and Willow Avenue frontages per City's current standards.

The light lost factor (LLF) to be used is 0.95. The LED fixture should have an efficiency of at least 90 lumens/watt and should have the International Dark-Sky Association (IDA) fixture seal of approval (FSA) and be on their IDA-Approved™ Products list. Along with the photometric analysis the developer shall provide cut sheets for proposed fixtures, ies files used to perform analysis, test results from certified dependent lab, and electronic copy of the photometric analysis in AGi32 format. All LED fixtures shall have a 10-year warranty.

Submit separate streetlight plans concurrently with the off-site improvement plan review to include installation of new conduits, existing and/or new locations of power source connection and new service pedestal, conductors, pull boxes, voltage drop and load calculations, and any other streetlight equipment as required to be installed by the Developer per latest City standard details and specifications and National Electric Code. Streetlight fixture pole types along Aster Avenue and Willow Avenue shall be in accordance with the LSAP requirements, unless otherwise directed by the Director of Public Works.

Developer shall comply with City streetlight design guidelines and plan check submittal requirements as provided by the City upon request.

Obtain PG&E's approval for new service pedestal, if required, prior to Encroachment Permit issuance. [COA] [PUBLIC WORKS]

EP-31. SIGNING AND STRIPING PLANS:

Submit a signing and striping plan in accordance with the latest edition of the CA MUTCD to City for review and approval by the Public Works Department. Restripe the existing Aster Avenue to include two-6' green bike lanes, two-11' travel lanes and a 10' center turn lane along the project frontage. Restripe the existing Willow Avenue to include two-6' green bike lanes and two-11' travel lanes along the project frontage. Coordinate bike lane connection to French Street with the City of Santa Clara. Lane configuration may be modified based on the results of the traffic impact analysis or as determined by the Director of Public Works. Pavement striping/marking shall be in thermoplastic.

Establish a stop control at each of the project's driveway onto Aster Avenue and Willow Avenue. Add a 'No Left Turn' sign for northbound Willow Avenue into the retail driveway. In addition, install a second 'No Left Turn' sign at the intersection of Willow Avenue and Reed Avenue prohibiting left turns from Willow Avenue Monday thru Friday, 7 a.m. to 9 a.m. and 4 p.m. to 6 p.m., excluding holidays. [COA] [PUBLIC WORKS]

EP-32. TRAFFIC CONTROL PLAN:

Submit a traffic control plan and temporary traffic control (TTC) checklist with the off-site improvement plans for review and approval, including compliance with LSAP Mitigation Measure 3.3.5. Per the TTC, the traffic control plan shall include a summary of the traffic control types, dates, times and blocks affected. All construction related materials, equipment, and construction workers parking need to be stored on-site and the public streets need to be kept free and clear of construction debris. [COA] [PUBLIC WORKS]

- EP-33. **DAMAGE TO EXISTING PUBLIC IMPROVEMENTS:**
Developer shall be responsible to rectify any damage to the existing public improvements fronting and adjacent to the project site as a result of project construction, to City's satisfaction by the Public Works Department. All existing traffic detector loops and conduits shall be protected in place during construction. Any damaged detector loops shall be replaced within 7 days at the expense of the developer. [COA] [PUBLIC WORKS]
- EP-34. **CITY STREET TREES:**
The developer shall install required street trees in proposed tree wells within the public right-of-way along the project frontage as follows: Aster Avenue: Deodar Cedar; Willow Avenue: species to be provided to the developer at a later date. Street trees and frontage landscaping shall be included in the detailed landscape and irrigation plan subject to review and approval by the Department of Public Works prior to issuance of encroachment permit. New street trees shall be 24-inch box size or 15-gallon size spaced approximately 35' apart. No street trees are to be planted within 10' of a sanitary sewer lateral. Sheets C1.0 through C10.1 of the Vesting Tentative Map package dated 1/29/19 are subject to change during plan check process. [SDR] [PUBLIC WORKS]
- EP-35. **PROTECTION OF EXISTING TREES:**
No utility trench shall be allowed within 15' radius of an existing mature tree. Boring, air spade or other excavation method as approved by the City Arborist shall be considered to protect existing mature tree. Consult with the City Arborist prior to adjusting locations of utility lines. [SDR] [PUBLIC WORKS]
- EP-36. **ROOT BARRIER:**
Install a continuous root barrier along new sidewalk adjacent to City trees per City standard details and specifications. [SDR] [PUBLIC WORKS]
- EP-37. **RECORD DRAWINGS:**
Stamped and signed hard copy record drawings of the off-site improvements (including off-site street, sewer, water, storm drain and landscaping plans) shall be submitted to the City prior to encroachment permit sign-off. In addition, streetlight record drawings shall be in AutoCAD format. Developer shall pay the record drawing fee. [COA] [PUBLIC WORKS]

TM: THE FOLLOWING CONDITIONS SHALL BE MET PRIOR TO THE APPROVAL OF THE FINAL MAP.

TM-1. CONDITIONS, COVENANTS AND RESTRICTIONS (CC&RS) (DRAFT REVIEW):

Any proposed deeds, covenants, restrictions and by-laws relating to the subdivision are subject to review and approval by the Director of Community Development and the City Attorney. In addition to requirements as may be specified elsewhere, the CC&R's shall include the following provisions:

- a) Membership in and support of an association controlling and maintaining all common facilities shall be mandatory for all property owners within the development.
- b) The owners association shall obtain approval from the Director of Community Development prior to any modification of the CC&R's pertaining to or specifying the City.
- c) The developer shall maintain all private utilities and landscaping for a period of three (3) years following installation of such improvements or until the improvements are transferred to a owners association, following sale of at least 75% of the units, whichever comes first.
- d) The Standard Development Requirements and Conditions of Approval included as part of the approved Planning Application, Permit # **2018-7513**, and associated map shall be incorporated into the CC&Rs as an exhibit or attachment. The included map shall clearly indicate all public/private easements as disclosure for property owners. The CC&Rs shall include a list of all attachments and/or exhibits.
- e) The CC&Rs shall contain language for Best Management Practices "Agreement to Maintain" pursuant to Sunnyvale Municipal Code 12.60.200.
- f) The CC&Rs shall contain the following provisions:
 - i) The owners association shall maintain parkstrip landscaping in perpetuity along the public street fronting the project site.
 - ii) Property owners are prohibited from modifying drainage facilities and/or flow patterns unless reviewed and approval granted from the Public Works Department.
- g) The CC&Rs shall contain the following language:
 - i) "Right to Remedy Failure to Maintain Common Area. In the event that there is a failure to maintain the Common Area so that owners, lessees, and their guests suffer, or will suffer, substantial diminution in the enjoyment, use, or property value of their Project, thereby impairing the health, safety and welfare of the residents in the Project, the City, by and through its duly authorized officers and employees, will have the right

to enter upon the subject Property, and to commence and complete such work as is necessary to maintain said Common Area. The City will enter and repair only if, after giving the Association and Owners written notice of the failure to maintain the Common Area, they do not commence correction of such conditions in no more than thirty (30) days from the giving of the notice and proceed diligently to completion. All expenses incurred by the City shall be paid within thirty (30) days of written demand. Upon a failure to pay within said thirty (30) days, the City will have the right to impose a lien for the proportionate share of such costs against each lot in the Project.

- iii) It is understood that by the provisions hereof, the City is not required to take any affirmative action, and any action undertaken by the City will be that which, in its sole discretion, it deems reasonable to protect the public health, safety and general welfare, and to enforce it and the regulations and ordinances and other laws.
- iv) It is understood that action or inaction by the City, under the provisions hereof, will not constitute a waiver or relinquishment of any of its rights to seek redress for the violation of any of the provisions of these restrictions or any of the rules, regulations and ordinances of the City, or of other laws by way of a suit in law or equity in a court of competent jurisdiction or by other action.
- v) It is further understood that the remedies available to the City by the provision of this section or by reason of any other provisions of law will be cumulative and not exclusive of the maintenance of any other remedy. In this connection, it is understood and agreed that the failure to maintain the Common Area will be deemed to be a public nuisance and the City will have the right to abate said condition, assess the costs thereof, and cause the collection of said assessments to be made on the tax roll in the manner provided by appropriate provisions of the Sunnyvale Municipal Code or any other applicable law.
- vi) No Waiver. No failure of the City of Sunnyvale to enforce any of the covenants or restrictions contained herein will in any event render them ineffective.
- vii) Hold Harmless. Declarant, Owners, and each successor in interest of Declarant and said Owners, hereby agree to save, defend and hold the City of Sunnyvale harmless from any and all liability for inverse condemnation which may result from, or be based upon, City's approval of the Development of the subject Property." [COA] [PUBLIC WORKS/PLANNING/CITY ATTORNEY]

- TM-2. HOA CREATION:
The developer/Owner shall create a Homeowner's Association that comports with the state law requirements for Common Interest Developments. Covenants, conditions and restrictions (CC&Rs) relating to the development are subject to review for consistency with the Conditions of Approval by the City Attorney and Director of Community Development prior to approval of the Final Map. The Conditions of Approval shall be attached as an exhibit to the CC&Rs created for this subdivision. [COA] [PLANNING]
- TM-3. HOA TRANSFER:
At the time the homeowners association is transferred from the developer to the individual property owners (typically at election of board members or officers), the developer shall schedule a meeting between the board members or officers, the City of Sunnyvale and the developer to review the Conditions of Approval of the development and other applicable City requirements. [COA] [PLANNING]
- TM-4. NEW STREET NAMING:
The name of the internal streets shall be named in accordance with the official Street Naming System, as selected by the Community Development Department. [COA] [PLANNING]
- TM-5. PUBLIC ACCESS EASEMENT ON COMMUNITY OPEN SPACE:
The final map shall show a public access easement to be recorded on the entirety of the community open space as shown in the approved plans along Aster Avenue and the western property line. The community open space shall be open to the public and shall not be restricted in use. The community open space shall be maintained in perpetuity by the association responsible for maintaining the parcel on which it is located. [COA] [PLANNING]
- TM-6. LOT LINE ADJUSTMENT:
A lot line adjustment of the existing parcels shall be completed and recorded with Santa Clara County prior to the final map approval. [COA] [PUBLIC WORKS]
- TM-7. FINAL MAP COMPLIANCE WITH VESTING TENTATIVE MAP:
The final map shall be substantially the same as the vesting tentative map. Any alteration of the vesting tentative map after the vesting tentative map is approved is subject to additional approval by the City and may require a public hearing. Sheets C1.0 through C10.1 of the Vesting Tentative Map package dated 1/29/19 are subject to change during plan check process. [COA] [PLANNING/PUBLIC WORKS]

- TM-8. TITLE 18 AND SUBDIVISION MAP ACT:
The submittal, approval and recordation of the final map shall be in accordance with the provision of the California Subdivision Map Act and Sunnyvale Municipal Code Title 18 Subdivision requirements. [COA] [PUBLIC WORKS]
- TM-9. PUBLIC/PRIVATE STREETS:
All streets, both public and private, shall be shown on the final parcel Map. Street names shall be approved by the Director of Community Development. Private streets shall be designated as "Terrace". [COA] [PUBLIC WORKS]
- TM-10. EASEMENT DEDICATION:
This project requires a minimum 26'-wide dedication of an emergency vehicle ingress and egress easement dedication on and over private roadways, a sidewalk easement, as required, along Aster Avenue and Willow Avenue to accommodate the 6' detached sidewalk and 10' attached sidewalk, respectively, and a public access easement over the Community Open Space and promenade. [COA] [PUBLIC SAFETY/PUBLIC WORKS]
- TM-11. RESERVATION/ABANDONMENT OF EASEMENTS:
Reservation of new and/or abandonment of existing public/private utility easement(s), ingress/egress easement(s), reciprocal parking easement(s), cross-lot drainage easement(s), sanitary sewer easement necessary for the project shall be delineated on the map or recorded concurrently with the map with a separate instrument. Quitclaim deed is required for abandonment of private easements prior to map recordation. All easements shall be kept open and free from buildings and structures of any kind except those appurtenances associated with the defined easements. [COA] [PUBLIC WORKS]
- TM-12. COMMUNITY OPEN SPACE:
The developer shall provide a community open space, available to the public, by recording a public access easement over the designated area. [PUBLIC WORKS]
- TM-13. UTILITY COMPANY APPROVAL:
Obtain map approval letters from the utility companies in regards to any existing or new easements associated with their facilities. [COA] [PUBLIC WORKS]
- TM-14. COST ESTIMATE:
Provide an itemized engineer's estimate for all off-site public improvements and on-site private improvements for the entire project

- with breakdowns corresponding to each construction phases (in accordance with City approved phasing plan). [COA] [PUBLIC WORKS]
- TM-15. SUBDIVISION IMPROVEMENT AGREEMENT AND IMPROVEMENT SECURITIES:
The developer shall execute a subdivision improvement agreement and provide improvement securities and/or cash deposit(s) for all proposed public improvements prior to map recordation or any permit issuance, whichever occurs first. Provide an itemized engineer's estimate for all improvements for the entire project for determination of security amount. [COA] [PUBLIC WORKS]
- TM-16. PUBLIC WORKS DEVELOPMENT FEES:
The developer shall pay all applicable Public Works development fees associated with the project, including but not limited to, utility frontage and/or connection fees and off-site improvement plan check and inspection fees, prior to map recordation or any permit issuance, whichever occurs first. The exact fee amount shall be determined based upon the fee rate at the time of fee payment. [COA] [PUBLIC WORKS]

PF: THE FOLLOWING CONDITIONS SHALL BE ADDRESSED ON THE CONSTRUCTION PLANS AND/OR SHALL BE MET PRIOR TO RELEASE OF UTILITIES OR ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

- PF-1. COMPLETION OF PUBLIC IMPROVEMENTS:
Developer shall complete all required public improvements in accordance with City approved plans, prior to any building occupancy. [COA] [PUBLIC WORKS]
- PF-2. NEW PUBLIC EASEMENTS LOCATED ON-SITE:
Any new easements required for public use purpose shall be either shown on the recorded final map or on a separate recorded Easement Deed deemed necessary by the Department of Public Works prior to any building occupancy. [COA] [PUBLIC WORKS]
- PF-3. LANDSCAPING, IRRIGATION, AND COMMUNITY ROOMS:
All landscaping, irrigation, and required community rooms/clubhouses as contained in the approved building permit plan shall be installed prior to occupancy of the land uses they serve. [COA] [PLANNING]
- PF-4. COMMUNITY OPEN SPACE:
The publicly-accessible community open space as shown in the approved plans along Aster Avenue and the western property line shall be installed to the satisfaction of City staff prior to occupancy of any

townhome unit, apartment, or condominium unit, whichever comes first. [COA] [PLANNING]

- PF-5. **PARKING LOT STRIPING:**
All parking lot striping shall be striped as per the approved building permit plans and Public Works standards prior to occupancy. [COA] [PLANNING/PUBLIC WORKS]
- PF-6. **CONDITIONS, COVENANTS AND RESTRICTIONS (CC&RS):**
The developer/owner shall submit a copy of the recorded CC&Rs and a letter from the developer/owner either indicating that the recorded CC&Rs are in conformance with the approved draft CC&Rs or summary of changes shall be provided to the Director of Community Development prior to release of utilities or certificate of occupancy. [COA] [PLANNING/PUBLIC WORKS/CITY ATTORNEY]
- PF-7. **HOA ESTABLISHMENT:**
The developer shall submit to the Planning Division the names, addresses and telephone numbers of the officers of the homeowners association, architectural review committee or similar committee, at the time the organization is granted autonomy. Until such information is supplied, the developer shall remain a responsible person for purposes of maintaining all common property. The chairperson, secretary, or principal officer of any committee or association shall notify the City of any change in officers and provide the names, addresses, and telephone numbers of the new officers within 30 days after the change becomes effective. [COA] [PLANNING]
- PF-8. **NOISE REDUCTION VERIFICATION:**
Acoustical tests shall demonstrate that an interior Ldn scale (day and night average noise level) of 50 dBA is met on the finished bedrooms and 55 dBA is met in other rooms, per the General Plan Safety and Noise Element. Such test results shall be furnished to the Director of Community Development prior to occupancy of any unit in the building(s) the permit pertains to. [COA] [PLANNING]
- PF-9. **BMR COMPLETION 60-DAY ADVANCE NOTICE:**
The Developer/Owner must provide a written "Notice of Intent to Sell" to the Affordable Housing Manager for each BMR unit(s) to be provided in the development at least sixty (60) days (but no more than ninety (90) days) prior to the request for a certificate of occupancy or receipt of a DRE report for the unit, whichever is later. Upon receipt of this Notice, the Housing Division will inform the developer of the current maximum BMR sales price applicable to the unit, based on number of bedrooms, as published in the BMR Program Guidelines and updated annually. The developer must also request and pass a site inspection

by the Affordable Housing Manager to verify that the BMR units have been completed in compliance with the BMR Development Agreement. [COA] [HOUSING]

PF-10. MASTER SIGN PROGRAM:

A Master Sign Program (MSP) for the entire project is required to be submitted and approved by the Director of Community Development prior to final occupancy of the first residential permit. The MSP shall contain provisions for wayfinding signage within the development and to the Lawrence Caltrain Station in accordance with LSAP Goal OSW-UDG2. Signage shall also be provided for loading and trash staging areas, with directions for deliveries to the retail space. [COA] [PLANNING]

PF-11. SOLID WASTE EQUIPMENT TRAINING:

Prior to the first certificate of occupancy for the condominiums and apartments, the developer shall ensure that proper training has been provided and certification obtained by personnel who will operate pallet jacks to haul waste receptacles to and from the staging area. Provide certification to the Solid Waste Division. [COA] [PUBLIC WORKS/ENVIRONMENTAL SERVICES]

DC: THE FOLLOWING CONDITIONS SHALL BE COMPLIED WITH AT ALL TIMES DURING THE CONSTRUCTION PHASE OF THE PROJECT.

DC-1. BLUEPRINT FOR A CLEAN BAY:

The project shall be in compliance with stormwater best management practices for general construction activity until the project is completed and either final occupancy has been granted. [SDR] [PLANNING]

DC-2. TREE PROTECTION:

All tree protection shall be maintained, as indicated in the tree protection plan, until construction has been completed and the installation of landscaping has begun. [COA] [PLANNING]

DC-3. CLIMATE ACTION PLAN – OFF ROAD EQUIPMENT REQUIREMENT:

OR 2.1: Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]), or less. Clear signage will be provided at all access points to remind construction workers of idling restrictions.

OR 2.2: Construction equipment must be maintained per manufacturer's specifications.

OR 2.3: Planning and Building staff will work with project applicants to limit GHG emissions from construction equipment by selecting one of the following measures, at a minimum, as appropriate to the construction project:

- a) Substitute electrified or hybrid equipment for diesel- and gasoline-powered equipment where practical.
 - b) Use alternatively fueled construction equipment on-site, where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.
 - c) Avoid the use of on-site generators by connecting to grid electricity or utilizing solar-powered equipment.
 - d) Limit heavy-duty equipment idling time to a period of 3 minutes or less, exceeding CARB regulation minimum requirements of 5 minutes.
- [COA] [PLANNING]

DC-4. DUST CONTROL:

At all times, the Bay Area Air Quality Management District's CEQA Guidelines and "Basic Construction Mitigation Measures Recommended for All Proposed Projects", shall be implemented. [COA] [PLANNING]

AT: THE FOLLOWING CONDITIONS SHALL BE COMPLIED WITH AT ALL TIMES THAT THE USE PERMITTED BY THIS PLANNING APPLICATION OCCUPIES THE PREMISES.

AT-1. COMMERCIAL SPACE HOURS OF OPERATION:

The use permitted as part of this application shall comply with the following hours of operation at all times:

- a) The hours of operation are limited to 6:00 a.m. to 10:00 p.m. for standard hours of operation, excluding short duration sales events which may have extended hours. Hours extending beyond 10:00 p.m. shall require approval of the Director of Community Development through a Miscellaneous Plan Permit. [COA] [PLANNING]

AT-2. DELIVERY HOURS:

Delivery hours for the approved use shall comply with SMC 19.42.030:

- a) Delivery hours are limited to daytime (period from 7:00 a.m. to 10:00 p.m. daily) only.
- b) Nighttime delivery (period from 10 p.m. to 7:00 a.m. daily) is prohibited. [SDR] [PLANNING]

AT-3. RECYCLING AND SOLID WASTE:

- All exterior recycling and solid waste shall be confined to approved receptacles and enclosures. [COA] [PLANNING]
- AT-4. LOUDSPEAKERS PROHIBITED:
Out-of-door loudspeakers shall be prohibited at all times. [COA] [PLANNING]
- AT-5. EXTERIOR EQUIPMENT:
All unenclosed materials, equipment and/or supplies of any kind shall be maintained within approved enclosure area. Any stacked or stored items shall not exceed the height of the enclosure. Individual air conditioning units shall be screened with architecture or landscaping features. [COA] [PLANNING]
- AT-6. LANDSCAPE MAINTENANCE:
All landscaping shall be installed in accordance with the approved landscape plan and shall thereafter be maintained in a neat, clean, and healthful condition. Trees shall be allowed to grow to the full genetic height and habit (trees shall not be topped). Trees shall be maintained using standard arboriculture practices. [COA] [PLANNING]
- AT-7. COMMUNITY OPEN SPACE MAINTENANCE:
The publicly-accessible community open space as shown in the approved plans along Aster Avenue and the western property line shall be open to the public and shall not be restricted in use. The community open space shall be maintained in perpetuity by the association responsible for maintaining the parcel on which it is located. [COA] [PLANNING]
- AT-8. PARKING MANAGEMENT:
On-Site parking management shall conform with the approved parking management plan. [COA] [PLANNING]
- AT-9. HOA REVIEW AND APPROVAL:
In common interest developments, any future application to the City for physical modifications on commonly-owned property shall require consent of the board of directors of the homeowners association, architectural review committee or similar committee; applications for physical modifications on privately-owned property shall require the individual property owner's signature. Individual property owners submitting an application for physical modifications on private property shall comply with any approval processes outlined as such in the CC&Rs of their respective development. [COA] [PLANNING]
- AT-10. HOA RESPONSIBILITIES:

The chairperson, secretary, or principal officer of any committee association shall notify the Planning Division and the Neighborhood and Community Resources Division of any change in officers and provide the names, addresses and telephone numbers of the new officers within (30) days after the change becomes effective. [COA] [PLANNING] [COMMUNITY SERVICES]

AT-11. PARKING LOT/STRUCTURE MAINTENANCE:

Parking lots and parking structures shall be maintained in accordance with the approved plans and as follows:

- a) Clearly mark all employee and customer spaces. This shall be specified on the Building Permit plans and completed prior to occupancy.
- b) Maintain all parking lot striping and marking.
- c) Assure that adequate lighting is available in parking lots to keep them safe and desirable for the use.
- d) Require signs to direct vehicles to additional parking spaces on-site, as needed.
- e) Garage spaces in the townhomes shall be maintained at all times so as to allow parking for vehicles. [COA] [PLANNING]

AT-12. UNENCLOSED STORAGE:

Unenclosed storage area(s) shall be fully screened to the highest point of any stored or stacked materials, equipment and/or supplies of any kind. The design and method of enclosure is subject to approval by the Director of Community Development. Any modification or expansion of unenclosed uses shall be subject to review and approval by the Director of Community Development. [COA] [PLANNING]

AT-13. RECREATIONAL VEHICLE STORAGE PROHIBITED:

Unenclosed storage of any vehicle intended for recreation purposes, including land conveyances, vessels and aircraft, but excluding attached camper bodies and motor homes not exceeding 18 feet in length, shall be prohibited on the premises. [COA] [PLANNING]

AT-14. BMP MAINTENANCE:

The project applicant, owner, landlord, or HOA, must properly maintain any structural or treatment control best management practices to be implemented in the project, as described in the approved Stormwater Management Plan and indicated on the approved building permit plans. [SDR] [PLANNING]

AT-15. BMP RIGHT OF ENTRY:

The project applicant, owner, landlord, or HOA, shall provide access to the extent allowable by law for representatives of city, the local vector control district, and the Regional Water Quality Control Board, strictly

for the purposes of verification of proper operation and maintenance for the storm water treatment best management practices contained in the approved Storm Water Management Plan. [SDR] [PLANNING]

- AT-16. TRANSPORTATION DEMAND MANAGEMENT (TDM) MEASURES:
The multi-family residential use shall participate in the Multi-Family Residential Transportation Demand Management (TDM) Plan program per Chapter 19.45 of the Sunnyvale Municipal Code (SMC). [SDR]
[PLANNING]
- AT-17. SOLID WASTE RECYCLING MANAGEMENT:
Waste and recycling services for residential uses shall be maintained under a master account held by the applicant, owner or landlord. The account holder will be responsible for ensuring adequate services and that all locations, private sidewalks and streets are kept free of litter and stains. Requirements shall be specified in the approved documents and be submitted for approval by the City. [COA]
[ENVIRONMENTAL SERVICES]

Exhibit 1 – The Lawrence Station Area Plan (LSAP) Mitigation Monitoring and Reporting Program follows on the next page.

**Lawrence Station Area Plan
Final Environmental Impact Report
Mitigation Monitoring and Reporting Program**

1. Statutory Requirement

When a lead agency makes findings on significant environmental effects identified in an environmental impact report (EIR), the agency must also adopt a “reporting or monitoring program for the changes to the project which it has adopted or made a condition of approval in order to mitigate or avoid significant effects on the environment” (Public Resources Code Section 21081.6(a) and California Environmental Quality Act Guidelines Section 15091(d) and Section 15097). The Mitigation Monitoring and Reporting Program (MMRP) is implemented to ensure that the mitigation measures and project revisions identified in the EIR are implemented. Therefore, the MMRP must include all changes in the proposed project either adopted by the project proponent or made conditions of approval by the lead agency or a responsible agency.

2. Administration of the Mitigation Monitoring and Reporting Program

The City of Sunnyvale (City) is the lead agency responsible for the adoption of the MMRP. The City is responsible for implementing, verifying, and documenting compliance with the MMRP, in coordination with other identified agencies. According to CEQA Guidelines Section 15097(a), a public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity that accepts the delegation. However, until mitigation measures have been completed, the lead agency remains responsible for ensuring that implementation of the measures occurs in accordance with the program.

3. Mitigation Measures and Reporting Program

Table B-1 is structured to enable quick reference to mitigation measures and the associated monitoring program based on the environmental resource. The numbering of mitigation measures correlates with numbering of measures found in the impact analysis sections of the Draft EIR.

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Requirements of Measure	Compliance Method	Verification/Timing	Responsible Party
Air Quality				
MM 3.5.3a	<p>Prior to the issuance of grading or building permits, the City of Sunnyvale shall ensure that the Bay Area Air Quality Management District's (BAAQMD) basic construction mitigation measures from Table 8-1 of the BAAQMD 2011 CEQA Air Quality Guidelines (or subsequent updates) are noted on the construction documents. These basic construction mitigation measures include the following:</p> <ol style="list-style-type: none"> 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day. 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered. 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited. 4. All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph). 5. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used. 6. All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation. 7. A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations. 	<ul style="list-style-type: none"> • Plan approval 	<ul style="list-style-type: none"> • Prior to issuance of grading or building permits • During construction 	<ul style="list-style-type: none"> • City of Sunnyvale (plan check) • Project applicant (during construction)
MM 3.5.3b	<p>In the cases where construction projects are projected to exceed the Bay Area Air Quality Management District's (BAAQMD) air pollutant significance thresholds for NO_x, PM₁₀, and/or PM_{2.5}, all off-road diesel-fueled equipment (e.g., rubber-tired dozers, graders, scrapers, excavators, asphalt paving equipment, cranes, and tractors) shall be at least California Air Resources Board</p>	<ul style="list-style-type: none"> • Site inspection 	<ul style="list-style-type: none"> • During construction 	<ul style="list-style-type: none"> • Project applicant (during construction) • City of

Mitigation Measure	Requirements of Measure	Compliance Method	Verification/Timing	Responsible Party
	(CARB) Tier 3 Certified or better.			Sunnyvale (during construction)
MM 3.5.5	<p>In the case when a subsequent project's construction spans greater than 5 acres and is scheduled to last more than two years, the subsequent project shall be required to prepare a site-specific construction pollutant mitigation plan in consultation with the Bay Area Air Quality Management District (BAAQMD) staff prior to the issuance of grading permits. A project-specific construction-related dispersion modeling acceptable to BAAQMD shall be used to identify potential toxic air contaminant impacts, including diesel particulate matter. If BAAQMD risk thresholds (i.e., probability of contracting cancer is greater than 10 in 1 million) would be exceeded, mitigation measures shall be identified in the construction pollutant mitigation plan to address potential impacts and shall be based on site-specific information such as the distance to the nearest sensitive receptors, project site plan details, and construction schedule. The City shall ensure construction contracts include all identified measures and that the measures reduce the health risk below BAAQMD risk thresholds. Construction pollutant mitigation plan measures shall include, but not be limited to:</p> <ol style="list-style-type: none"> 1. Limiting the amount of acreage to be graded in a single day, 2. Restricting intensive equipment usage and intensive ground disturbance to hours outside of normal preschool hours, 3. Notification of affected sensitive receptors one week prior to commencing on-site construction so that any necessary precautions (such as rescheduling or relocation of outdoor activities) can be implemented. The written notification shall include the name and telephone number of the individual empowered to manage construction of the project. In the event that complaints are received, the individual empowered to manage construction shall respond to the complaint within 24 hours. The response shall include identification of measures being taken by the project construction contractor to reduce construction-related air pollutants. Such a measure may include the relocation of equipment. 	<ul style="list-style-type: none"> • Plan approval 	<ul style="list-style-type: none"> • Prior to issuance of grading permit 	<ul style="list-style-type: none"> • City of Sunnyvale (plan check) • Project applicant (during construction)
MM 3.5.6	<p>The following measures shall be utilized in site planning and building designs to reduce TAC and PM_{2.5} exposure where new receptors are located within 1,000 feet of emission sources:</p> <ul style="list-style-type: none"> • Future development with the LSAP that includes sensitive receptors (such as residences, schools, hospitals, daycare centers, or retirement homes) located 	<ul style="list-style-type: none"> • Plan approval 	<ul style="list-style-type: none"> • Prior to issuance of grading or building permit 	<ul style="list-style-type: none"> • City of Sunnyvale

Mitigation Measure	Requirements of Measure	Compliance Method	Verification/Timing	Responsible Party
	<p>within 1,000 feet from Caltrain and/or stationary sources shall require site-specific analysis to determine the level of health risk. This analysis shall be conducted following procedures outlined by BAAQMD. If the site-specific analysis reveals significant exposures from all sources (i.e., health risk in terms of excess cancer risk greater than 100 in one million, acute or chronic hazards with a hazard Index greater than 10, or annual PM_{2.5} exposures greater than 0.8 µg/m³) measures shall be employed to reduce the risk to below the threshold (e.g., electrostatic filtering systems or equivalent systems and location of vents away from TAC sources). If this is not possible, the sensitive receptors shall be relocated.</p> <ul style="list-style-type: none"> Future nonresidential developments projected to generate more than 100 heavy-duty trucks daily will be evaluated through the CEQA process or BAAQMD permit process to ensure they do not cause a significant health risk in terms of excess cancer risk greater than 10 in one million, acute or chronic hazards with a hazard Index greater than 1.0, or annual PM_{2.5} exposures greater than 0.3 µg/m³. 			
Biological Resources				
MM 3.9.1	<p>If clearing and construction activities will occur during the nesting period for burrowing owls (February 1–August 31) on the vacant portion of the Corn Palace property, a qualified biologist shall conduct focused surveys for burrowing owls on and adjacent to the project site. Surveys shall be conducted in accordance with the CDFW’s Staff Report on Burrowing Owl Mitigation, published March 7, 2012. Surveys shall be repeated if project activities are suspended or delayed for more than 15 days during nesting season.</p> <p>If no burrowing owls are detected, no further mitigation is required. If active burrowing owls are detected, the project proponent will implement the avoidance, minimization, and mitigation methodologies outlined in the CDFW’s Staff Report prior to initiating project-related activities that may impact burrowing owls.</p>	<ul style="list-style-type: none"> Preconstruction surveys for work done between February 1 and August 31 	<ul style="list-style-type: none"> Up to 14 days prior to construction 	<ul style="list-style-type: none"> Project applicant (survey and protection measures)) City of Sunnyvale (document compliance)
MM 3.9.2	<p>Prior to the removal of trees or the demolition of buildings, a bat survey shall be performed by a qualified biologist no more than 3 days prior to the start of construction activities. If bat roosts are identified, the City shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed. If maternity roosts are identified during the maternity roosting season (typically May to September) they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur on-site, replacement roost habitat (e.g., bat boxes) shall be</p>	<ul style="list-style-type: none"> Preconstruction surveys 	<ul style="list-style-type: none"> No more than 3 days prior to building demolition and/or tree removal 	<ul style="list-style-type: none"> Project applicant (survey and protection measures) City of Sunnyvale

Mitigation Measure	Requirements of Measure	Compliance Method	Verification/Timing	Responsible Party
	<p>provided to offset roosting sites removed. If no bat roosts are detected, no further action is required if the trees and buildings are removed prior to the next breeding season.</p> <p>If a female or maternity colony of bats is found on the project site, and the project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after July 31 and before March 1).</p> <p>If an active nursery roost is documented on-site and the project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after July 31 and before March 1 to prevent the formation of maternity colonies. Nonbreeding bats shall be safely evicted, under the direction of a bat specialist.</p>			(document compliance)
MM 3.9.3	<p>All construction and clearing activities shall be conducted outside of the avian nesting season (January 15–August 31), when feasible. If clearing and/or construction activities occur during the nesting season, preconstruction surveys for nesting raptors, special-status resident birds, and other migratory birds protected by the Migratory Bird Treaty Act shall be conducted by a qualified biologist, up to 3 days before initiation of construction activities. The qualified biologist shall survey the construction zone and a 250-foot radius surrounding the construction zone to determine whether the activities taking place have the potential to disturb or otherwise harm nesting birds.</p> <p>If an active nest is located within 100 feet (250 feet for raptors) of construction activities, the project applicant shall establish an exclusion zone (no ingress of personnel or equipment at a minimum radius of 100 feet or 250 feet, as appropriate around the nest). Alternative exclusion zones may be established through consultation with the CDFW and the USFWS, as necessary. The City shall be notified if altered exclusion zones widths are authorized by these agencies prior to the initiation of work. The exclusion zones shall remain in force until all young have fledged.</p>	<ul style="list-style-type: none"> • Preconstruction surveys for work done between January 15 and August 31 	<ul style="list-style-type: none"> • No more than 3 days prior to tree removal and/or site preparation involving removal of vegetation 	<ul style="list-style-type: none"> • Project applicant (survey and protection measures) • City of Sunnyvale (document compliance)
Cultural Resources				
MM 3.10.2	All subsequent projects within the LSAP plan area shall be required to include information on the improvement plans that if, during the course of grading or	<ul style="list-style-type: none"> • Plan approval 	<ul style="list-style-type: none"> • During construction 	<ul style="list-style-type: none"> • City of Sunnyvale

Mitigation Measure	Requirements of Measure	Compliance Method	Verification/Timing	Responsible Party
	construction cultural resources (i.e., prehistoric or historic sites) are discovered, work will stop in that area and within 100 feet of the find until a qualified archaeologist can access the significance of the find and, if necessary, develop appropriate treatment measures as part of a treatment plan in consultation with the City and all other appropriate agencies. The treatment plan shall include measures to document and protect the discovered resource. Consistent with CEQA Guidelines Section 15126.4(b)(3), preservation in place will be the preferred method of mitigating impacts to the discovered resource. Pursuant to Government Code Section 6254.10, information on the discovered resource shall be confidential.			(plan check) <ul style="list-style-type: none"> Project applicant (if resources found)
Geology, Soils, and Paleontological Resources				
MM 3.7.4	All subsequent projects within the LSAP plan area shall be required to include information on the improvement plans that if, during the course of grading or construction fossils are discovered, work shall be halted immediately within 50 feet of the discovery, the Sunnyvale Community Development Department shall be notified, and the significance of the find and recommended actions are determined by a qualified paleontologist. In addition, prior to the commencement of project site preparation, all construction personnel shall be informed of the potential to discover fossils and the procedures to follow.	<ul style="list-style-type: none"> Plan approval 	<ul style="list-style-type: none"> Prior to issuance of grading permit During construction 	<ul style="list-style-type: none"> City of Sunnyvale (plan check) Project applicant (if fossils discovered)
Hazards and Hazardous Materials				
MM 3.3.3	<p>The City shall require a Phase I Environmental Site Assessment (ESA) prepared and submitted with any application for new development or redevelopment in any LSAP subarea north of the Caltrain tracks, the Peninsula subarea, the Lawrence/Reed/Willow subarea, or the Corn Palace property. The Phase I ESA shall be prepared by a qualified professional registered in California and in accordance with ASTM E1527-13 (or the most current version at the time a development application is submitted for the project).</p> <p>If determined necessary by the Phase I ESA, a Phase II ESA shall be conducted to determine the lateral and vertical extent of soil, groundwater, and/or soil vapor contamination, as recommended by the Phase I ESA.</p> <p>The City shall not issue a building permit for a site where contamination has been identified until remediation or effective site management controls appropriate for the use of the site have been completed consistent with applicable regulations and to the satisfaction of the City of Sunnyvale, DTSC, or San Francisco Bay RWQCB (as appropriate) prior to initiation of construction activities. Deed restrictions, if appropriate, shall be recorded.</p>	<ul style="list-style-type: none"> Review of Phase I and/or Phase II ESA Site inspection 	<ul style="list-style-type: none"> Phase I at the time development application is submitted Phase II prior to building permit issuance Site inspection during construction 	<ul style="list-style-type: none"> Project applicant (Phase I/Phase II) City of Sunnyvale (document compliance)

Mitigation Measure	Requirements of Measure	Compliance Method	Verification/Timing	Responsible Party
	<p>If temporary dewatering is required during construction or if permanent dewatering is required for subterranean features, the City shall not issue an improvement permit or building permit until documentation has been provided to the City that the Water Pollution Control Plant has approved the discharge to the sewer. Discharge of any groundwater removed from a construction site in any LSAP subarea north of the Caltrain tracks, the Peninsula subarea, the Lawrence/Reed/Willow subarea, or the Corn Palace property to the El Camino Storm Drain Channel, Calabazas Creek, or storm drain shall be prohibited. The City shall ensure all plans and permits state this prohibition.</p> <p>If the Phase I ESA determines there are no recognized environmental conditions (RECs), no further action is required. However, the City shall ensure any grading or improvement plan or building permit includes a statement if hazardous materials contamination is discovered or suspected during construction activities, all work shall stop immediately until a qualified professional has determined an appropriate course of action.</p>			
MM 3.3.5	<p>Prior to issuance of a permit for a specific development project or prior to approving a City-initiated roadway improvement identified in the LSAP, the City shall determine whether project construction activities have the potential to affect traffic conditions on roadways as a result of construction of the development project or roadway improvement(s). If there is the potential the activities could impair or inhibit emergency response or evacuation, a Construction Traffic Control Plan shall be prepared for City review and approval. The plan shall include, but not be limited to, schedule of construction and anticipated methods of handling traffic for each phase of construction to ensure the safe flow of traffic and adequate emergency access, including maintaining an open lane for vehicle travel at all times. All traffic control measures shall conform to City of Sunnyvale, Santa Clara County, and/or Caltrans standards, as applicable. The City shall ensure final approved plans for private development projects specify the requirement, as appropriate, to implement the construction traffic control plan.</p>	<ul style="list-style-type: none"> Plan approval 	<ul style="list-style-type: none"> Prior to permit issuance 	<ul style="list-style-type: none"> City of Sunnyvale (plan check and inspection) Project applicant (prepare plan)
Hydrology and Water Quality				
MM 3.8.3	<p>Prior to approving any subsequent projects in the LSAP at any location where fill is placed in the FEMA AO zone to elevate the ground surface above the base flood elevation, the project applicant shall submit a hydraulic analysis prepared by a California-registered professional engineer for City Engineer review and approval. The analysis shall, at a minimum, identify: (1) the specific locations</p>	<ul style="list-style-type: none"> Plan approval 	<ul style="list-style-type: none"> Prior to grading permit issuance 	<ul style="list-style-type: none"> City of Sunnyvale (plan check) Project applicant

Mitigation Measure	Requirements of Measure	Compliance Method	Verification/Timing	Responsible Party
	where changes in water surface elevations due to fill encroachment could occur; and (2) drainage improvements that will be used to ensure placement of fill will not increase flood hazards in areas not previously subject to flooding during occurrence of the base flood discharge.			(hydraulic analysis)
Noise				
MM 3.6.4	<p>Subsequent projects in the LSAP shall employ site-specific noise attenuation measures during construction to reduce the generation of construction noise. These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the City of Sunnyvale Building Services Division. Measures specified in the Noise Control Plan and implemented during construction shall include, at a minimum, the following noise control strategies:</p> <ul style="list-style-type: none"> • Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds. • Impact tools (e.g., jackhammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used. • Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures. • Noise reducing pile-driving techniques shall be employed during project construction. These techniques shall include: <ul style="list-style-type: none"> o Installing intake and exhaust mufflers on pile-driving equipment. o Vibrating piles into place when feasible, and installing shrouds around the pile-driving hammer where feasible. o Implement “quiet” pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving 	<ul style="list-style-type: none"> • Plan approval 	<ul style="list-style-type: none"> • Prior to issuance of grading and/or building permits 	<ul style="list-style-type: none"> • City of Sunnyvale (plan check and inspection) • Project applicant (during construction)

Mitigation Measure	Requirements of Measure	Compliance Method	Verification/Timing	Responsible Party
	<p>duration), where feasible, in consideration of geotechnical and structural requirements and conditions.</p> <ul style="list-style-type: none"> ○ Use cushion blocks to dampen impact noise, if feasible based on soil conditions. Cushion blocks are blocks of material that are used with impact hammer pile drivers. They consist of blocks of material placed atop a piling during installation to minimize noise generated when driving the pile. Materials typically used for cushion blocks include wood, nylon and micarta (a composite material). ○ At least 48 hours prior to pile-driving activities, the applicant shall notify building owners and occupants within 600 feet of the project area of the dates, hours, and expected duration of such activities. 			
Transportation and Circulation				
MM 3.4.6	<p>Should the proposed Land Use and Transportation Element update not be adopted, the following roadway improvements are required as a component of the implementation of the LSAP:</p> <ul style="list-style-type: none"> • <u>Wolfe Road & Kifer Road</u> – Construction of a second southbound left-turn lane and a second westbound left-turn lane. Both left-turn lanes would need to have the same length as the original left-turn lane. Depending on the width of each travel lane, the north and east legs of the intersection will need to be widened between 8 feet and 11 feet. The through lanes at this intersection will be realigned. The required right-of-way would need to be acquired from the northwest, northeast, and/or southeast quadrants of the intersection. Existing bicycle and pedestrian facilities will be retained. This improvement would be a requirement for projects within the LSAP only and not a citywide requirement. <p>With this improvement, the intersection would operate at an acceptable LOS D during the AM peak hour. There would be secondary deficiencies associated with this improvement such as increased pedestrian and bicyclist exposure to traffic when crossing the intersection. The increased exposure time would range from approximately 2 to 3 seconds for pedestrians and from 1 to 2 seconds for bicyclists. This increased exposure time would be minimal. Located in an industrial area and immediately between the rail tracks and Central Expressway, this intersection is also not expected to serve a considerable amount of pedestrian and bicyclist volume. The required right-of-way acquisition would be minimal and would not displace businesses or parking spaces. This improvement would be a requirement for</p>	<ul style="list-style-type: none"> • LSAP approval 	<ul style="list-style-type: none"> • Incorporated into LSAP should Draft LUTE not be adopted • Implemented during future development projects in LSAP only if Draft LUTE not adopted 	<ul style="list-style-type: none"> • City of Sunnyvale Planning Department

Mitigation Measure	Requirements of Measure	Compliance Method	Verification/Timing	Responsible Party
	<p>project within the LSAP only and not a citywide requirement.</p> <ul style="list-style-type: none"> • <u>Wolfe Road & Fremont Avenue</u> – Construction of an exclusive southbound right-turn lane for the length of the segment. The eastbound inner left-turn lane will require restricting the U-turn movement to allow a southbound overlap right-turn phase. Vehicles wishing to perform the eastbound U-turn movement would instead perform the U-turn at Eleanor Way. Depending on the extent of the median on the north leg that could be removed, the north leg would be widened between 3 and 11 feet. The north leg would be realigned to accommodate the southbound right turn. There is existing right-of-way on the northeast quadrant of the intersection. <p>With this improvement, the intersection would operate at an unacceptable LOS E during the PM peak hour, but would no longer have an LSAP intersection deficiency. Secondary deficiencies on the pedestrian and bicycle facilities associated with this improvement would not be considerable. The increased exposure time would range from approximately 1 to 3 seconds for pedestrians and from 1 to 2 seconds for bicyclists. This increased exposure time would be minimal. The required right-of-way acquisition would be minimal and would not displace businesses. This improvement would be a requirement for projects within the LSAP only and not a citywide requirement.</p> 			

Site and Architectural Plans – 1155-1175 Aster Ave

Available at: https://cityofsunnyvale-my.sharepoint.com/:b:/g/personal/gschroeder_sunnyvale_ca_gov/EXcWx30yAGdEpQZuoJ4q19YB9JNLQvC6YoCnKW5nkR9gBA?e=5JAEcq



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Sunnyvale, CA

Olympic Residential Group

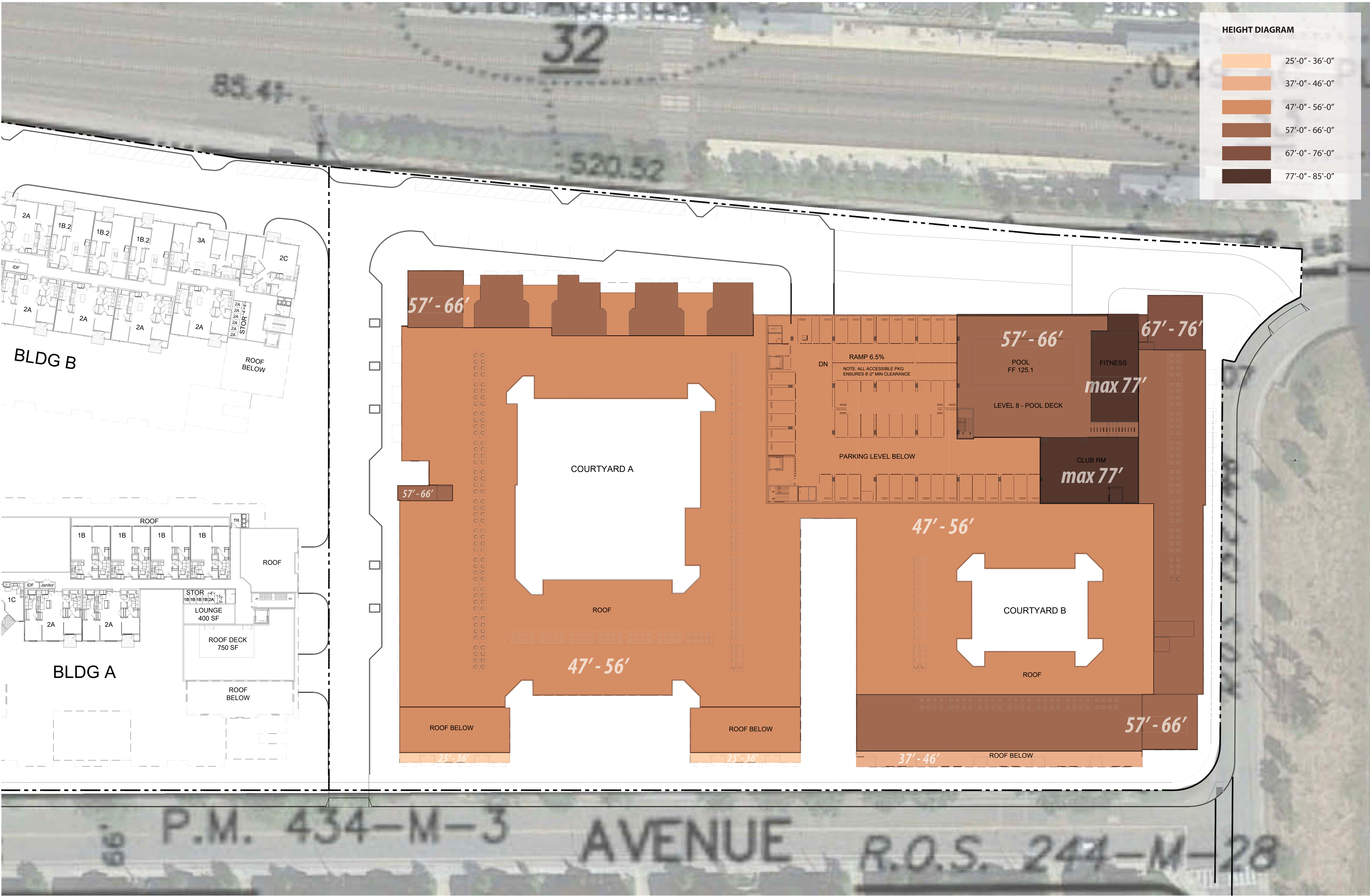
235 Montgomery St, Suite 960
San Francisco, CA

Sheet Title:

HEIGHT DIAGRAM:
APARTMENT

Job No. 17033
Date: 01/29/2019
Scale: 1" = 30' - 0"
Drawn By:

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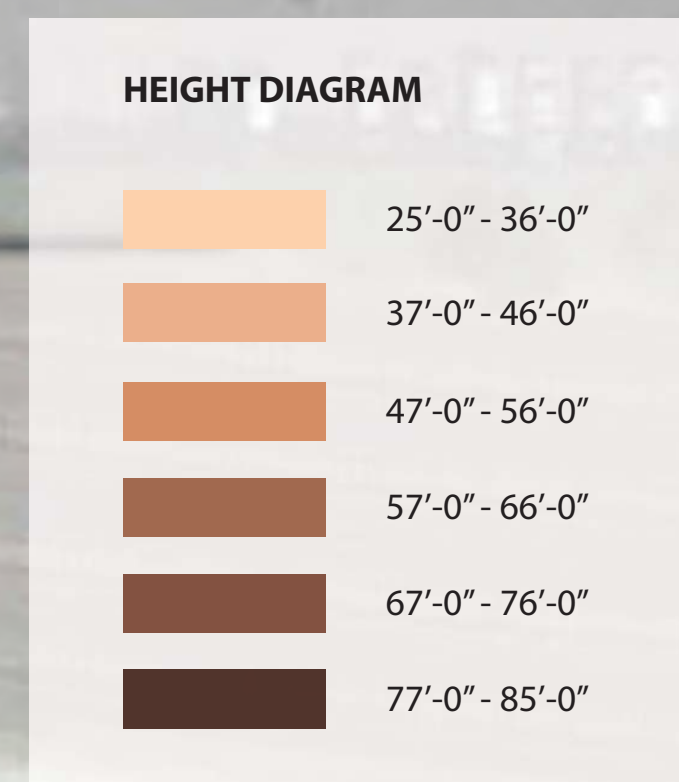
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San Francisco, CA

Sheet Title:

HEIGHT DIAGRAM:
TOWNHOMES

Job No. 17033
Date: 01/29/2019
Scale: 1" = 30' - 0"
Drawn By:

Sheet No:



Drone Views from Proposed Apartment and Condominium Building Heights, 11-20-2018



View from Apartment building at 40 feet



View from Apartment building at 50 feet



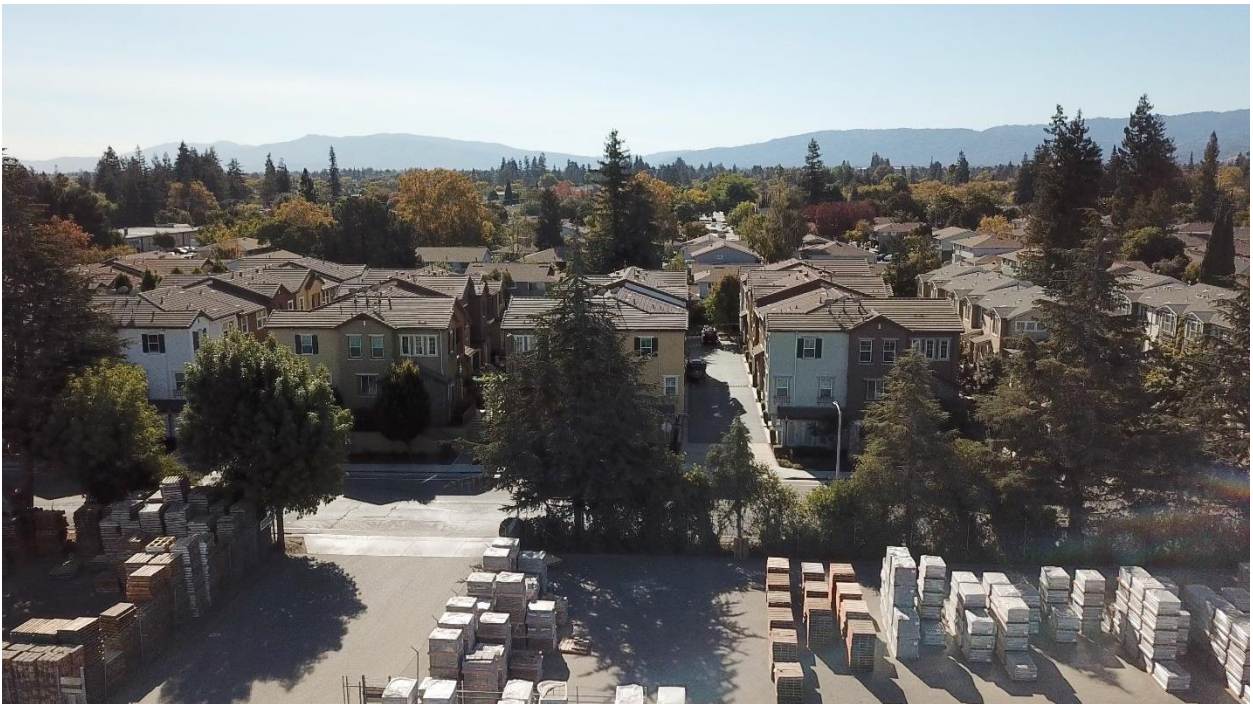
View from Condominium A building at 40 feet



View from Condominium A building at 50 feet



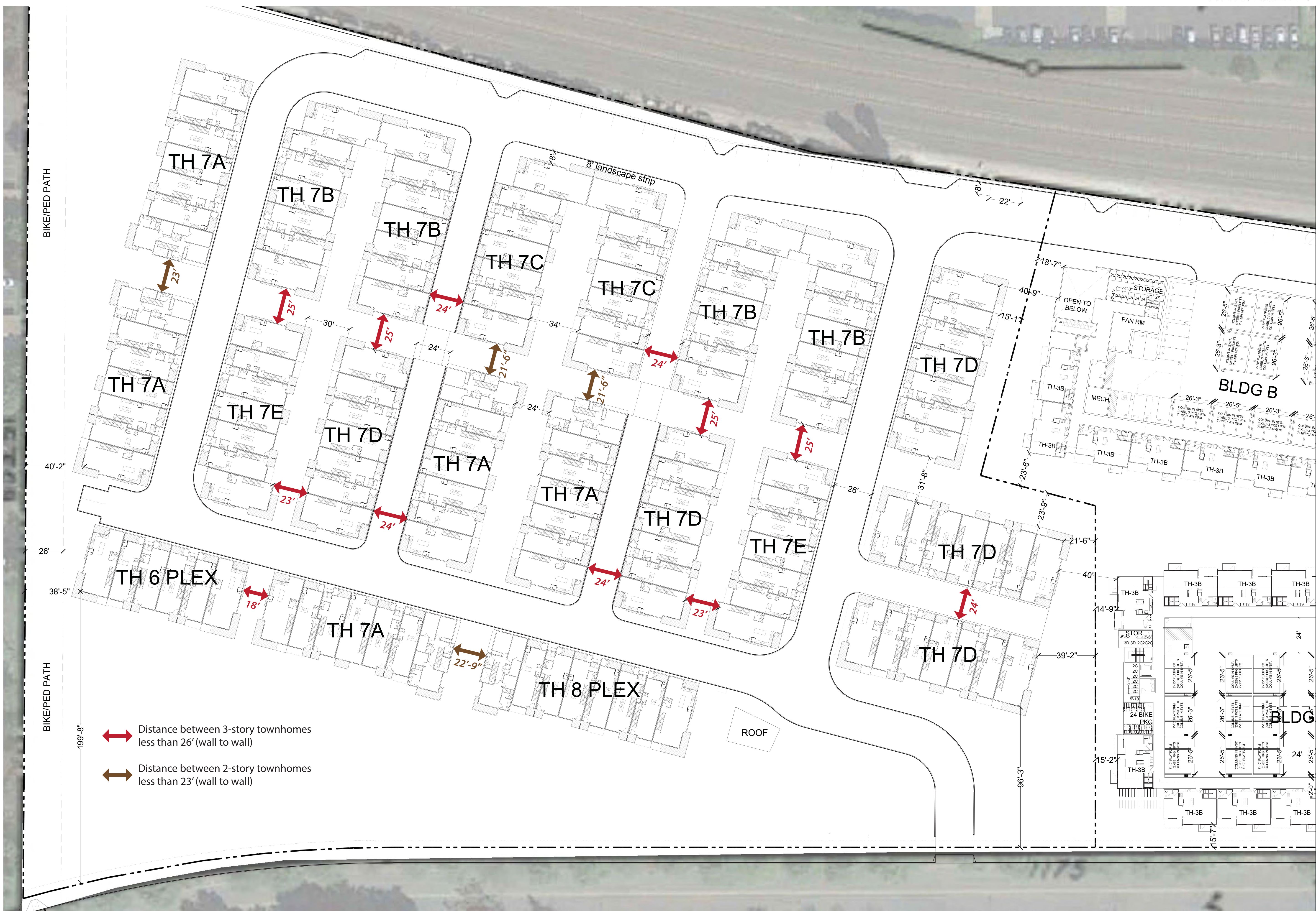
View from Condominium A building at 60 feet



View from Condominium A building at 70 feet

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Sheet No:





Aster Avenue MASTER PLAN



Environmental Checklist

Prepared for:



Sunnyvale

City of Sunnyvale

January 2019

Aster Avenue

MASTER PLAN

Environmental Checklist

Prepared for:



City of Sunnyvale

Community Development
Department, Planning Division
465 W. Olive Avenue
Sunnyvale, California 94086

Contact:

George Schroeder
Senior Planner

Prepared by:



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January 2019

TABLE OF CONTENTS

Section	Page
LIST OF ABBREVIATIONS.....	III
1 INTRODUCTION AND PROJECT HISTORY	1-1
2 PROJECT DESCRIPTION.....	2-3
2.1 Project Overview	2-3
2.2 Project location.....	2-3
2.3 Existing Setting	2-3
2.4 Project Objectives.....	2-6
2.5 Construction Activities.....	2-14
2.6 Required Actions	2-15
3 ENVIRONMENTAL CHECKLIST FOR SUPPLEMENTAL ENVIRONMENTAL REVIEW.....	3-1
3.1 Explanation of Checklist Evaluation Categories	3-1
3.2 Discussion and Mitigation Sections	3-2
4 ENVIRONMENTAL CHECKLIST.....	4-1
4.1 Aesthetics.....	4-1
4.2 Agriculture and Forest Resources	4-4
4.3 Air Quality	4-5
4.4 Biological Resources	4-13
4.5 Cultural Resources	4-18
4.6 Geology and Soils	4-21
4.7 Greenhouse Gas Emissions.....	4-25
4.8 Hazards and Hazardous Materials.....	4-28
4.9 Hydrology and Water Quality.....	4-34
4.10 Land Use and Planning	4-39
4.11 Mineral Resources	4-41
4.12 Noise	4-42
4.13 Population and Housing.....	4-47
4.14 Public Services.....	4-49
4.15 Recreation.....	4-52
4.16 Transportation/Traffic	4-54
4.17 Utilities and Service Systems.....	4-64
4.18 Mandatory Findings of Significance	4-69
5 LIST OF PREPARERS AND PERSONS CONSULTED.....	5-1
5.1 List of Preparers	5-1
6 REFERENCES	6-1

Appendices

A Transportation Impact Analysis

Figures

Figure 2-1 Project Vicinity 2-4

Figure 2-2 Project Site..... 2-5

Figure 2-3 Proposed Vehicular and Bicycle/Pedestrian Circulation Plan 2-7

Figure 2-4 Proposed Apartments Elevation and Perspective from Caltrain tracks..... 2-9

Figure 2-5 Proposed Apartments Elevation and Perspective from Aster Avenue2-10

Figure 2-6 Proposed Condominiums Elevation and Perspective2-11

Figure 2-7 Proposed Townhomes Elevation and Perspective, Type 12-12

Figure 2-8 Proposed Townhomes Elevation and Perspective, Type 22-13

Tables

Table 2-1 Proposed Uses..... 2-6

Table 4.3-1 Summary of Daily Construction Emissions of Criteria Pollutants and Precursor Emissions..... 4-7

Table 4.3-2 Summary of Estimated Health Risks and Hazards for the Aster Avenue Project.....4-10

LIST OF ABBREVIATIONS

AB	Assembly Bill
ADWF	average dry weather flow
BMP	best management practices
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CGS	California Geological Survey
CHRIS	California Historic Resources Information System
City	City of Sunnyvale
CMP	Congestion Management Program
CNDDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CRHR	California Register of Historical Resources
EIR	Environmental Impact Report
ESA	Environmental Site Assessment
FEMA	Federal Emergency Management Agency
FTA	Federal Transit Administration
I	Interstate
LID	Low Impact Development
LOS	level of service
LSAP	Lawrence Station Area Plan
LUTE	Land Use and Transportation Element
MPO	metropolitan planning organizations
MRP	Municipal Regional Stormwater Permit
NRHP	National Register of Historic Places
NWIC	Northwest Information Center
PDA	Priority Development Area
project	Aster Avenue project
R&D	research and development
REC	recognized environmental conditions
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SCS	sustainable community strategies
SDP	Special Development Permit
sf	square feet
SMC	Sunnyvale Municipal Code
SR	State Route
SWPPP	stormwater pollution prevention plan
TIA	Transportation Impact Analysis

TPA	Transit Priority Area
USFWS	U.S. Fish and Wildlife Service
UWMP	Urban Water Management Plan
V/C	volume-to-capacity
VTA	Valley Transportation Authority
WPCP	Water Pollution Control Plant
WSA	Water Supply Assessment

1 INTRODUCTION AND PROJECT HISTORY

On December 6, 2016, the Sunnyvale City Council approved the 319-acre Lawrence Station Area Plan (LSAP) for development of up to 2,323 new residential units, 1.2 million square feet of new office/research and development (R&D) uses, and 16,600 square feet of new retail uses. The LSAP would result in mixed-use development and revitalization surrounding the existing Lawrence Caltrain Station. The City of Sunnyvale (City) prepared an Environmental Impact Report (EIR) (State Clearinghouse No. 2013082030) for the LSAP that evaluated the environmental impacts associated with development of the entire plan area based on the land use and zoning designations established in the LSAP.

The proposed Aster Avenue project (project) is located within the southern portion of the LSAP. The project site is designated as “Mixed Use Transit Supporting South.” The proposed project would demolish an existing corporation yard totaling approximately 16.82 acres and would construct new residential units consisting of 412 apartments, 189 condominium units, and 140 townhomes. The project also includes 1,500 square feet of retail space on the ground floor of the apartment building. The project was programmatically evaluated in the LSAP EIR and is consistent with the LSAP and is considered a subsequent project as part of the implementation of the LSAP.

The EIR was prepared at the program “first-tier” level of environmental review consistent with the requirements of the California Environmental Quality Act (CEQA) Sections 15152 and 15168. The program-level analysis considered the broad environmental impacts of the overall LSAP. The EIR acknowledged that subsequent development of the LSAP area would occur in multiple years and phases. As those phases are proposed, such as the project, they are being evaluated to determine whether the entitlements/actions proposed fall within the scope of the approved EIR and incorporate all applicable performance standards and mitigation measures identified therein. Should the subsequent development phases not be consistent with the approved LSAP, additional environmental review through the subsequent review provisions of CEQA for changes to previously reviewed and approved projects may be warranted (CEQA Guidelines Sections 15162 and 15164).

Consistent with the process described, the City is evaluating the Aster Avenue application to determine what type of additional environmental review would be required. This environmental checklist has been prepared to determine whether the environmental impacts of the project are within the scope of the LSAP EIR, or if changed environmental conditions are of sufficient magnitude to result in new or substantially more severe environmental impacts, as compared to those considered in the LSAP EIR. This analysis also considers whether there is new information of substantial importance showing that new or substantially more severe environmental impacts would occur compared to that evaluated in the LSAP EIR.

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2 PROJECT DESCRIPTION

2.1 PROJECT OVERVIEW

The Aster Avenue project would redevelop an existing 16.82-acre site and construct high-density residential uses with a variety of housing types and publicly accessible open space. The property would include approximately 2.3 acres of community open space and 412 for-rent apartments (including 1,500 square feet of retail space), two condominium buildings that would consist of 189 residential units, and 140 townhomes for a total of 741 dwelling units. Parking garages would be provided for each use. The project is consistent with the Lawrence Station Area Plan (LSAP) land use designations and zoning. The project would require a Special Development Permit and Vesting Tentative Map approval.

2.2 PROJECT LOCATION

The project site is located within the City of Sunnyvale (Figure 2-1), on a 16.82-acre site south of the Caltrain rail line, north of Aster Avenue, and west of Willow Avenue and Lawrence Expressway (Figure 2-2). The project would be accessed from Aster Avenue and Willow Avenue.

2.3 EXISTING SETTING

The project site consists of three parcels (1155 and 1175 Aster Avenue) that consists of the Calstone and Peninsula Building Material Operations including nine one-story buildings and parking. The project site contains 134 trees that vary in species and size. No natural habitat or water features exist on the site. Surrounding land uses consist of residential, office, and industrial uses, as well as railroad tracks managed by the Peninsula Corridor Joint Powers Board.

The site is located in a Transit Priority Area (TPA) and Priority Development Area (PDA). As designated by the Metropolitan Transportation Commission's Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Plan Bay Area 2040), a TPA is a geographic area that meets the requirements of a Transit Priority Project under Senate Bill (SB) 375. SB 375 provides streamlining benefits for a TPP. The criteria for TPPs are:

- ▲ consistent with the general land use designation, density, building intensity, and applicable policies specified for the project area in the SCS;
- ▲ located within half a mile of a major transit stop or high-quality transit corridor;
- ▲ comprised of at least 50 percent residential use based on total building square footage, or as little as 26 percent residential use if the project has a floor area ratio of not less than 0.75; and
- ▲ built out with a minimum of 20 dwelling units per acre (PRC Section 21155).

Under the RTP/SCS, a PDA is an area within an existing community that local city or county governments have identified and approved for future growth. The project site is located in PDA and TPA areas (MTC June 2016). The City of Sunnyvale designates the site in the General Plan as Transit Mixed-Use, the LSAP identifies the site in the Peninsula Subarea, and the site is zoned LSAP MXD-III – Flexible Mixed-Use III. Allowed uses under this land use designation and zoning include mixed-use (residential and office/research and development (R&D) uses on a single site), high-density residential (24 dwelling units per acre [du/ac] to 36 du/ac with incentives), and office/R&D with 55-foot maximum building heights.



Figure 2-1

Project Vicinity





Source: Provided by Studio T Square in 2019

X18010125 01 002

Figure 2-2

Project Site



2.4 PROJECT OBJECTIVES

The project's objectives, partially described in the LSAP Draft EIR, are the following:

- ▲ promote a diversity of land uses and densities that will support transit usage and neighborhood services,
- ▲ provide a range of housing densities within walking distance of the Caltrain Lawrence Station,
- ▲ implement the LSAP policies,
- ▲ provide a development project that compliments the existing neighborhoods to the south of the site, and
- ▲ create a strong sense of place and community identity with the development of a vibrant neighborhood center.

2.4.1 Proposed Project

The project is a proposed mixed-use development within the LSAP area. The project would demolish and remove structures and facilities associated with the existing Calstone and Peninsula Building Materials operations. The site would be redeveloped with residential uses of varying densities, consisting of apartments, condominiums, and townhomes (see Table 2-1). The apartments would be located in 3 to 5-story stacked apartment units, up to 77 feet (ft) in building height, with studio, one- or two-bedroom units and parking in an above and below-grade garage. The apartments would include a 1,500 square foot retail space and residential leasing office with amenities at the corner of Aster Avenue and Willow Avenue. The project would include two 2 to 7-story condominium buildings in the center of the site with a building height of up to 85 feet and 189 units. The western portion of the site would include 140 for-sale townhome units with 2 to 4 bedrooms, ranging from 1,425 square feet (sf) to 2,160 sf. All townhomes would be 2- or 3-story in height, with tucked-in two-car garages.

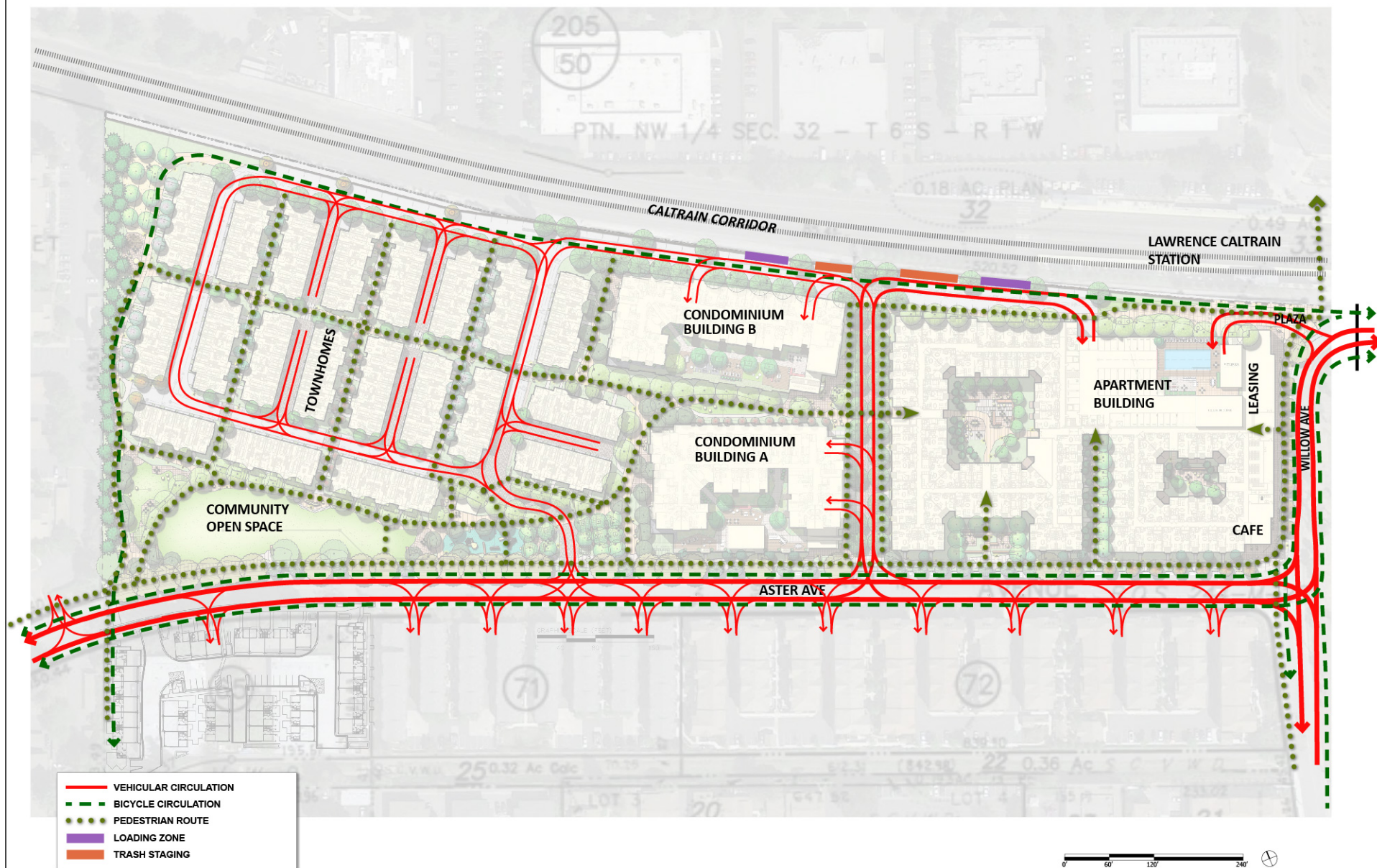
Table 2-1 Proposed Uses

Unit type	Square footage (gross)	Number of Units	Provided Parking
Apartment	460,373	412	572
Condominium	270,322	189	304
Townhome	267,630	140	280
Retail and Amenities	24,717	Not applicable (NA)	3 for retail/café within the apartment garage
Surface Parking	NA	NA	40
Total	1,023,042	741	1,196

Source: Olympic Residential Group 2019

2.4.2 Proposed Site Plan

The project is a residential development within the LSAP area that includes an apartment building (with ground floor retail), two condominium buildings, 20 townhome buildings, and an open space community area with public access. The site would be accessible from Aster and Willow Avenue and would be served with an internal roadway system (see Figure 1-3). The project site would include an approximately 2.3-acre community open space with play area, dog run, and walkways through the site to connect the neighborhood with the Caltrain Lawrence Station. The new sidewalks and plazas are part of pedestrian improvements on the site. The project would be in compliance with LSAP policies regarding site design that include requiring development under the LSAP be compatible with their surroundings. The LSAP also includes policies regarding street design to create safe and comfortable movement on foot, including streetscape amenities like street trees, furniture, and street lights (see Figure 2-3).



Source: Provided by Studio T Square in 2019

X18010125 01 003

Figure 2-3

Proposed Vehicular and Bicycle/Pedestrian Circulation Plan

Sunnyvale Municipal Code (SMC) Chapter 19.94 requires tree removal permits for heritage trees or other protected trees. The proposed project would result in the removal of up to 44 trees, 24 of which are a protected size under the SMC. An additional three trees of protected size would be relocated. Removal of trees would be incorporated with the Special Development Permit required for the project. The City requires tree removal to include the replacement of the trees. The project proposes to plant 391 trees of varying sizes.

2.4.3 Building Height and Massing

The LSAP Building Height guidelines call for a height restriction of 35 ft to 55 ft. SMC Chapter 19.35 allows a maximum height of 55 feet. See Figures 2-4 and 2-5 for illustrative examples of the potential apartment buildings as seen from the Lawrence Expressway (Figure 2-4) and from Aster Avenue (Figure 2-5). See Figure 2-6 for an illustrative example of the potential condominium buildings as seen from Aster Avenue. See Figures 2-7 and 2-8 for illustrative examples of the potential townhome units, as seen from Aster Avenue. Setbacks would conform to the City's zoning code with 15 ft along Aster Avenue and 10 ft at Willow Avenue.

APARTMENTS

The apartment complex would be located on the eastern portion of the site with 412 apartments with one parking spot per bedroom located in a wrapped garage. The maximum apartment building height proposed ranges from 57 to 69 ft with a rooftop clubhouse height up to 77 ft, which would require a deviation from 19.35.060 of the SMC. Deviations to standards for maximum height may be considered with the Special Development Permit (SDP) for the project, per Section 19.90.030 of the SMC. The apartment complex would be accessible off Aster and Willow Avenue. The complex would contain pool amenities, plazas located in the middle of the complex area accessible by sidewalks, and a café on the corner of Willow Avenue and Aster Avenue. The complex is required by the City's zoning code to have a 15-ft setback along Aster Avenue and a 10-ft setback along Willow Avenue.

CONDOMINIUMS

The two condominium buildings would be located in the center of the project site between the apartment complexes and the townhomes. There would be 189 condos total (94 in Building A and 95 in Building B), including parking at an average of 1.6 spaces per unit located in 2-level podium garages below the units. The maximum condominiums height ranges from 71 to 85 ft, which would also require a deviation from Table 19.35.060 of the SMC and may be considered through the SDP. The units would be accessed from Aster Avenue.

TOWNHOMES

The townhomes would be located on the westernmost portion of the site. There would be 140 units available ranging from 1,425 sf to 2,160 sf. The townhomes would be 2- or 3-stories in height and contain tucked-in-two-car garages. Similar to the other housing units, the townhomes would be accessible off Aster Avenue. See Figures 2-7 and 2-8 for illustrative examples of the potential townhome buildings, as seen from Aster Avenue.

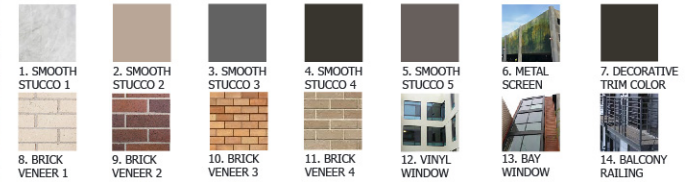


A APARTMENT BUILDING AND CONDOMINIUM BUILDING B SEEN FROM LAWRENCE EXPRESSWAY, WITH CALTRAIN TRACKS IN FOREGROUND

INSPIRATIONAL IMAGES

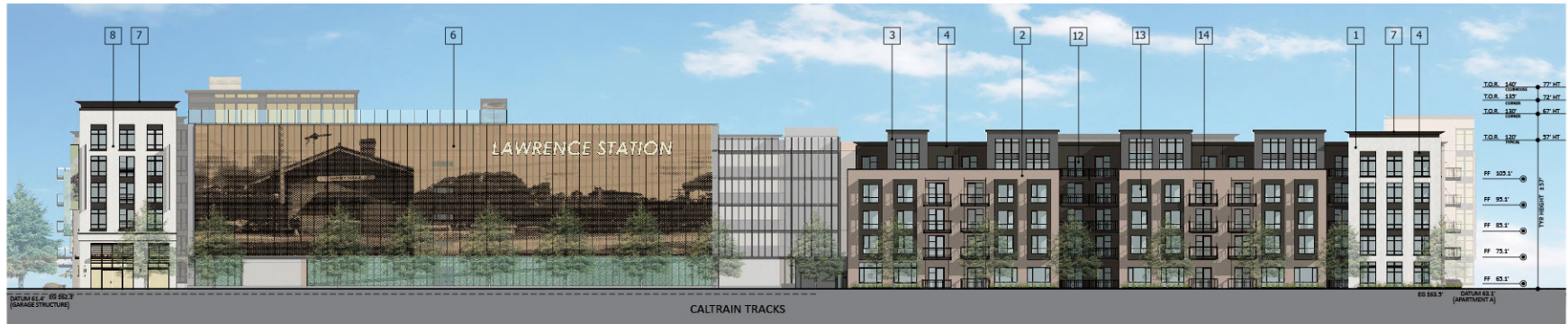


APARTMENT MATERIAL PALETTE



APARTMENT ELEVATION - NORTH

SCALE : 1" = 20'

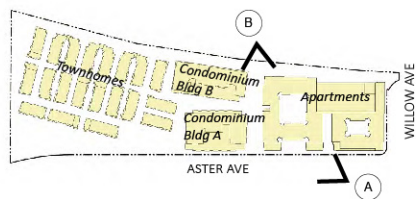


Source: Provided by Studio T Square in 2019

X18010125 01 004

Figure 2-4

Proposed Apartments Elevation and Perspective from Caltrain tracks

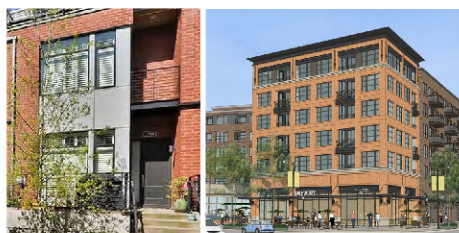


(A) APARTMENT BUILDING LOOKING WEST ALONG ASTER AVE

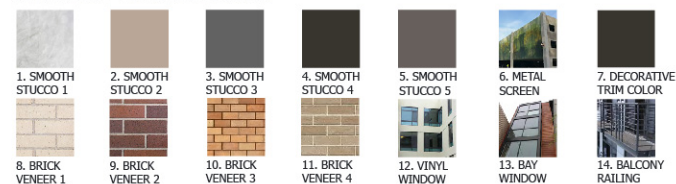


(B) VIEW OF WEST ELEVATION FROM GREEN BELT

INSPIRATIONAL IMAGES



APARTMENT MATERIAL PALETTE



APARTMENT ELEVATION - WEST SCALE: 1" = 20'

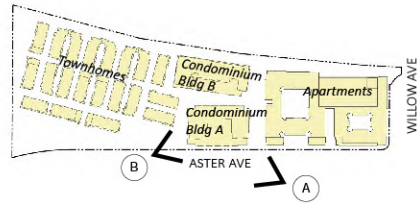


Source: Provided by Studio T Square in 2019

X18010125 01 010

Figure 2-5

Proposed Apartments Elevation and Perspective from Aster Avenue and Project Interior



INSPIRATIONAL IMAGES



(A) CONDOMINIUM BUILDING A LOOKING WEST ALONG ASTER AVE



(B) CONDOMINIUM BUILDING A LOOKING EAST ALONG ASTER AVE

CONDOMINIUM MATERIAL PALETTE



CONDOMINIUM A ELEVATION - SOUTH

SCALE: 1" = 20'



CONDOMINIUM A ELEVATION - EAST

SCALE: 1" = 20'



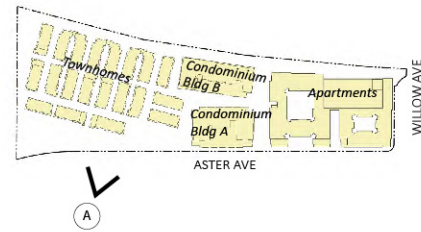
Source: Provided by Studio T Square in 2019

X18010125 01.005

Figure 2-6

Proposed Condominiums Elevation and Perspective





*TOWNHOME TYPE 1 INCLUDES 7A, 7C, 7D, 7E, 8-PLEX

TOWNHOME TYPE 1: MATERIAL PALETTE A



TOWNHOME TYPE 1: MATERIAL PALETTE B



TOWNHOME TYPE 1 ELEVATION - FRONT (TYP.)

SCALE: 1" = 10'



(A) TOWNHOME TYPE 1 - MATERIAL PALETTE A

TOWNHOME TYPE 1 ELEVATION - RIGHT (TYP.)

SCALE: 1" = 10'



Source: Provided by Studio T Square in 2019

X18010125 01 006

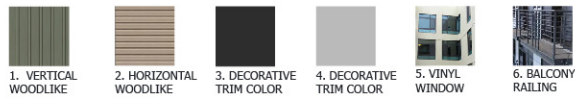
Figure 2-7

Proposed Townhomes Elevation and Perspective, Type 1

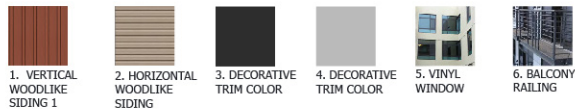


* TOWNHOME TYPE 2 INCLUDES 6-PLEX, 7A, 7B

TOWNHOME TYPE 2A MATERIAL PALETTE



TOWNHOME TYPE 2B MATERIAL PALETTE



A TOWNHOME TYPE 2A

TOWNHOME TYPE 2A ELEVATION - FRONT (TYP.)

SCALE: 1" = 10'-0"



TOWNHOME TYPE 2A ELEVATION - RIGHT (TYP.)

SCALE: 1" = 10'-0"



TOWNHOME TYPE 2B ELEVATION - FRONT (TYP.)

SCALE: 1" = 10'-0"



TOWNHOME TYPE 2B ELEVATION - RIGHT (TYP.)

SCALE: 1" = 10'-0"



Source: Provided by Studio T Square in 2019

X18010125 01.009

Figure 2-8

Proposed Townhomes Elevation and Perspective, Type 2

2.4.4 Utilities

The project site is currently served by utility providers for the existing uses. Natural gas and electricity are provided by Pacific Gas and Electric. Water and wastewater disposal and treatment are provided by the City of Sunnyvale. The project applicant would construct and maintain on-site utilities that connect to existing infrastructure for water, sewer, storm drain, electricity, gas, telecommunications and other services. The project site is served by an existing 39-inch storm drain that traverses from east to west near the northern property line. The project would re-align and shift a portion of the existing storm drain line to provide for more efficient uses for the development. The storm drain line would more closely follow the alignment of the existing northerly property line. The development is also proposing new tie-in connection points directly into the relocated 39-inch storm drain line along the north side of the property.

STORMWATER

The project site qualifies as a Special Project under the Santa Clara Valley Urban Runoff C3 Requirements. This allows Low Impact Development (LID) reduction credit and non-LID treatment measures. Based on location, the project qualifies for a 50-percent credit because it is within 0.24 miles of the Lawrence Station Transit hub. The site would use a minimum of 60-percent LID reduction credits through location and density credits with a possibility of up to 70-percent credit. As a result, up to 40 percent of the runoff from the impervious area on the site would be treated through BMP measures such as flow through planters and bio-retention swales and basins. The remaining 60 percent of the total impervious area of the site would be routed and treated through mechanical treatment devices.

2.4.5 Open Space and Landscaping

The project would include an approximately 2.3-acre public community open space area along the south and west boundary. Additionally, an internal green open space would run between the townhomes and condominium buildings and would provide an informal pedestrian connection from the apartments to the community open space (see Figure 2-7). As described above, the project site contains 134 trees that vary in species and size (including 48 bottlebrush trees/shrubs), and the proposed project would result in the removal of up to 47 trees (including 24 protected trees to be removed and an additional three protected trees to be relocated). Removal of trees would be incorporated with the SDP for the project, and the City requires the replacement of the trees. The project would include the planting of 391 trees of varying sizes. Landscaping would feature native and low-water use plants, trees, shrubs, and other ground cover.

2.4.6 Circulation and Access

As noted above, the project would be served by an internal roadway system and would be accessible from Aster and Willow Avenue. The main driveway entry would be along Aster Avenue between the apartment and condominium buildings. A secondary Aster Avenue driveway near the townhomes would align with an existing driveway across Aster Avenue. Circulation infrastructure would include signage off-site at the intersection of Willow Avenue and Reed Avenue. The project would include the installation of a sign restricting left turns from southbound Willow Avenue onto Reed Avenue during the a.m. peak (7:00 a.m. to 9:00 a.m.) and p.m. peak (4:00 p.m. to 6:00 p.m.) periods.

2.5 CONSTRUCTION ACTIVITIES

Construction activities associated with the project would include demolition activities, excavation, and relocation of soil on the site, backfilling and compaction of soils, construction of infrastructure improvements

(water supply, wastewater, drainage facilities, electrical and natural gas, roadway, and driveway improvements), and construction of residential and community open space uses. These construction activities would also include cleanup of existing on-site contamination associated with the planned removal of a gasoline and diesel underground storage tanks. The applicant is entering into a Voluntary Clean-Up Program with Santa Clara County Department of Environmental Health.

Construction equipment would vary day-to-day depending on the project phase and the activities occurring, but could involve operation of demolition equipment, graders, dozers, excavators, scrapers, other tractors, cranes, forklifts, generator sets, curb equipment, pavers, paving equipment, rollers, welders, and air compressors. No pile driving is proposed for the project. Offsite construction would include public right-of-way improvements such as new sidewalks, bicycle lanes, a center two-way left turn lane on Aster Avenue, and the installation of the proposed traffic signage at the intersection of Reed Avenue and Willow Avenue.

Construction workers would access the site via Aster Avenue. The applicant estimates 500 cubic yards of soil would be removed from the site during site cleanup and preparation. Following demolition and removal of existing uses and cleanup, the site would be prepared for construction. Construction would include the import of approximately 26,000 cubic yards of fill to raise building pad elevations. Fill will be placed on the site in designated areas to raise the ground to satisfy Federal Emergency Management Agency (FEMA) requirements to remove the designated areas from the FEMA flood zone (Flood Zone AO). This would be done in coordination with FEMA.

Construction activities would occur between 7:00 a.m. and 6:00 p.m. on Monday through Friday, and 8:00 a.m. to 5:00 p.m. Saturdays. No construction work would occur on Sundays or holidays. No restrictions on construction seasons are expected. A construction management plan would be required by the City. The project applicant has agreed to require construction contractors only use off-road construction equipment that meet EPA's Tier 4 emission standards as defined in 40 CFR 1039, as available. The City would determine the construction truck routes. Construction staging for materials and equipment and worker parking would occur on the project site. Development of the project site would occur over an approximate 3-year timeframe with overlapping phases for the different building types. It is expected that the townhomes would be constructed first over a period of 27 months; the apartments would be constructed second over a period of 31 months; and the condominiums would complete project construction with a duration of 34 months. The overall construction period would be 37 months. However, ultimate development of the site would be based on market conditions.

2.6 REQUIRED ACTIONS

The project would require the following actions by the City.

- ▲ approval of a Special Development Permit for site and architectural (i.e. design) review, removal of protected trees; and
- ▲ approval of a Vesting Tentative Subdivision Map.

Other anticipated permits, approvals, and actions associated with the project includes the following:

- ▲ approval of the Voluntary Clean-Up Program by the Santa Clara County Department of Environmental Health, and
- ▲ issuance of demolition permits for removal of existing buildings and parking lots and building permits for construction of the new project.

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3 ENVIRONMENTAL CHECKLIST FOR SUPPLEMENTAL ENVIRONMENTAL REVIEW

3.1 EXPLANATION OF CHECKLIST EVALUATION CATEGORIES

The purpose of this checklist is to evaluate the categories in terms of any “changed condition” (i.e., changed circumstances, project changes, or new information of substantial importance) that may result in environmental impact significance conclusions different from those found in the LSAP EIR. The row titles of the checklist include the full range of environmental topics, as presented in Appendix G of the State CEQA Guidelines. The column titles of the checklist have been modified from the Appendix G presentation to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162. A “no” answer does not necessarily mean that there are no potential impacts relative to the environmental category, but that there is no change in the condition or status of the impact because it was analyzed and addressed with mitigation measures in the LSAP EIR. For instance, the environmental categories might be answered with a “no” in the checklist because the impacts associated with the project were adequately addressed in the LSAP EIR, and the environmental impact significance conclusions of the LSAP EIR remain applicable. The purpose of each column of the checklist is described below.

Where Impact was Analyzed

This column provides a cross-reference to the pages of the LSAP Draft and Final EIR where information and analysis may be found relative to the environmental issue listed under each topic.

Do Proposed Changes Involve New Significant Impacts?

The significance of the environmental impacts of the project-specific features not considered in the LSAP and its EIR, is indicated in the columns to the right of the environmental issues.

Any new Circumstances Involving New or Substantially More Severe Significant Impacts?

Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (circumstances under which the project is undertaken) that have occurred subsequent to the prior environmental documents, which would result in the current project having new significant environmental impacts that were not considered in the prior environmental documents or having substantial increases in the severity of previously identified significant impacts.

Any New Information Requiring New Analysis or Verification?

Pursuant to Section 15162(a)(3)(A-D) of the CEQA Guidelines, this column indicates whether 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 environmental documents were certified as complete is available, requiring an update to the analysis of the previous environmental documents to verify that the environmental conclusions and mitigation measures remain valid. If the new information shows that: (A) the project will have one or more significant effects not discussed in the prior environmental documents; or (B) that significant effects previously examined will be substantially more severe than shown in the prior environmental documents; or (C) that mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects or the project, but the project proponents decline to adopt the Mitigation Measure or alternative; or (D) that mitigation measures or alternatives which are considerably different from those analyzed in the prior environmental documents would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the Mitigation Measure or alternative, the question would be answered “yes” requiring the preparation of a subsequent EIR or supplement to the EIR. However, if the additional analysis completed as part of this Environmental Checklist Review finds that the conclusions of the prior environmental documents remain the same and no new significant impacts are identified, or

identified significant environmental impacts are not found to be substantially more severe, the question would be answered “no” and no additional EIR documentation (supplement to the EIR or subsequent EIR) would be required.

Notably, where the only basis for preparing a subsequent EIR or a supplement to an EIR is a new significant impact or a substantial increase in the severity of a previously identified impact, the need for the new EIR can be avoided if the project applicant agrees to one or more mitigation measures that can reduce the significant effect(s) at issue to less-than-significant levels. (See *River Valley Preservation Project v. Metropolitan Transit Development Board* (1995) 37 Cal.App.4th 154, 168.)

Do Prior Environmental Documents Mitigations Address/Resolve Impacts?

This column indicates whether the prior environmental documents and adopted CEQA Findings provide mitigation measures to address effects in the related impact category. In some cases, the mitigation measures have already been implemented. A “yes” response will be provided in either instance. If “NA” is indicated, this Environmental Checklist Review concludes that there was no impact, or the impact was less-than-significant and, therefore, no mitigation measures are needed.

3.2 DISCUSSION AND MITIGATION SECTIONS

Discussion

A discussion of the elements of the checklist is provided under each environmental category to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue, and the status of any mitigation that may be required or that has already been implemented.

Mitigation Measures

Applicable mitigation measures from the prior environmental review that would apply to the project are listed under each environmental category. New mitigation measures are included, if needed.

Conclusions

A discussion of the conclusion relating to the need for additional environmental documentation is contained in each section.

Acronyms Used in Checklist Tables

Acronyms used in the Environmental Checklist tables and discussions include:

EIR	Environmental Impact Report
MM	Mitigation Measure
NA	not applicable

4 ENVIRONMENTAL CHECKLIST

4.1 AESTHETICS

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Do Any New Circumstances Involve New or Substantially More Severe Significant Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
1. Aesthetics. Would the project:				
a. Have a substantial adverse effect on a scenic vista?	Draft EIR Setting pp. 3.12-1 to 3.12-5 No Impact	No	No	NA, no impact would occur.
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Draft EIR Setting pp. 3.12-1 to 3.12-5 No Impact	No	No	NA, no impact would occur.
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	Draft EIR Setting pp. 3.12-1 to 3.12-5 Impacts 3.12.1, 3.12.3 and 3.12.4	No	No	NA, impact remains less than significant.
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	Draft EIR Setting pp. 3.12-1 to 3.12-5 Impacts 3.12.2 and 3.12.4	No	No	NA, impact remains less than significant.

4.1.1 Discussion

No substantial change in the environmental and regulatory settings related to aesthetics, described in the LSAP Draft EIR Section 3.12, Visual Resources and Aesthetics, has occurred since certification of the EIR in December 2016. In April 2017, the City Council adopted an update to the City's Land Use and Transportation Element (LUTE) of its General Plan. The LUTE incorporates and integrates policy direction and land use patterns from other City of Sunnyvale planning documents, including the LSAP.

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

As described in the LSAP Draft EIR Section 3.12, Visual Resources and Aesthetics, there are no scenic vistas within the plan area, and the plan area is not located near any officially designated state or county scenic highway. Therefore, no impact would occur for the project.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Impact 3.12.1 of the LSAP EIR describes permanent changes to the visual character of the LSAP area from development, while Impact 3.12.3 addressed potential shadow impacts of new buildings in the plan area. Impact 3.12.4 addresses whether the LSAP would contribute to cumulative aesthetic impacts.

The LSAP Draft EIR identified that the LSAP would provide opportunities for new development and redevelopment, including higher densities, mixed use, and new urban living elements in areas generally occupied by industrial, office/research and development, and other nonresidential uses. The Transit Core, West, East, and Peninsula subareas, which adjoin the Caltrain tracks on the north and south, could experience the greatest amount of land use changes. The changes would alter the visual characteristics of those subareas compared to existing conditions. The land use changes in the Transit Core, West, East, and Peninsula subareas could be visible from residential uses, depending on the viewers' locations relative to the areas where the higher intensity land uses could be developed around the Lawrence Caltrain Station.

The project site is located in the Peninsula subarea and would include building heights up to 85 feet for the podium condominium buildings. The LSAP EIR stated that the Transit Core and West and East subareas could consist of vertical development up to 85 feet in height with varying building footprints. The buildings could be substantially taller and would be more visible than the existing low-rise, large-footprint structures that currently occupy the area and could generate shadow impacts. While the project site is outside of these subareas, within the Peninsula subarea, the project site is similarly located adjacent to the Caltrain tracks and the Lawrence Expressway. The project would require a deviation from Table 19.35.060 of the SMC to exceed the maximum allowable height designated in the LSAP for the MXD-III zoning district (Peninsula Subarea). Deviations to standards for maximum height may be considered with the Special Development Permit for the project, per Section 19.90.030 of the SMC. The LSAP EIR stated that the appearance of the height and mass of taller buildings and structures would be minimized through areawide design guidelines in the Lawrence Station Area Plan such as BH-UDG4, BMA-UDG1, BMA-UDG2, BO-UDG10, and PK-UDG14. These guidelines, along with other areawide and subarea-specific guidelines, encourage the greatest concentration of taller buildings near the Lawrence Station (Transit Core subarea), where the elevated portion of the station creates an existing vertical element. Variations in building height within blocks and parcels in the subarea and limits on the footprint of the tallest portion of a building on a lot, along with modulation and articulation of building massing to reduce apparent scale to provide visual interest and variety, would avoid a blocky uniform appearance. The Aster Avenue project would provide a variety of building heights between the apartment, condominium, and townhome structures. The typical apartment heights proposed is 65 feet, with lower 35-foot massing facing Aster Avenue. The tallest building portions would be placed closest to the center of the site and the Caltrain station. Consistent with the LSAP Guidelines, adjacent to existing residential neighborhoods on Aster Avenue heights would step down to provide a transition in scale. Setbacks would conform to the City's zoning code with 15 feet along Aster Avenue and 10 feet at Willow Avenue. As explained in the LSAP EIR, the LSAP measures would ensure that development of taller buildings would not be visually intrusive and would be consistent with surrounding urban form and context, both when viewed from within the plan area or when viewed from outside the plan area. The LSAP also contains guidelines to ensure appropriate open space and landscaping is included to provide visual interest and overall beautification of the subareas. The project would include an approximately 2.3-acre community open space area along the western boundary, which would be visible from Aster Avenue. Although the visual appearance of the Peninsula subarea would change, the plan area would retain Sunnyvale's established urban visual character.

Compliance with existing Sunnyvale General Plan policies, zoning regulations, standard development conditions, Citywide Design Guidelines, and the proposed LSAP policies and guidelines would minimize potential effects on the visual environment that could be subjectively perceived as adverse or negative. Therefore, implementation of the LSAP would not substantially degrade the visual character or quality of the plan area or its surroundings under project or cumulative conditions.

Although project building heights, with a rooftop clubhouse facing the railroad tracks that could reach 77 feet and would be higher than the LSAP maximum allowed height of 55 feet for the MXD-III zoning district, the project would be consistent with the LSAP standards and are subject to LSAP policies and guidelines for design, including for design of taller buildings. Therefore, no new significant impacts or substantially more severe impacts would occur, and the findings of the certified LSAP EIR remain valid.

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

As identified in Impact 3.12.3, there are existing sources of nighttime lighting and glare in the plan area because it is largely built out with residential and nonresidential uses. New development in the Transit Core, West, East, and Peninsula subareas would comprise the predominant potential sources of additional nighttime lighting and illumination in the plan area because those areas could experience the greatest amount of land use changes. Potential sources of nighttime lighting would be expected to include exterior lighting on new nonresidential and residential buildings, light emanating from building interiors, additional street lighting on new street improvements. Additional nighttime illumination could also contribute to existing skyglow conditions. Glare could be created from reflective surfaces, such as vehicles in parking lots and windows on buildings.

The LSAP contains several areawide design guidelines that would help reduce the potential for spillover lighting and skyglow effects associated with nighttime illumination and to minimize glare from reflective surfaces. For example, a Lighting Master Plan would be required as part of the Streetscape Master Plan (Guideline L-UDG1). Dark sky goals would be incorporated into the Lighting Master Plan (L-UDG2). Other guidelines address the use of luminaries with white, natural appearing light in pedestrian areas and requirements for pole heights that relate to the scale of the street and include shielding or directionality to avoid light spillover and glare. Potential glare effects from new buildings would be minimized through Guideline BO-UDG3 (clear, nonreflective glazing on all windows at street level) and avoiding highly reflective surfaces and materials (BM-UDG5). Shading and perimeter landscaping at surface parking lots (PK-UDG8) would reduce the amount of glare that could be generated from vehicle windshields. Additionally, compliance with Section 19.42.050 of the Sunnyvale Municipal Code would further minimize potential light and glare impacts by ensuring that all lights, spotlights, floodlights, reflectors, and other means of illumination are shielded or equipped with special lenses in such a manner as to prevent any glare or direct illumination on any public street or other property.

The LSAP EIR stated that implementation of the proposed lighting, building design, and landscaping guidelines, as well as continued compliance with the City's existing lighting regulations, would ensure that potential light and glare impacts are reduced to a level that would be less than significant for the LSAP under project and cumulative conditions.

No changes in the proposed nighttime lighting conditions for the project site have occurred since approval of the LSAP. Project proposed lighting and compliance with City standards is provided in the project design plans (see sheets L1.0 through L8.0). Therefore, no new significant impacts or substantially more severe impacts would occur. The findings of the certified LSAP EIR remain valid, and this impact would remain less than significant.

Mitigation Measures

No significant aesthetic impacts were identified in the LSAP EIR, and no mitigation measures were required.

CONCLUSION

No new circumstances or project changes have occurred nor has any new information been found that would result in new significant or substantially more severe impacts than those identified in the LSAP EIR. Therefore, the conclusions of the LSAP EIR remain valid and approval of the project would not result in new or substantially more severe significant impacts to aesthetics.

4.2 AGRICULTURE AND FOREST RESOURCES

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
2. Agriculture and Forestry Resources. 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?	Scoped out at Notice of Preparation stage. Resources do not exist in LSAP area.	No	No	NA
b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Scoped out at Notice of Preparation stage. No agricultural zoning or Williamson Act contracted lands exist in LSAP area.	No	No	NA
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))?	Scoped out at Notice of Preparation stage. Resources do not exist in LSAP area.	No	No	NA
d. Result in the loss of forest land or conversion of forest land to non-forest land?	Scoped out at Notice of Preparation stage. Resources do not exist in LSAP area.	No	No	NA
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?	Scoped out at Notice of Preparation stage. Resources do not exist in LSAP area.	No	No	NA

4.2.1 Discussion and Conclusion

Agricultural and forestry impacts were scoped out of the LSAP EIR at the Notice of Preparation stage as these resources do not exist in the LSAP area. The project site does not contain any of these resources; therefore, the project would also have no impact.

4.3 AIR QUALITY

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents' Mitigations Address/Resolve Impacts?
3. Air Quality. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	Draft EIR Setting pp. 3.5-1 to 3.12-20 Impact 3.5.1	No	No	NA, impact remains less than significant
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	Draft EIR Setting pp. 3.5-1 to 3.12-20 Impacts 3.5.2, 3.5.3, and 3.5.8	No	No	Yes, impact would be less than significant.
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	Draft EIR Setting pp. 3.5-1 to 3.12-20 Impact 3.5.8	No	No	Yes, impact would be less than significant.
d. Expose sensitive receptors to substantial pollutant concentrations?	Draft EIR Setting pp. 3.5-1 to 3.12-20 Impacts 3.5.4, 3.5.5, and 3.5.6	No	No	Yes, impacts would be less than significant.
e. Create objectionable odors affecting a substantial number of people?	Draft EIR Setting pp. 3.5-1 to 3.12-20 Impact 3.5.7	No	No	NA, impact remains less than significant.

4.3.1 Discussion

No substantial change in the environmental setting related to Air Quality, described in LSAP Draft EIR Section 3.5, Air Quality, has occurred since certification of the EIR in December 2016.

Since preparation of the LSAP EIR, a California Supreme Court decision, and subsequent revisions to the CEQA Guidelines, resulted in changes to CEQA regarding the effects of existing environmental conditions on a project's future users or residents. The effects of the environment on a project are generally outside the scope of CEQA unless the project would exacerbate these conditions, as concluded by the California Supreme Court (see *California Building Industry Association v. Bay Area Air Quality Management District* [2015] 62 Cal.4th 369, 377 ["we conclude that agencies generally subject to CEQA are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users."]). Changes to the State CEQA Guidelines to reflect this decision were adopted on December 28, 2018. As noted in the BAAQMD's revised CEQA thresholds of significance, local agencies are not precluded from considering the impact of locating new development in areas subject to existing environmental hazards; however, CEQA cannot be used by a lead agency to require a developer or other agency to obtain an EIR or implement mitigation measures solely because the occupants or users of a new project would be subjected to the level of emissions specified. However, because the LSAP EIR was certified before these changes, previous and updated discussions of effects of the environment related to air quality on future residents are included herein for disclosure purposes.

a) Conflict with or obstruct implementation of the applicable air quality plan?

As identified in Impact 3.5.1 of the LSAP EIR, the LSAP is a transit-oriented development in support of the Lawrence Caltrain station. The LSAP has been developed to promote greater use of the existing Lawrence Station transit asset and guide the development of a diverse neighborhood for employment, residential, retail, and other support services. The LSAP includes policies which prioritize new residential development near transit stations, improve connections between the transit station and adjacent destinations, and densify and intensify the land uses at key locations within the plan area. The project is also located in a Transit Priority Area (TPA) and Priority Development Area (PDA) as part of the Metropolitan Transportation Commissions (MTC) regional transportation plan, Plan Bay Area 2040. Plan Bay Area 2040 serves as MTC's regional transportation plan, helping to identify transportation and land use strategies to guide long-term growth in the MTC planning area.

The Bay Area Air Quality Management District's (BAAQMD) 2017 Clean Air Plan is the air district's most recent air quality plan which provides strategies to fulfill state ozone planning requirements by reducing emissions of ozone precursors (ROG and NOx) and reducing transport of ozone and its precursors to neighboring air basins, as well as reducing emissions from fine particulate matter and toxic air contaminants. BAAQMD's 2017 Clean Air Plan includes various control strategies to reduce emissions of local and regional pollutants, including reductions from stationary sources such as industrial facilities and power plants as well as mobile sources such as automobiles and trucks. The LSAP remains consistent with the control strategies included in BAAQMD's 2017 Clean Air Plan by prioritizing new development near existing transit facilities, promoting the use of transit for new residents in the plan area, and reducing reliance on of personal vehicles as the primary mode of transportation. Specifically, the LSAP aligns with the 2017 Clean Air Plan's control measures TR 5 "Land Use Strategies" which is focused on supporting implementation of Plan Bay Area 2040 as a tool to increase use of public transit and improve regional air quality. The LSAP EIR determined that policy provisions of the LSAP support the goals of the Clean Air Plan as they include applicable pollutant control mechanisms. Therefore, the LSAP EIR concluded that this impact is considered less than significant.

No changes in the air quality conditions for the project site have occurred since approval of the LSAP. The project's land uses are consistent with the LSAP. The project would promote a diversity of land uses and densities that will support transit usage and neighborhood services, and also provide a range of housing densities within walking distance of the Caltrain Lawrence Station. See the discussion under checklist item 4.7a in the Greenhouse Gas Emissions portion of this checklist for a discussion of the City's Climate Action Plan. The project would be consistent with applicable air quality plans, and no new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Operational Emissions of Criteria Pollutants and Precursor Emissions

The 2011 BAAQMD CEQA Guidelines do not contain numeric thresholds related to criteria pollutant emissions resulting from 'plan implementation'. According to the BAAQMD CEQA Guidelines, in order to identify whether a plan would violate any ambient air quality standard or contribute substantially to an existing or projected air quality violation, the LSAP must demonstrate consistency with the control measures contained in the most recent Clean Air Plan (BAAQMD 2017). Based on the BAAQMD CEQA Guidelines, the plan must also demonstrate that projected VMT increases as a result of the plan area are less than or equal to projected population increases over its planning period. As discussed in Impact 3.5.2 and shown in Table 3.5.8 of the LSAP EIR, the plan's projected VMT increase (109 percent) would increase at a lower rate than population growth (175 percent) in comparison to existing conditions. Therefore, the LSAP EIR concluded that this impact would be less than significant.

No changes in the air quality conditions for the project site have occurred since approval of the LSAP. The project's land uses are consistent with the LSAP. The project would promote a diversity of land uses and

densities that will support transit usage and neighborhood services, and also provide a range of housing densities within walking distance of the Caltrain Lawrence Station. As noted under checklist item 4.17i, implementation of the LSAP would also result in an improvement in VMT per capita as compared to citywide VMT under the existing General Plan and the Land Use and Transportation Element. This is consistent with the intent of the LSAP to improve the use of alternative modes of transportation and reduce vehicle use and associated VMT. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

Construction Emissions of Criteria Air Pollutants and Precursor Emissions

As discussed in Impact 3.5.3 of the LSAP EIR, construction projects can produce ozone precursors and fugitive dust emissions. The LSAP EIR explained that project-level analyses of air quality impacts for projects in the LSAP area are required to be conducted on a case-by-case basis as individual, future development projects are proposed. As part of the LSAP EIR, the City adopted Mitigation Measures MM 3.5.3a that requires compliance with BAAQMD basic construction mitigation measures from Table 8-1 of the BAAQMD 2011 CEQA Air Quality Guidelines and Mitigation Measures MM 3.5.3a.

The project would include demolition of existing uses onsite and the construction and operation of approximately 2.3 acres of community open space and 412 for-rent apartments (including 1,500 square feet of retail space), two condominium buildings, and townhomes for a total of 741 dwelling units. As discussed in the Section 2.5, "Construction Activities" in the Project Description, project construction would include the use of California Air Resources Board (CARB) Tier 4 engines for all off-road construction equipment, resulting in reductions in criteria air pollutants. Construction-related air quality modeling has been conducted for the project, and Table 4.3-1 includes modeled daily construction emissions estimates for the project.

Table 4.3-1 Summary of Daily Construction Emissions of Criteria Pollutants and Precursor Emissions

Emissions Source	ROG	NOx	PM ₁₀	PM _{2.5}
2019	.6	3.1	.6	.2
2020	4	21.1	14.7	6.3
2021	3.3	17.7	6.6	1.9
2022	52.7	16.1	7.7	2.1
Maximum Daily Emissions	52.7	21.1	14.7	6.3
BAAQMD Emissions Threshold	54	54	82 ¹	54 ¹

Notes: ROG = Reactive Organic Gases; NOx = Oxides of Nitrogen; PM₁₀ = Particulate matter 10 micrometers or less in diameter; PM_{2.5} = Fine particulate matter.

¹ Exhaust emissions only

Source: Modeled by Ascent Environmental 2018.

Based on the LSAP EIR, conditions of approval would require that Mitigation Measures MM 3.5.3a be implemented as part of the project. As shown in Table 4.3-1, the project's construction-related emissions of NOx, PM₁₀, and/or PM_{2.5} would not exceed BAAQMD's significance thresholds for construction emissions. Therefore, no new significant impacts or substantially more severe impacts would occur that have not been addressed in the LSAP EIR, and this impact would be less than significant for the project.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The San Francisco Bay Area Air Basin is currently in non-attainment for California's Ambient Air Quality Standard for Ozone (1-Hour and 8-Hour Standards), PM₁₀, and PM_{2.5} (BAAQMD 2018). The LSAP EIR noted that, due to future uncertainties regarding the details of future individual projects under the LSAP, the LSAP could result in a cumulatively considerable net increase of a criteria pollutant for which the project region is in non-attainment. The cumulative impact (Impact 3.5.8 of the LSAP EIR) was determined to be significant and unavoidable even with implementation of Mitigation Measures MM 3.5.3a, which requires that BAAQMD basic construction mitigation measures are employed.

As shown in Table 4.3-1, construction-related emissions of ROG, NO_x, PM₁₀, and/or PM_{2.5} would not exceed BAAQMD's significance thresholds. Therefore, the project would not result in a cumulatively considerable net increase in any criteria air pollutant for which the region is in non-attainment under an applicable federal or state ambient air quality. This impact would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Carbon Monoxide Concentrations

Based on BAAQMD's CEQA guidelines, projects meeting the following screening criteria would be considered to have a less-than-significant impact on localized carbon monoxide concentrations if:

- ▲ The project traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- ▲ The project traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited (e.g., tunnel, parking garage, bridge underpass, natural or urban street canyon, below grade roadway).

According to the traffic impact analysis prepared for the LSAP Draft EIR (Hexagon 2018), none of the traffic volumes at any intersection, freeway segment, or freeway ramp would experience more than 44,000 vehicles per hour generated by the LSAP (See Tables 15 & 16 in Appendix C of the LSAP Draft EIR). Similarly, as stated in the LSAP EIR, the LSAP would not result in 24,000 vehicles per hour where vertical and/or horizontal mixing of pollutants and atmosphere is substantially limited (i.e., an enclosed parking structure). As a result, this impact was identified as less than significant for the LSAP under project and cumulative conditions. As discussed above, the project meets both screening criteria as part of BAAQMD's threshold for localized carbon monoxide concentrations. Therefore, the project would not result in exposure of sensitive receptors to substantial concentrations of CO.

No new significant impacts or substantially more severe impacts would occur. The findings of the certified LSAP EIR remain valid. This impact would be less than significant.

Toxic Air Contaminant Concentrations

Temporary, Short-Term Emissions from Construction Equipment

As identified in Impact 3.5.5 of the LSAP EIR, sources of construction-related toxic air contaminants (TACs) potentially affecting sensitive receptors include off-road diesel-powered equipment. In the case of most construction projects allowed under the LSAP, duration would be short-term, lasting less than one year. According to the BAAQMD (2017), construction-generated diesel PM emissions contribute to negative health impacts when construction is extended over lengthy periods of time. Projects under the LSAP would be subject to, and would comply with, California regulations limiting idling to no more than five minutes, which

would further reduce nearby sensitive receptors exposure to temporary and variable diesel PM emissions. Additionally, concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (CARB 2005).

As discussed in Impact 3.5.5 of the LSAP EIR, the project would be required to implement Mitigation Measure MM 3.5.3a which requires that BAAQMD basic construction mitigation measures are employed. Additionally, as discussed in the Section 2.5, "Construction Activities" in the Project Description, project construction would include the use California Air Resources Board (CARB) Tier 4 engines for all off-road construction equipment, resulting in reductions in criteria air pollutants. Impact 3.5.5 of the LSAP EIR also includes Mitigation Measure MM 3.5-3, which requires a site-specific analysis of large-scale construction projects (i.e., projects greater than five acres lasting longer than two years) for the potential of construction-generated air pollutant impacts based on specific project details of future development, and the development of adequate mitigation, in consultation of the BAAQMD, to address any such impacts. Under Mitigation Measure MM 3.5-3, projects would be required to include appropriate mitigation measures to mitigate potential impacts on nearby sensitive receptors only if the BAAQMD risk threshold (i.e., probability of contracting cancer is greater than 10 in 1 million) would be exceeded during the project construction period.

A screening-level Health Risk Assessment (HRA) was conducted by Yorke Engineering (Yorke Engineering 2019) to assess whether project construction activity would result in TAC emissions that would exceed the BAAQMD risk threshold for TACs. Based on the results of the HRA, project construction activity would not result in exposure of existing or planned sensitive land uses in close proximity to the project to construction-source TAC emissions. Construction-related TAC emissions would not exceed the BAAQMD risk threshold (i.e., probability of contracting cancer is greater than 10 in 1 million). Therefore, this impact would be less than significant.

Operational Source Emissions

As addressed in Impact 3.5.6 of the LSAP EIR, sensitive receptors can be exposed to TAC concentrations from future nonresidential land uses in close proximity to the project site. However, as explained above, a recent California Supreme Court decision has determined that exposure to environmental hazards need not be addressed as a CEQA impact if the risk of exacerbation does not occur. As a result, the following discussion of health risk exposure to the project from existing conditions is for informational purposes only. It should be noted that this impact would be similar to Impact 3.5.6, and the project would not result in a more substantial effect than previously analyzed.

Development projects that involve numerous heavy-duty truck trips on-site create substantial quantities of diesel PM emissions, and therefore can negatively affect sensitive land uses. According to CAPCOA's (2009) Health Risk Assessments for Proposed Land Use Projects, operations that require fewer than 100 delivery trucks daily are not considered a potential health risk. The project consists of residential as well as a small amount of retail space (1,500 square feet) and would not generate daily truck traffic in exceedance of 100 daily trips, and would not include any stationary TAC sources. The potential for project residents to be exposed to TAC emissions that would exceed health risk significance threshold identified by BAAQMD from sources surrounding the Aster Avenue property was evaluated based on the sources identified under Impact 3.5.6 of the LSAP EIR in Table 3.5-10 through Table 3.5-12 and additional sources identified through BAAQMD's Stationary Source Screening Analysis Tool and analyzed based on guidance from BAAQMD. Results from this analysis are included in Table 4.3-2. The estimated cancer risks, non-cancer hazards, and PM_{2.5} levels would not exceed the BAAQMD's cumulative cancer risk significance thresholds. However, as shown in Table 4.3-2, the Lawrence Expressway, to the east of the project site, would result in exceedance of BAAQMD's Individual Source Significance Threshold at the project site. As noted under Mitigation Measure MM 3.5.6 in the LSAP EIR, potential health risks from TACs can be mitigated through the use of electrostatic filtering systems or equivalent systems and location of vents away from TAC sources. Additionally, as part of the Caltrain Modernization Program, Caltrain is in the process of electrifying all its rail line with 100 percent of Caltrain trains scheduled to be powered by electricity by 2040. According to the Caltrain Electrification Project Draft Environmental Impact Report (Peninsula Corridor Joint Powers Board 2014), PM emissions generated along the Caltrain corridor between San Jose and San Francisco would be reduced by 71 percent

in 2020 and by 100 percent in 2040. As a result of this project, project residents' exposure to TACs will be reduced over the lifetime of the project.

As a result of the decision in *California Building Industry Association v. Bay Area Air Quality Management District*, as discussed above, this information is provided for informational purposes only, and no significance determination is made regarding this impact.

Table 4.3-2 Summary of Estimated Health Risks and Hazards for the Aster Avenue Project

Source	Cancer Risk (risk per million)	Chronic Non-Cancer Hazard Index ²	Annual PM _{2.5} Concentration (µg/m ³)
Lawrence Expressway ¹	29.77	0.138	0.69
150 Lawrence Station ¹	8.9	0.03	N/A
1170 Kifer Road ¹	3.37	0	0
Caltrain	16.34	0.01	0.08
Highest Individual Source	29.77	0.03	0.16
BAAQMD Individual Source Significance Threshold	10	1	0.3
Exceeds Individual Source Threshold?	Yes	No	No
Source Total (All Sources)	58.38	0.178	0.77
BAAQMD Cumulative Significance Threshold	100	10	0.8
Exceeds Cumulative Threshold?	No	No	No

Notes:

N/A = the BAAQMD has not provided health risks and hazards estimates for these emission sources, although they are listed in the 2014 BAAQMD Toxics Air Emissions Inventory."

1 The cancer risks estimated from the BAAQMD internet-based tools were increased by a factor of 1.05 to account for the differences in cancer risk guidance between the current cancer risk guidance and the cancer risk guidance used to estimate the internet-based cancer risks.

2 Chronic non-cancer hazard index was estimated by dividing the annual DPM concentration (as PM_{2.5} exhaust) by a factor of 5, which has the chronic non-cancer reference exposure level for DM.

Source: Analysis conducted by Ascent Environmental (January 2019).

e) Create objectionable odors affecting a substantial number of people?

The LSAP EIR determined that construction within the plan area is not anticipated to expose nearby receptors to objectionable odors. As noted in Impact 3.5.7 in the LSAP EIR, construction-generated odors are typically associated with exhaust emissions from diesel fueled equipment and the application of architectural coatings and paving materials, which may be considered objectionable to some individuals. However, because construction-related odors would be intermittent, temporary, and would disperse rapidly with distance from the source, construction-related odors would not result in the frequent exposure of a substantial number of individuals to objectionable odors. It is also important to note that the project would be required to comply with BAAQMD Regulation 8, Rule 3, Architectural Coatings, and Rule 15, Emulsified Asphalt, which establish VOC content limits for these construction materials. VOCs are the main sources of odors from these sources. Therefore, compliance with these regulatory requirements would further reduce odor impacts associated with these sources. Short-term exposure to odorous emissions would therefore be considered less than significant. For these reasons, odorous emissions generated during construction under the project would also be less than significant.

The project would consist of residential and retail uses and would not be a major source of odorous emissions. In addition, no existing major stationary sources of odors have been identified in the plan area. The findings of the certified LSAP EIR remain valid, and long-term exposure to odorous emissions would be considered less than significant.

Mitigation Measures

The following mitigation measures were referenced in the LSAP EIR analysis and would be implemented if the project were approved. It should be noted that the portion of Mitigation Measure MM 3.5.5 requiring a project-specific construction-related dispersion modeling acceptable to BAAQMD to identify potential toxic air contaminant impacts, including diesel particulate matter has been completed and additional mitigation measures are not required.

■ Mitigation Measure MM 3.5.3a:

Prior to the issuance of grading or building permits, the City of Sunnyvale shall ensure that the Bay Area Air Quality Management District's (BAAQMD) basic construction mitigation measures from Table 8-1 of the BAAQMD 2011 CEQA Air Quality Guidelines (or subsequent updates) are noted on the construction documents. These basic construction mitigation measures include the following:

- 1) All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day.
- 2) All haul trucks transporting soil, sand, or other loose material off-site shall be covered.
- 3) All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
- 4) All vehicle speeds on unpaved roads shall be limited to 15 miles per hour (mph).
- 5) All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.
- 6) All construction equipment shall be maintained and properly tuned in accordance with manufacturers' specifications. All equipment shall be checked by a certified mechanic and determined to be running in proper condition prior to operation.
- 7) A publicly visible sign shall be posted with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The BAAQMD's phone number shall also be visible to ensure compliance with applicable regulations.

■ Mitigation Measure MM 3.5.5:

In the case when a subsequent project's construction is span greater than five acres and is scheduled to last more than two years, the subsequent project shall be required to prepare a site-specific construction pollutant mitigation plan in consultation with the Bay Area Air Quality Management District (BAAQMD) staff prior to the issuance of grading permits. A project-specific construction-related dispersion modeling acceptable to BAAQMD shall be used to identify potential toxic air contaminant impacts, including diesel particulate matter. If BAAQMD risk thresholds (i.e., probability of contracting cancer is greater than 10 in 1 million) would be exceeded, mitigation measures shall be identified in the construction pollutant mitigation plan to address potential impacts and shall be based on site-specific information such as the distance to the nearest sensitive receptors, project site plan details, and construction schedule. The City shall ensure construction contracts include all identified measures and that the measures reduce the health risk below BAAQMD risk thresholds. Construction pollutant mitigation plan measures shall include, but not be limited to:

- 1) Limiting the amount of acreage to be graded in a single day,
- 2) Restricting intensive equipment usage and intensive ground disturbance to hours outside of normal preschool hours,

3) Notification of affected sensitive receptors one week prior to commencing on-site construction so that any necessary precautions (such as rescheduling or relocation of outdoor activities) can be implemented. The written notification shall include the name and telephone number of the individual empowered to manage construction of the project. In the event that complaints are received, the individual empowered to manage construction shall respond to the complaint within 24 hours. The response shall include identification of measures being taken by the project construction contractor to reduce construction-related air pollutants. Such a measure may include the relocation of equipment.

CONCLUSION

As required by Mitigation Measure MM 3.5.5, adopted as part of the LSAP, the project provides an additional health risk assessment analysis (Yorke 2019). The project-specific analyses provide additional detail for the project site, and the project would not result in new or substantially more severe significant impacts to air quality. The conclusions of the LSAP EIR remain valid.

4.4 BIOLOGICAL RESOURCES

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
4. Biological Resources. 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 or U.S. Fish and Wildlife Service?	Draft EIR Setting pp. 3.9-1 to 3.9-14 Impacts 3.9.1, 3.9.2, 3.9.10, and 3.9.11	No	No	Yes, impacts to special-status bats, nesting raptors, and migratory birds would remain less than significant with application of adopted mitigation measures. Impact on other special-status species remains less than significant
b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	Draft EIR Setting pp. 3.9-1 to 3.9-14 Impacts 3.9.5 and 3.9.6	No	No	NA, impact remains less than significant.
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Draft EIR Setting pp. 3.9-1 to 3.9-14 Impact 3.9.6	No	No	NA, impact remains less than significant
d. Interfere substantially with the movement of any native resident or migratory fish and wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Draft EIR Setting pp. 3.9-1 to 3.9-14 Impact 3.9.7	No	No	NA, impact remains less than significant
e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.	Draft EIR Setting pp. 3.9-1 to 3.9-14 Impact 3.9.8	No	No	NA, impact remains less than significant.
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?	Draft EIR Setting pp. 3.9-1 to 3.9-14 Impact 3.9.9	No	No	NA, no impact would occur.

4.4.1 Discussion

Biological resources are discussed in Chapter 3.9, “Biological Resources,” of the LSAP EIR. The analysis below utilizes updated and site-specific California Natural Diversity Database (CNDDB) and California Native Plant Society (CNPS) records searches of the project vicinity, as well as review of recent aerial imagery of the site (CNDDB 2018, CNPS 2018). It also incorporates the *Aster Avenue Project Biological Resources Report*

(H.T. Harvey & Associates October 2018) prepared for the project. This assessment involved a review of relevant background information combined with a reconnaissance-level survey conducted on October 15, 2018. For this report, H.T. Harvey & Associates senior wildlife ecologist Kim Briones, M.S., and plant ecologist Matthew Mosher, B.S., characterized the existing biological conditions on the project site, including the presence and distribution of biotic habitats and the potential for occurrence of regulated habitats and special-status species. Additionally, Ms. Briones inspected the adjacent Lawrence Expressway Bridge for evidence of activity of bat maternity colonies or special-status bats that could be affected by project activities.

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 or the U.S. Fish and Wildlife Service?

The reconnaissance-level field survey identified one habitat type, developed/landscaped, on the project site. The site is currently being utilized as a stone paving manufacturing facility, as well as a buildings material supply store and yard. Nearly the entire site is paved, with numerous buildings associated with the existing businesses. Vegetation on the project site consists of ornamental street tree species, such as non-native fir (*Abies* sp.) and crimson bottlebrush (*Callistemon citrinus*), planted around the perimeter of the parcel, a stand of Mexican fan palm (*Washingtonia robusta*) along the north side of the site, and a small landscaping demonstration area consisting of horticultural plants in the center of the site. The only non-ornamental vegetation occurred in the northeast corner of the project site, along the old railway tracks, and consists of the ruderal plant species stinkwort (*Dittrichia graveolens*) and Canada horseweed (*Erigeron canadensis*), which were growing in cracks in the pavement.

The wildlife most often associated with developed and landscaped areas are those that are tolerant of periodic human disturbances, including introduced species such as the European starling (*Sturnus vulgaris*), rock pigeon (*Columba livia*), eastern gray squirrel (*Sciurus carolinensis*), house mouse (*Mus musculus*), and Norway rat (*Rattus norvegicus*). Several common native species are also able to utilize these habitats, especially the buildings and landscaped areas, including the western fence lizard (*Sceloporus occidentalis*), striped skunk (*Mephitis mephitis*), and a variety of birds. Birds such as the Anna's hummingbird (*Calypte anna*), white-crowned sparrow (*Zonotrichia leucophrys*), black phoebe (*Sayornis nigricans*), bushtit (*Psaltirparus minimus*), and chestnut-backed chickadee (*Poecile rufescens*) were observed foraging on the project site. In addition, the eaves and gutters of the buildings on the site may be attractive to other nesting and/or roosting birds in the area, such as the house finch (*Haemorhous mexicanus*), black phoebe, barn swallow (*Hirundo rustica*), and American robin (*Turdus migratorius*), and evidence of previous nesting attempts were observed on a pergola in the landscaped area and on an electrical conduit pipe of a storage building in the north central portion of the site.

Suitable burrowing owl (*Athene cunicularia*) habitat was only identified within one portion of the LSAP area as described in Impact 3.9.1 in the LSAP EIR; the Corn Palace property located approximately 0.7 mile south of the project site. The project site does not contain any suitable habitat for burrowing owl, as it is completely developed and does not contain native vegetation.

As identified in Impact 3.9.2 of the LSAP EIR, four special-status bat species, including western red bat (*Lasiurus blossevillii*), Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), and western mastiff bat (*Eumops perotis*), are known to occur near the LSAP area. Potential maternity and night-roosting habitat includes snags, sloughing tree bark, and human structures in the LSAP area. The LSAP EIR determined that, during the summer, large numbers of bats may be present at maternity roosts, and young bats which are unable to fly, may be also present. Removal of roost sites could cause direct mortality of bats. Noise and dust from construction could result in indirect impacts to bats during construction. This was identified as a potentially significant impact that would be mitigated through implementation of Mitigation Measure MM 3.9.2, which would require pre-construction surveys and protection of bats and

active roosts. Potentially suitable roost habitat for special-status bats within the project site includes large ornamental trees and buildings.

During the project-specific biological survey, potential crevices or entry points for bats were observed on four of the buildings (Photo 4). These areas could attract small numbers of individual bats, but they do not provide habitat for large roosting or maternity colonies. In addition, an examination of the exterior of the buildings failed to detect any evidence of bat activity (i.e., guano or urine staining), indicating that large bat colonies are absent from these structures. Expansion joints along the underside of the bridge deck and horizontal crevices along the north and south abutments of the adjacent Lawrence Expressway Bridge provide potentially suitable for day-roost habitat for day-roosting bats. However, upon closer inspection of this bridge, the joints are inaccessible to bats due to the presence of exclusion bird-netting, and no evidence of bat activity was observed along the abutments.

All native breeding birds, regardless of their listing status, are protected under the Migratory Bird Treaty Act as well as California Fish and Game Code sections 3503 and 3513. As noted in Impact 3.9.3, the LSAP contains several guidelines intended to protect trees, but recognizes that some trees may need to be removed to accommodate new projects. If construction occurs during the nesting season and trees are removed or substantially pruned, this could result in direct impacts on nesting birds and raptors if present. Additionally, noise and other human activity may result in nest abandonment if nesting birds are present within 200 feet (500 feet for raptors) of a work site. The project site contains many large ornamental trees which could provide suitable habitat for nesting birds and raptors, and removal of these trees may result in potentially significant impacts. Mitigation Measure MM 3.9.3 would mitigate this impact by requiring preconstruction surveys and avoidance of active nest sites under project and cumulative conditions.

The mature fir, eucalyptus, and fan palm trees along the perimeter of the project site, and the ornamental trees and shrubs in the landscaping demonstration area provide food and nesting opportunities for a variety of native and non-native species, including the fox squirrel (*Sciurus niger*), chestnut-backed chickadee, Anna's hummingbird, American crow (*Corvus brachyrhynchos*), and hooded oriole (*Icterus cucullatus*). In addition, the mature trees provide potential nesting habitat for raptors such as the Cooper's hawk (*Accipiter cooperii*). However, no old nests of raptors were observed on the site during the reconnaissance survey. Further, an examination of the trees on the site detected no large cavities that might provide suitable habitat for a large roosting or maternity colony of bats. Therefore, there is no potential for large numbers of bats to roost on the site or close enough to the site to be disturbed by proposed project activities.

No new significant impacts or substantially more severe biological impacts would occur with implementation of the project. The findings of the certified LSAP EIR remain valid.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

The two waterways in the LSAP area, the El Camino Storm Drain Channel and Calabazas Creek, are concrete lined and do not support riparian vegetation. All other areas in the plan area are completely developed or disturbed and no longer support natural communities. No riparian habitat or other sensitive natural communities occur in the LSAP area. The project site is completely developed and is surrounded by roads, railroad tracks, and other urban and suburban development. The project site does not contain riparian or any other sensitive habitat. The findings of the certified LSAP EIR remain valid and no further analysis is required.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The LSAP EIR stated that the aquatic habitat within the LSAP area, Calabazas Creek and the El Camino Storm Drain Channel, are considered protected waters of the United States. No direct fill or loss of these

waters is proposed as part of the LSAP. The project site is completely developed and does not contain any wetland or other aquatic habitat. No habitat observed on the project site possesses the field characteristics used by the federal and state resource/regulatory agencies in defining their jurisdiction (i.e., waters of the U.S., under the Clean Water Act, or waters of the State, under the Porter-Cologne Water Quality Control Act). Therefore, no jurisdictional or regulated waters or aquatic habitats were found to occur on the project site (H.T. Harvey & Associates October 2018). The findings of the certified LSAP EIR remain valid, and this would remain a less-than-significant impact.

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, or impede the use of native wildlife nursery sites?

As stated in the LSAP EIR, the LSAP area does not overlap with an Essential Connectivity Area as defined by California Department of Fish and Wildlife (CDFW). In addition, the LSAP would not result in a significant change in land use intensity and therefore would not alter the movements of wildlife currently utilizing the LSAP area. The entire LSAP area and surrounding lands are either developed or disturbed and provide very limited wildlife movement opportunities. The project is located within an existing developed area and provides no wildlife movement corridors. Because there are no new significant impacts or substantially more severe impacts, the findings of the certified LSAP EIR remain valid and no further analysis is required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The LSAP EIR stated that implementation of LSAP Policy OSP-6 and Guideline STP-UDG6 would ensure the protection and enhancement of the trees throughout the plan area wherever possible. Municipal Code Chapters 13.16 and 19.94 dictate the limited circumstances under which protected trees may be removed and require implementation of protection measures for these trees during construction activities. If any protected trees are impacted by future development, the project applicant will be required to comply with Chapter 19.94. The LSAP would implement this requirement through guideline STP-UDG7, which requires that replacement trees be provided where tree removal is unavoidable. In addition, the LSAP has identified a goal to enhance the urban forest in the plan area to provide shade and shelter, add scale to pedestrian and vehicular streets, beautify the area, and provide wildlife habitat (LSAP Goal STP-G1). This would be accomplished through guidelines that require planting street trees on all streets, using medium- to large-canopy trees on large streets, and ensuring new tree plantings are appropriate for an urban environment. Impacts would be less than significant.

The project would be subject to LSAP policy provisions and Municipal Code Chapters 13.16 and 19.94. The *Preliminary Arborist Report for 1175 Aster Avenue, Sunnyvale, CA* outlines the trees present on the project site (Hort Science 2018, updated 2019). Project plans include the removal of up to 44 trees, 24 of which are trees of a protected size, mostly along Aster Avenue and Willow Avenue. An additional three trees of protected size would be relocated. Many existing trees would be retained and protected, and approximately 391 new trees will be planted as part of development of the project site. The project would comply with applicable replacement standards. The project would not result in any new significant impacts or substantially more severe impacts; therefore, the findings of the certified LSAP EIR remain valid.

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?

The LSAP EIR determined that the LSAP area is not located in a habitat conservation plan area. As a result, no conflict with an adopted habitat conservation plan would occur, and no impact would result. No new conservation plans have been adopted since approval of the LSAP. Therefore, there are no new significant impacts or substantially more severe impacts that would occur pertaining to conflicts with adopted conservation plans. The findings of the certified LSAP EIR remain valid and no further analysis is required.

Mitigation Measures

The following mitigation measures were referenced in the LSAP EIR analysis and would be implemented if the project were approved.

▲ Mitigation Measure MM 3.9.2:

- Prior to the removal of trees or the demolition of buildings, a bat survey shall be performed by a qualified biologist no more than 3 days before the start of construction activities. If bat roosts are identified, the City shall require that the bats be safely flushed from the sites where roosting habitat is planned to be removed. If maternity roosts are identified during the maternity roosting season (typically May to September), they must remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur on-site, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites removed. If no bat roosts are detected, no further action is required if the trees and buildings are removed before the next breeding season.
- If a female or maternity colony of bats is found on the project site, and the project can be constructed without the elimination or disturbance of the roosting colony (e.g., if the colony roosts in a large oak tree not planned for removal), a qualified biologist shall determine what buffer zones shall be employed to ensure the continued success of the colony. Such buffer zones may include a construction-free barrier of 200 feet from the roost and/or the timing of the construction activities outside of the maternity roost season (after July 31 and before March 1).
- If an active nursery roost is documented on-site and the project cannot be conducted outside of the maternity roosting season, bats shall be excluded from the site after July 31 and before March 1 to prevent the formation of maternity colonies. Nonbreeding bats shall be safely evicted under the direction of a bat specialist.

▲ Mitigation Measure MM 3.9.3:

- All construction and clearing activities shall be conducted outside of the avian nesting season (January 15–August 31), when feasible. If clearing and/or construction activities occur during the nesting season, preconstruction surveys for nesting raptors, special-status resident birds, and other migratory birds protected by the Migratory Bird Treaty Act shall be conducted by a qualified biologist, up to 3 days before initiation of construction activities. The qualified biologist shall survey the construction zone and a 250-foot radius surrounding the construction zone to determine whether the activities taking place have the potential to disturb or otherwise harm nesting birds.
- If an active nest is located within 100 feet (250 feet for raptors) of construction activities, the project applicant shall establish an exclusion zone (no ingress of personnel or equipment at a minimum radius of 100 feet or 250 feet, as appropriate, around the nest). Alternative exclusion zones may be established through consultation with the CDFW and the U.S. Fish and Wildlife Service (USFWS), as necessary. The City shall be notified if altered exclusion zones widths are authorized by these agencies before the initiation of work. The exclusion zones shall remain in force until all young have fledged.

CONCLUSION

No new significant or substantially more severe biological impacts would occur with the project. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

4.5 CULTURAL RESOURCES

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
5. Cultural Resources. Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	Draft EIR Setting pp. 3.10-1 to 3.10-8 Impacts 3.10.1 and 3.10.3	No	No	NA, impacts would remain less than significant
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Draft EIR Setting pp. 3.10-1 to 3.10-8 Impacts 3.10.2 and 3.10.3	No	No	Yes, impacts would remain less than significant with the application of the adopted mitigation measure.
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Draft EIR page 3.7-11 Impacts 3.7.4 and 3.7.6	No	No	Yes, impacts would remain less than significant with the application of the adopted mitigation measure.
d. Disturb any human remains, including those interred outside the formal cemeteries?	Draft EIR Setting pp. 3.10-1 to 3.10-8 Impacts 3.10.2 and 3.10.3	No	No	NA, impacts would remain less than significant

4.5.1 Discussion

In August 2018, the project applicant requested a report from the Northwest Information Center (NWIC) of the California Historic Resources Information System (CHRIS). The letter report (CHRIS 2018) noted that that there has been one architectural study and three archaeological resource studies that cover approximately 10 percent of the project area, concentrated on the area around the railroad adjacent to the proposed project area; as such, their scope of study in relation to the proposed project area may be considered generalized. This project area contains no recorded archaeological resources and no recorded buildings or structures within the proposed project area. The findings of the records search are consistent with the EIR analysis.

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

As identified under Impact 3.10.1 of the LSAP EIR, Sunnyvale has numerous buildings that may have historical value. However, none of the structures or sites identified in the City's Heritage Resources Inventory is located within or immediately adjacent to the LSAP area.

In addition to the discussion included in the LSAP EIR, the properties at 1155 and 1175 Aster Avenue have been evaluated for listing on the National Register of Historic Places (NRHP), California Register of Historical Resources (CRHR), and Section 19.96.050 (heritage resource criteria) of the City of Sunnyvale Municipal Code. The buildings do not appear to meet NRHP, CRHR, or City criteria and therefore are not considered to be a historic resource under CEQA. The buildings are not associated with events that have made a significant contribution to the broad patterns of our nation's, California's, or Sunnyvale's history; the properties have been owned by the Morey family since construction, however, the family is not known to have played an important

role in the history of Sunnyvale's development; the buildings lack architectural distinction, do not have artistic qualities, are not the work of a master; and the buildings are not likely to yield any additional important information about our history (Ascent Environmental 2019).

The project site includes no historic structures and no new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

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

As discussed in Impact 3.10.2 in the LSAP, while the LSAP would not directly affect archaeological resources, implementation of the LSAP would allow new development, redevelopment, and infrastructure improvements that could involve subsurface disturbance for installation of foundations, utilities, or subterranean building features. As identified in Impact 3.10.2, subsequent actions have the potential to impact undiscovered archaeological resources. If such resources were to represent "unique archaeological resources" as defined by CEQA in State CEQA Guidelines Section 15064.5 and Public Resources Code Section 21083.2(g), any substantial change to or destruction of these resources would be a significant impact. Implementation of Mitigation Measure MM 3.10.2 would require halting of construction activities and protection of any discovered archaeological resources.

The project would be subject to Mitigation Measure MM 3.10.2. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The underlying geology of the LSAP area consists of basin and alluvial deposits that have the potential to contain fossils, based on previously reported finds in similar materials in other locations in the Bay Area. New development and redevelopment activities in the LSAP area could involve the installation of footings and foundations and/or excavations. Because the plan area is developed, it is likely that a substantial amount of ground disturbance and placement of fill has altered the subsurface soils and underlying geologic materials at varying depths. However, if a large area were excavated to depths greater than 10 feet, it is possible the excavation could be within Holoceneage deposits or older Pleistocene alluvial materials, which could contain fossils. Paleontological resources are classified as nonrenewable scientific resources. The inadvertent damage or destruction during excavation and grading activities at construction sites could further reduce this finite resource base. This is a potentially significant impact for the LSAP. Implementation of Mitigation Measure MM 3.7.4 that would require halting of construction activities and protection of any discovered paleontological resources would reduce this impact to a less-than-significant level.

The project would be subject to Mitigation Measure MM 3.7.4. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

d) Disturb any human remains, including those interred outside of formal cemeteries?

While the LSAP would not directly affect human remains, implementation of the LSAP would allow new development, redevelopment, and infrastructure improvements that could involve subsurface disturbance for installation of foundations, utilities, or subterranean building features. As identified in Impact 3.10.2, subsequent actions have the potential to impact unrecorded human remains. California Health and Safety Code Section 7050.5, State CEQA Guidelines Section 15064.5, and California Public Resources Code Section 5097.98 mandate the process to be followed in the event of accidental discovery of human remains in a location other than a dedicated cemetery. These sections also provide guidance if the remains are determined to be Native American. The actions required under these sections would ensure a less than significant impact to human remains.

No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

Mitigation Measures

The following mitigation measure was adopted with the LSAP and would continue to remain applicable if the project was approved.

▲ Mitigation Measure MM 3.7.4:

- All subsequent projects within the LSAP plan area shall be required to include information on the improvement plans that if, during the course of grading or construction fossils are discovered, work shall be halted immediately within 50 feet of the discovery, the Sunnyvale Community Development Department shall be notified, and the significance of the find and recommended actions must be determined by a qualified paleontologist. In addition, before the commencement of project site preparation, all construction personnel shall be informed of the potential to discover fossils and the procedures to follow.

▲ Mitigation Measure MM 3.10.2:

- All subsequent projects within the LSAP plan area shall be required to include information on the improvement plans that if, during the course of grading or construction cultural resources (i.e., prehistoric or historic sites) are discovered, work will stop in that area and within 100 feet of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop appropriate treatment measures as part of a treatment plan in consultation with the City and all other appropriate agencies. The treatment plan shall include measures to document and protect the discovered resource. Consistent with CEQA Guidelines Section 15126.4 (b)(3), preservation in place will be the preferred method of mitigating impacts to the discovered resource. Pursuant to Government Code Section 6254.10, information on the discovered resource shall be confidential.

CONCLUSION

No new circumstances or project changes have occurred nor has any new information been found that would result in new significant or substantially more severe impacts than those identified in the LSAP EIR. Therefore, the conclusions of the LSAP EIR remain valid and approval of the project would not result in new or substantially more severe significant impacts to cultural resources.

4.6 GEOLOGY AND SOILS

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
6. Geology and Soils. Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: <ul style="list-style-type: none"> i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Landslides? 	Draft EIR Setting pp. 3.7-1 to 3.7-8 Impact 3.7.1 and 3.7.6	No	No	NA, no geologic impacts would occur.
b. Result in substantial soil erosion or the loss of topsoil?	Draft EIR Setting pp. 3.7-1 to 3.7-8 Impact 3.7.2 and 3.7.6	No	No	NA, no geologic impacts would occur.
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in: on-or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	Draft EIR Setting pp. 3.7-1 to 3.7-8 Impact 3.7.3 and 3.7.6	No	No	NA, no geologic impacts would occur.
d. Be located on expansive soil, as defined in Table 18- 1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Draft EIR Setting pp. 3.7-1 to 3.7-8 Impact 3.7.3 and 3.7.6	No	No	NA, no geologic impacts would occur.
e. Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	No Impact	No	No	NA

4.6.1 Discussion

No substantial change in the environmental and regulatory settings related to geology and soils, described in the LSAP Draft EIR Section 3.7, “Geology, Soils, and Paleontological Resources,” has occurred since certification of the LSAP EIR. The regional and local settings remain the same as stated in Section 3.7.

The California Supreme Court decision in *California Building Industry Association v. Bay Area Air Quality Management District* has resulted in changes to CEQA with regard to the effects of existing environmental conditions on a project’s future users or residents. The effects of the environment on a project are generally outside the scope of CEQA unless the project would exacerbate these conditions, as concluded by the California Supreme Court (see *California Building Industry Association v. Bay Area Air Quality Management District* [2015] 62 Cal.4th 369, 377 [“we conclude that agencies generally subject to CEQA are not required to analyze the impact of existing environmental conditions on a project’s future users or residents. But when

a project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users.”]). Changes to the State CEQA Guidelines to reflect this decision were adopted on December 28, 2018. Local agencies are not precluded from considering the impact of locating new development in areas subject to existing environmental hazards; however, CEQA cannot be used by a lead agency to require a developer or other agency to obtain an EIR or implement mitigation measures solely because the occupants or users of a new project would be subjected to the level of hazards specified. However, previous discussions of effects of the environment related to geology and soils on future residents are included herein for disclosure purposes.

- a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:**
 - i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to California Geological Survey Special Publication 42.)**
 - ii) Strong seismic ground shaking?**
 - iii) Seismic-related ground failure, including liquefaction?**
 - iv) Landslides?**

As noted in Impact 3.7.1 of the LSAP Draft EIR, the LSAP area, similar to most of California, is located in a seismically active area and could experience strong seismic ground shaking and seismic-related ground failure (e.g., liquefaction and settlement) from earthquakes on active faults located outside of the plan area (City of Sunnyvale 2016). The anticipated increase in population and development under the LSAP could result in the exposure of people, structures, and infrastructure to seismic-related hazards.

A preliminary geotechnical investigation prepared for the project. The report states that the project site is located in the Coast Ranges geomorphic province of California that is characterized by northwest-trending valleys and ridges. These topographic features are controlled by folds and faults that resulted from the collision of the Farallon plate and North American plate and subsequent strike-slip faulting along the San Andreas Fault system. The San Andreas Fault is more than 600 miles long from Point Arena in the north to the Gulf of California in the south. The major active faults in the area are the San Andreas, Hayward, Calaveras, and San Gregorio Faults. The report states that during a major earthquake on a segment of one of the nearby faults, strong to very strong shaking is expected to occur at the project site. Strong shaking during an earthquake can result in ground failure such as that associated with soil liquefaction, lateral spreading, and cyclic densification. The report states that intensity of earthquake ground motion at the site will depend on the characteristics of the generating fault, distance to earthquake epicenter, and magnitude and duration of the earthquake.

Soil susceptible to liquefaction includes loose to medium dense sand and gravel, low-plasticity silt, and some low-plasticity clay deposits. Flow failure, lateral spreading, differential settlement, loss of bearing strength, ground fissures and sand boils are evidence of excess pore pressure generation and liquefaction. The report states that the eastern portion of the property has been mapped within a zone of liquefaction potential on the map titled State of California, Seismic Hazard Zones, San Jose West Quadrangle, Official Map, prepared by the California Geological Survey (CGS), dated February 7, 2002. The geotechnical investigation for the project included an evaluation of the liquefaction potential of soil encountered below groundwater at the site. The analysis identified thin layers of potentially liquefiable soils between 7 to 45 feet below the project site that could become unstable in the event of an earthquake (Rockridge Geotechnical 2017:8).

The analysis indicated that potentially liquefiable layers are sufficiently thin and/or have a sufficient amount of plastic fines such that the potential for surface manifestations from liquefaction, such as sand boils, and loss of bearing capacity for shallow foundations are low.

Lateral spreading occurs when a continuous layer of soil liquefies at depth and the soil layers above move toward an unsupported face, such as a shoreline slope, or in the direction of a regional slope or gradient. Based on the lack of controlling boundary conditions, the report concluded that the potential for lateral spreading to occur at the site is very low (Rockridge Geotechnical 2017:8).

The City's Municipal Code has adopted the California Building Code (CBC) by reference in Chapter 16.16.020, with changes and modifications providing a higher standard of protection. All new development and redevelopment would be required to comply with the current adopted CBC, which includes adherence to design criteria for seismic loading and other geologic hazards. Compliance with the CBC requires that new developments incorporate design criteria for geologically induced loading that governs sizing of structural members and provides calculation methods to assist in the design process. While ground shaking could result in damage to structures, incorporation of CBC criteria that recognize this potential would lessen those impacts. The CBC includes provisions for buildings to structurally survive an earthquake without collapsing, and includes specific measures such as anchoring structures to the foundation and structural frame design. In addition, the preliminary geotechnical investigation prepared for the project provided initial recommendations for construction of proposed structures, which would be revisited and finalized based on subsequent geotechnical investigations for final design (Rockridge Geotechnical 2017:14).

Thus, while subsequent development associated with implementation of the LSAP, due to its location, would inherently result in the exposure of people, structures, and infrastructure to adverse effects associated with earthquakes because of its location in a seismically active region and site-specific soil conditions, continued implementation of the City's Municipal Code and implementation of recommendations contained in the preliminary geotechnical investigation would minimize the potential risks associated with project implementation to structures and people. The project will incorporate the recommendations of the geotechnical report, including that the buildings would be supported on stiffened foundation systems, as recommended in the Geotechnical Report. Therefore, this impact would be less than significant, consistent with the conclusions of the LSAP EIR.

b) Result in substantial soil erosion or the loss of topsoil?

Impact 3.7.2 of the LSAP Draft EIR identifies that implementation of the project could include development of new uses, redevelopment, and infrastructure improvements. Grading and site preparation activities associated with such development could temporarily remove buildings and pavement potentially disturbing the soils, which could result in additional potential for wind and water erosion.

However, construction within the LSAP area would be required to comply with CBC Chapter 70 standards, which would ensure implementation of appropriate site-specific measures during grading and other construction activities to reduce and minimize the potential for soil erosion. Additionally, any development involving clearing, grading, or excavation that causes soil disturbance of one or more acres would be required to prepare and implement a stormwater pollution prevention plan (SWPPP), which includes specific requirements related to the installation and maintenance of erosion control measures. The SWPPP would consider the full range of erosion control best management practices (BMPs), including any additional site-specific and seasonal conditions. As further discussed in LSAP Draft EIR Section 3.8, "Hydrology and Water Quality," the State Water Resources Control Board has adopted a Construction General Permit (Order No. 20090009-DWQ, as amended by Order No. 2010-0014-DWQ and Order 2012-0006-DWQ) that provides additional standards and requirements to avoid soil erosion. In addition, the City's grading standards (Municipal Code Section 18.12.110) specify that when grading will create a nuisance or hazard to other properties, public way, or public facilities due to erosion from storm runoff or rainfall, grading cannot commence or continue without specific consent in writing from the Director of Public Works or the Director of Community Development.

Through compliance with applicable standards and implementation of the SWPPP and associated BMPs, the potential for substantial erosion would be minimized, and impacts would be less than significant. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

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

The LSAP EIR stated that future structures and improvements that could be developed under the LSAP could experience stresses on various sections of foundations and connected utilities, as well as structural failure and damage to infrastructure if located on expansive or unstable soils (LSAP Draft EIR Impact 3.7.3). The City requires preparation of geotechnical reports for all development projects, which include soil sampling and laboratory testing to determine the soil's susceptibility to expansion and differential settlement and would provide recommendations for design and construction methods to reduce potential impacts, as necessary. The preliminary geotechnical investigation prepared for the project identified potentially expansive and settlement-prone soils within the project site. Depending on the results of final geotechnical investigations, additional design recommendations may be incorporated into the project's design, specific to site-specific soil conditions. These may include moisture-treating the soil, use of non-expansive fill or lime-treated soil beneath interior and exterior slabs, and either supporting foundations below the zone of severe moisture change or providing stiff, shallow foundations that can limit deformation of the superstructures as the underlying soil shrinks and swells.

In addition to the above, the CBC requires the incorporation of special design and construction methods to reduce potential site conditions related to expansive soil and settlement. Preparation of final geotechnical reports and continued compliance with CBC regulations would ensure the adequate design and construction of building foundations, and ground preparation to resist soil movement.

No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid, and this impact would be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial risks to life or property?

See analysis under item c) above.

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

As described in the EIR, the LSAP, as well as the project, would utilize the existing City's wastewater conveyance and treatment. Septic systems would not be required and there would be no impact. This condition has not changed. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Mitigation Measures

No significant geologic impacts were identified in the LSAP EIR, and no mitigation measures were required.

CONCLUSION

No new circumstances or project changes have occurred nor has any new information been found requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid, and approval of the project would not result in new or substantially more severe significant impacts to geology and soils.

4.7 GREENHOUSE GAS EMISSIONS

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents' Mitigations Address/Resolve Impacts?
7. Greenhouse Gas Emissions. Would the project:				
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	Draft EIR Setting pp. 3.13-1 to 3.13-10 Impact 3.13.1	No	No	NA, impact remains less than significant.
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Draft EIR Setting pp. 3.13-1 to 3.13-10 Impact 3.13.1	No	No	NA, impact remains less than significant.

4.7.1 Discussion

The City tracks the progress of the Climate Action Plan (CAP) through biennial progress reporting. According to the City's 2018 CAP Biennial Progress Report, communitywide GHG emissions in 2016 were approximately 12 percent less than 1990 levels, and the Progress Report states that an estimated 28 percent less than 1990 levels is achievable by 2020 (City of Sunnyvale 2018). According to the report, the City is ahead of schedule in meeting its GHG reduction goals.

The City's CAP and its reduction targets are aligned with the statewide GHG target for 2020 established by Assembly Bill (AB) 32 of 2006; however, the CAP was prepared before the establishment of a statewide GHG target for 2030 by Senate Bill (SB) 32 in 2016. SB 32 established a statewide target of 40 percent less than 1990 emissions levels by 2030. The City is currently in the process of updating its CAP (CAP 2.0) to be aligned with the statewide target for 2030.

There have been several new or updated GHG executive orders, plans, policies, or regulations issued since certification of the LSAP EIR, but none of these new items, which are part of the regulatory setting, constitute substantial information indicating that the project would have a significant impact not analyzed in the LSAP EIR. For references, updates to the regulatory setting are briefly summarized below:

- ▲ Executive Order B-55-18: Executive Order B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter."
- ▲ Scoping Plan Update: Executive Order B-30-15 and SB 32 require CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, the California Air Resources Board (CARB) approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target.
- ▲ 2017 Update to the SB 375 Targets: Under SB 375, CARB is required to update the emission reduction targets for the metropolitan planning organizations (MPOs) every eight years. CARB adopted the updated targets and methodology in March 2018 and subsequent sustainable community strategies (SCSs) adopted after this date are subject to these new targets.
- ▲ Senate Bill 100: SB 100 raises California's RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045.

Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon free electricity target.

- ▲ **Building Energy Efficiency Standards:** Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 and most recently revised in 2016 (Title 24, Part 6, of the California Code of Regulations). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards, which were recently adopted on May 9, 2018, go into effect starting January 1, 2020.
- ▲ **CALGreen Updates:** CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants. The recently adopted 2019 Standards will take effect on January 1, 2020. Each iteration of the CALGreen standards improves the energy efficiency and sustainability of new development from the prior iteration.

The changes to the regulatory environment will act to reduce the project's long term GHG emissions by reducing emissions from energy and automobiles and therefore do not constitute substantial new information that would cause a more severe adverse impact on climate change than discussed in the LSAP EIR.

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

Buildout of the LSAP is expected to generate 22,122 metric tons annually (2.4 metric tons annually per person in the LSAP) by the year 2035. The LSAP service population ratio does not exceed the CAP targets of 3.6 metric tons per service population in 2020 and 2.6 metric tons per service population in 2035. The City is currently in the process of updating its CAP (CAP 2.0) to be aligned with the statewide target of the 40 percent less than 1990 emissions levels by 2030 to be consistent with the mandate of SB 32. As mentioned above, the City's 2018 CAP Biennial Progress Report, has demonstrated that an estimated 28 percent less than 1990 levels is achievable by 2020 (City of Sunnyvale 2018).

The LSAP conforms to the overall intent of the City CAP as it has been developed with the objective of environmental sustainability and enhances utilization of an existing commuter rail line. According to the LSAP, it is the intent of the plan area to decrease dependence upon the automobile as a primary transportation mode by providing a mix of uses to allow people to live, work, shop and relax in the plan area. The project's land use and development intensities are consistent with the LSAP and what was assumed in the GHG analysis of the LSAP EIR. No changes in the GHG conditions for the project site have occurred since approval of the LSAP. The project would not include any development beyond that assumed and analyzed in the LSAP EIR. Therefore, no new significant impacts or substantially more severe impacts would occur related to GHG emissions. The findings of the certified LSAP EIR remain valid and no further analysis is required.

The required compliance with the CAP would reduce the GHG emissions attributable to the plan area. As previously stated, future development projects in the plan area would be required to comply with the provisions of the Sunnyvale CAP as a condition of development approval. The project's land uses are consistent with the LSAP and its contribution to GHG emissions contribution were evaluated programmatically in the LSAP EIR. The project is required to comply with GHG reduction requirements of the LSAP as well as the CAP. Thus, GHG impacts were identified as less than significant. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

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

See discussion in a) above.

CONCLUSION

No new circumstances or project changes have occurred nor has any new information been found requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid and approval of the project would not result in new or substantially more severe significant impacts to GHG emissions.

4.8 HAZARDS AND HAZARDOUS MATERIALS

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
8. Hazards and Hazardous Materials. Would the project:				
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Draft EIR Setting pp. 3.3-1 to 3.3-8 Impacts 3.3.1 and 3.3.7	No	No	NA, impact remains less than significant
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?	Draft EIR Setting pp. 3.3-1 to 3.3-8 Impact 3.3.2	No	No	NA, impact remains less than significant
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Draft EIR Setting pp. 3.3-1 to 3.3-8 Impacts 3.3.3 and 3.3.7	No	No	Yes, impacts would remain less than significant with the application of the adopted mitigation measure.
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, would it create a significant hazard to the public or the environment?	Draft EIR Setting pp. 3.3-1 to 3.3-8 Impacts 3.3.3 and 3.3.7	No	No	Yes, impacts would remain less than significant with the application of the adopted mitigation measure.
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, would the project result in a safety hazard for people residing or working in the project area?	Draft EIR page 3.3-9 No Impact	No	No	NA, no impact would occur.
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working on the project area?	Draft EIR page 3.3-9 No Impact	No	No	NA, no impact would occur.
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Draft EIR Setting pp. 3.3-1 to 3.3-8 Impacts 3.3.5 and 3.3.8	No	No	Yes, impacts would remain less than significant with the application of the adopted mitigation measure.
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	Draft EIR page 3.3-9 No Impact	No	No	NA

4.8.1 Discussion

No substantial change in the environmental and regulatory settings related to hazards and hazardous materials, described in LSAP Draft EIR Section 3.3, "Hazards and Human Health," has occurred since certification of the LSAP EIR.

a) **Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?**

As identified in Impact 3.3.1 of the LSAP Draft EIR, hazardous materials are routinely used, stored, and transported throughout the plan area to businesses located north of the Caltrain tracks, and such operations are anticipated to continue into the future. Implementation of the LSAP would allow for the development of additional land uses, including industrial uses and certain commercial uses (e.g., gas stations, dry cleaners, medical facilities,) that routinely store, use, and transport hazardous materials. LSAP goal LU-G2 provides that existing uses in the plan area may remain as legal, conforming uses with the ability to grow and expand, but that such uses would be discouraged from using hazardous materials in their operation, especially when located adjacent to residential uses. New development or redevelopment that involves construction, demolition, and landscaping activities would require the transport, use, and disposal of various building materials, including some hazardous materials (e.g., gasoline, fuels, demolition materials, asphalt, lubricants, toxic solvents, pesticides, and herbicides.) The transport, use, and disposal of such materials could pose a potential hazard to the public and the environment if not properly transported, used, stored, and disposed. However, the LSAP EIR determined that hazardous materials that may be associated with future development or redevelopment under the LSAP, including the project, would be required to comply with all applicable local, state, and federal regulations during construction and operation. Facilities that use hazardous materials are required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. The City's Department of Public Safety is responsible for consolidating, coordinating, and making consistent the administrative requirements, permits, inspections, and enforcement activities of state standards regarding the transportation, use, and disposal of hazardous materials in the LSAP area.

The project would include construction, demolition, and landscaping activities that could result in the transport, use, and disposal of hazardous materials such as gasoline, fuels, demolition materials, asphalt, lubricants, toxic solvents, pesticides, and herbicides. The project would be subject to the same standards noted above. With continued compliance with all federal, state, and local regulations related to the transport, use, and disposal of hazardous materials, this impact would be less than significant. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid, and this impact would be less than significant.

b) **Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?**

The LSAP EIR stated that subsequent projects under the LSAP could involve the transportation, use, and disposal of hazardous materials in the LSAP area (see Impact 3.3.2 of the LSAP Draft EIR). These activities could result in the accidental release of hazardous materials into the environment and exposure of the public to hazardous materials. Redevelopment activities associated with the LSAP could result in exposure to hazardous materials that may be contained in building features. The LSAP EIR stated that there is the potential for soil and/or groundwater contamination, particularly in the area north of the Caltrain tracks where land uses have been dominated by industrial activities. The transport, storage, and use of hazardous materials by developers, contractors, business owners, residents, and others are required to follow local, state, and federal regulations during project construction and operation. Furthermore, facilities that use hazardous materials are required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases. As the LSAP is implemented, it is anticipated there would not be a substantial increase in the number of facilities or types of activities involving the use of

hazardous materials compared to existing conditions, and the LSAP does not designate land for new heavy industrial or manufacturing.

The project construction activities would include cleanup of existing on-site contamination associated with the planned removal of a gasoline and diesel underground storage tanks. The applicant is entering into a Voluntary Clean-Up Program with Santa Clara County Department of Environmental Health. The project consists of residential and retail development uses and would not utilize hazardous materials. No changes to the conditions of the site or the presence of hazardous materials has occurred since approval of the LSAP. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid, and this impact would be less than significant.

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

Santa Clara Christian School, Monticello Academy, Sunshine Day Care, and Wilcox High School are located east of Lawrence Expressway outside the LSAP area but are within one-quarter mile of the Transit Core East and Office/R&D East subareas. Ponderosa Elementary School is within one-quarter mile of the Southern Residential subarea. No new school sites are proposed as part of the LSAP (City of Sunnyvale 2016).

The LSAP EIR stated that subsequent projects under the LSAP could involve increased storage, use, and transport of hazardous materials in the plan area, including during demolition and construction activities as well as operation. However, the land use designation changes contemplated as part of the project are intended to facilitate mixed-use development with primarily residential and retail uses, which would not be involve hazardous emissions or the handling of hazardous materials, such as those associated with manufacturing and industrial uses. These construction activities would also include cleanup of existing on-site contamination associated with the planned removal of a gasoline and diesel underground storage tanks and per the recommendations of the Limited Phase II Site Assessment. The applicant is entering into a Voluntary Clean-Up Program with Santa Clara County Department of Environmental Health. The project would comply with all federal, state, and local regulations related to the transport, use, and disposal of hazardous materials, which would be monitored and enforced by the City.

The project consists of residential and retail development uses and would be in compliance with previously approved requirements for hazardous materials in the LSAP EIR. No changes to the conditions of the site or the presence of hazardous materials has occurred since approval of the LSAP. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

As identified in Impact 3.3.3, there are contaminated sites within the LSAP, but the known hazardous materials release sites in the LSAP area have been cleaned. Thus, this impact was identified as potentially significant and would be reduced to less than significant through implementation Mitigation Measure MM 3.3.3 in the LSAP EIR requires preparation of a Phase I Environmental Site Assessment and remediation of any contamination discovered.

A Phase I Environmental Site Assessment was prepared in 2017 for the project site and determined that, given the past use of the site for agricultural purposes, it is possible that pesticides and other agricultural chemicals may have been applied to the site (AEI 2017a). Additionally, a Phase II Site Assessment was conducted for soil assessment was prepared, consistent with the recommendations of the Phase I to assess the potential presence of agricultural chemical residue within the project site. The soils on the project site are considered Urban Land soils meaning they have been disturbed repeatedly and covered by pavement at some point.

AEI provided an updated review of potential hazards and contamination on-site consistent with the requirements of LSAP EIR Mitigation Measure MM 3.3.3. The analysis concluded the potential for hazards and contamination on-site was low with regards to potential vapor intrusion concerns. Vapor intrusion occurs when hazardous chemicals leak into the groundwater through the form of vapors. However, the Phase II Environmental Assessment (AEI 2017b) states the PCE concentration in well MW-1P and the TPHd/TPHmo concentrations in wells MW-1C and MW-2C exceeds requirements and direct contact would cause human health risks. However, the project site is not anticipated to use groundwater, and the risk of vapor intrusion was determined to be low by the Phase II (AEI 2017b).

The Phase I and II did not identify any other specific RECs. As part of the Phase I, AEI conducted a limited review of asbestos and lead-based paint on the project site. Prior to any demolition activities, a comprehensive asbestos and lead-based paint survey would be conducted to ensure all building materials are appropriately handled in accordance with local, state, and federal regulations. The Phase I Environmental Assessment examined the potential of lead-contaminated soil that should be examined before construction activities (AEI 2017a: 40). As discussed above, project construction activities would include cleanup of existing on-site contamination, per the recommendations of the Limited Phase II Site Assessment, and the applicant is entering into a Voluntary Clean-Up Program with Santa Clara County Department of Environmental Health.

No changes to the conditions of the site or the presence of hazardous materials has occurred since approval of the LSAP. The recommendations of the project-specific Phase I and II would be implemented. Therefore, no new significant impacts or substantially more severe impacts would occur, and the findings of the certified LSAP EIR remain valid.

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, would the project result in a safety hazard for people residing or working in the project area?

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

The LSAP Draft EIR stated that the LSAP area is outside the Moffett Airfield's influence area and safety zones, and there are no private airstrips near the LSAP area. Therefore, impacts related to airport or private airfield safety were not discussed in the LSAP EIR. No new airports have been developed near the project area. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no impact would occur.

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

As addressed in Impact 3.3.5 of the LSAP EIR, construction activities for individual projects in the LSAP could temporarily affect operating conditions on these roadways from movement of heavy equipment, worker vehicle parking, and materials delivery and storage, depending on the locations. Connection of a development site to water, wastewater, and storm drain lines could involve work within the roadway itself. The LSAP also proposes roadway improvements such as The Loop and secondary street improvements along existing roadways. These activities may result in the need for temporary traffic lane closures or narrowing, which could affect emergency response or evacuation routes. This was identified as a potentially significant impact that would be mitigated to less than significant through implementation of Mitigation Measure MM 3.3.5, which that requires the City to develop a construction traffic control plan if project activities could impair or inhibit emergency response or evacuation.

The project site improvements are subject to compliance with Mitigation Measure MM 3.3.5. No changes to the conditions of the site has occurred since approval of the LSAP. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

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

As identified on LSAP Draft EIR page 3.3-9, there are no Fire Hazard Severity Zones or state responsibility areas or Very High Fire Hazard Severity Zones for local responsibility areas within or adjacent to Sunnyvale. No changes to the location of the project have occurred and no changes to the risks from wildfires has occurred since approval of the LSAP. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Mitigation Measures

Mitigation Measures 3.3.3 and 3.3.5 were adopted as part of the LSAP. Mitigation Measure 3.3.3 required preparation of a Phase I Environmental Site Assessment (ESA) and, if deemed necessary by the Phase I ESA, the preparation of a Phase II ESA. As noted above, a Phase I and Phase II have been completed for the project. Construction activities would include cleanup of existing on-site contamination associated with the planned removal of a gasoline and diesel underground storage tanks and per the recommendations of the Limited Phase II Site Assessment. The applicant is entering into a Voluntary Clean-Up Program with Santa Clara County Department of Environmental Health. The project would comply with all federal, state, and local regulations related to the transport, use, and disposal of hazardous materials, which would be monitored and enforced by the City. Therefore, the portion of Mitigation Measure 3.3.3 associated with preparation of the Phase I and Phase II ESAs has been completed and is no longer required. The following remainder of the mitigation measure would continue to be applicable if the project was approved

▲ Mitigation Measure MM 3.3.3:

- extent of soil, groundwater, and/or soil vapor contamination, as recommended by the Phase I ESA.
- The City shall not issue a building permit for a site where contamination has been identified until remediation or effective site management controls appropriate for the use of the site have been completed consistent with applicable regulations and to the satisfaction of the City of Sunnyvale, DTSC, or SFBRWQCB (as appropriate) before initiation of construction activities. Deed restrictions, if appropriate, shall be recorded.
- If temporary dewatering is required during construction or if permanent dewatering is required for subterranean features, the City shall not issue an improvement permit or building permit until documentation has been provided to the City that the Water Pollution Control Permit has approved the discharge to the sewer. Discharge of any groundwater removed from a construction site in any LSAP subarea north of the Caltrain tracks, the Peninsula subarea, the Lawrence/Reed/Willow subarea, or the Corn Palace property to the El Camino Storm Drain Channel, Calabazas Creek, or storm drain shall be prohibited. The City shall ensure all plans and permits state this prohibition.
- If the Phase I ESA determines there are no recognized environmental conditions (RECs), no further action is required. However, the City shall ensure any grading or improvement plan or building permit includes a statement if hazardous materials contamination is discovered or suspected during construction activities, all work shall stop immediately until a qualified professional has determined an appropriate course of action.

▲ Mitigation Measure MM 3.3.5:

- Prior to issuance of a permit for a specific development project or before approving a City-initiated roadway improvement identified in the LSAP, the City shall determine whether project construction activities have the potential to affect traffic conditions on roadways as a result of construction of the development project or roadway improvement(s). If there is the potential the activities could impair or inhibit emergency response or evacuation, a Construction Traffic Control Plan shall be prepared for City review and approval. The plan shall include, but not be limited to, schedule of construction

and anticipated methods of handling traffic for each phase of construction to ensure the safe flow of traffic and adequate emergency access, including maintaining an open lane for vehicle travel at all times. All traffic control measures shall conform to City of Sunnyvale, Santa Clara County, and/or Caltrans standards, as applicable. The City shall ensure final approved plans for private development projects specify the requirement, as appropriate, to implement the construction traffic control plan.

CONCLUSION

No new circumstances or project changes related to hazards and hazardous materials have occurred nor has any new information been identified requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid and approval of the project would not result in new or substantially more severe significant impacts. No additional analysis is required.

4.9 HYDROLOGY AND WATER QUALITY

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
9. Hydrology and Water Quality. Would the project:				
a. Violate any water quality standards or waste discharge requirements?	Draft EIR Setting pp. 3.8-1 to 3.8-13 Impact 3.8.1 and 3.8.4	No	No	NA, impact remains less than significant
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted?	Draft EIR Setting pp. 3.8-1 to 3.8-13 Impact 3.8.2, 3.8.5, 3.11.5.1, and 3.11.5.3	No	No	NA, impact remains less than significant
c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	Draft EIR Setting pp. 3.8-1 to 3.8-13 Impact 3.8.1 and 3.8.4	No	No	NA, impact remains less than significant
d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	Draft EIR Setting pp. 3.8-1 to 3.8-13 Impact 3.8.3 and 3.8.6	No	No	NA, impacts would remain less than significant.
e. Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	Draft EIR Setting pp. 3.8-1 to 3.8-13 Impact 3.8.1, 3.8.3 and 3.8.4	No	No	NA, impact remains less than significant
f. Otherwise substantially degrade water quality?	Draft EIR Setting pp. 3.8-1 to 3.8-13 Impact 3.8.1 and 3.8.4	No	No	NA, impact remains less than significant
g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	Draft EIR Setting pp. 3.8-1 to 3.8-13 Impact 3.8.3 and 3.8.6	No	No	NA, impacts would remain less than significant.
h. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	Draft EIR Setting pp. 3.8-1 to 3.8-13 Impact 3.8.3 and 3.8.6	No	No	NA, impacts would remain less than significant.
i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	Draft EIR page 3.8-15 No Impact	No	No	NA
j. Inundation by seiche, tsunami, or mudflow?	Draft EIR page 3.8-15 No Impact	No	No	NA

4.9.1 Discussion

No substantial change in the environmental and regulatory settings related to hydrology and water quality, described in LSAP Draft EIR Section 3.8, Hydrology and Water Quality, has occurred since certification of the LSAP EIR.

a) **Violate any water quality standards or waste discharge requirements?**

As addressed in Impact 3.8.1 of the LSAP EIR, construction activities associated with development of projects allowed under the LSAP would include grading, demolition, and vegetation removal which would disturb and expose soils to water erosion, potentially increasing the amount of silt and debris entering downstream waterways. In addition, refueling and parking of construction equipment and other vehicles on-site during construction could result in oil, grease, or related pollutant leaks and spills that may discharge into storm drains. Individual development projects, like the project, would be required to comply with Chapter 12.60 Stormwater Management of the Sunnyvale Municipal Code, as well as implement BMPs for the prevention of erosion and the control of loose soil and sediment, to ensure that construction does not result in the movement of unwanted material into waters within or outside the plan area. The Stormwater Management chapter of the Sunnyvale Municipal Code provides regulations and gives legal effect to certain requirements of the NPDES permit issued to Sunnyvale regarding municipal stormwater and urban runoff requirements. During construction of projects in the city, the dischargers, through individual coverage under the State's General Construction NPDES permit must develop and implement a SWPPP and perform monitoring of discharges to stormwater systems to ensure compliance with State regulations and General Plan Policy EM-8.5. Construction impacts would be less than significant under project and cumulative conditions.

Urban runoff pollutants such as heavy metals, oil, and grease, sediment, and other chemicals would continue to be generated, but because the changes in land use are primarily related to increased intensity of development and not new land uses, the types and amounts of pollutants in stormwater runoff would not vary considerably from existing conditions. All private development projects would be required to include appropriate features to meet applicable regional Municipal Regional Stormwater Permit (MRP) Provision C.3 requirements and implement low impact design (LID). Common LID strategies that would be appropriate for the plan area would include treatment methods such as bio-retention basins and flow-through planters, green roofs, media filtration devices, and pervious surfaces. These features would be included within individual sites on a project-by-project basis. Compliance with existing requirements of Chapter 12.60 of the Municipal Code, the City's Municipal Code Chapter 12.60, the City of Sunnyvale Urban Runoff Management Plan, and MRP Provision C.3 requirements, along with implementation of General Plan policies EM-8.6, EM-10.1, and EM-10.3 and LSAP goal UG-1 and policies U-P1 through U-P4, would reduce surface water quality impacts associated with occupancy of projects in the LSAP to a less-than-significant level under project and cumulative conditions.

Based on groundwater monitoring data for the Aster Avenue property, groundwater is presumed to be present roughly 15.64 to 22 feet below the surface. Based on conclusions identified in the Update of Environmental Conditions, 1155 and 1175 Aster Avenue, Sunnyvale, California (Rockridge Geotechnical 2017: 12), the project is not expected to encounter groundwater during construction, and would therefore be unlikely to be a source of contamination to groundwater resources. Additionally, groundwater beneath the site is not used as a source for drinking water, and is therefore not subject to drinking water requirements.

The project is subject to the water quality control requirements identified above. Project design plans include water quality control features for the site (see design plan sheets C3.0 and C3.1). No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

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

Implementation of projects allowed by the LSAP would have little or no effect on groundwater recharge because the LSAP area is largely built out and would therefore neither increase nor decrease the amount of permeable surfaces; in addition, the area is underlain by soils with low percolation rates, which results in a muted effect from changes in the amount of permeable surfaces. The LSAP does not propose the installation of any wells in the plan area that could alter groundwater flows. As identified on Draft EIR page 3.11-28, city-wide groundwater withdrawal is not expected to increase beyond 1,000 acre-feet per year except in multiple dry year conditions and is actively managed by the Santa Clara Valley Water District to avoid groundwater overdraft through its conjunctive use efforts. No mitigation was required.

The project would not substantially change development patterns and the amount of impermeable surface from that approved in the LSAP. The project would add open grass spaces and create fewer impermeable surfaces than currently on the site. The project would also not include the construction or operation of a well facility. Therefore, no new significant impacts or substantially more severe impacts would occur. The findings of the certified LSAP EIR remain valid and no further analysis is required.

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

See analysis under item a) above.

- d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in on- or off-site flooding?**

Impact 3.8.3 in the LSAP EIR identified that there are some locations within the plan area that are within FEMA-designated 100-year flood hazard Zone AO. The LSAP EIR stated that projects within Zone AO could be subject to 100-year flood hazard. Areas that could be redeveloped under the LSAP (i.e., where new buildings could be constructed) would be limited to the Peninsula subarea (the current location of the Calstone/Peninsula Building Materials operations), the Lawrence/Reed/Willow subarea and a small part of the Southern Residential subarea north of the Lawrence/Reed Willow subarea, and the undeveloped part of the Southern Residential area at the southern boundary of the LSAP (i.e. Corn Palace parcel). There is also narrow band of Zone AO mapped just north of the Caltrain tracks at the southern parts of the Transit Core and West and East subareas. The Prevention of Flood Damage Chapter (Chapter 16.62) of Sunnyvale's Buildings and Construction Ordinance provides standards for construction in 100-year flood hazard areas. The standards for construction generally require that the lowest floor of any structure be elevated to or above the base flood elevation, anchoring, and the use of flood damage-resistant materials and methods. LSAP goal U-G5 and policy U-P5 also direct that flood prevention measures be included in development projects. Mitigation Measure MM 3.8.3 in the LSAP EIR addressed address flood impact changes from placement of fill in the flood hazard Zone AO anticipated to occur in the Peninsula subarea. The majority of the project site is located in the Flood Zone AO.

The LSAP EIR concluded that stormwater runoff in the LSAP area is not expected to increase, and stated that individual development projects would be required, per Section 12.60.160(a) of the City's Municipal Code, to demonstrate that development each individual development project would not increase runoff over pre-project rates and durations. In addition, General Plan policy EM-9.1 requires that the City maintain and operate the storm drain system so that stormwater is drained from 95 percent of the streets within one hour after a storm stops. For flood-prone locations, policy EM10.2 requires incorporation of appropriate controls

to detain excess stormwater. The EIR concluded that compliance with the existing regulations contained in the City's Municipal Code would reduce potential impacts associated with flooding and stormwater drainage to a level that is less than significant. Construction for the project would include the import of approximately 26,000 cubic yards of fill to raise building pad elevations. Fill will be placed on the site in designated areas to raise the ground to satisfy Federal Emergency Management Agency (FEMA) requirements to remove the designated areas from the FEMA flood zone (Flood Zone AO). This would be done in coordination with FEMA. The project would raise specific pad areas out of the flood zone. Once the fill materials have been placed, the areas will be surveyed to confirm they have been raised above the flood depth. Proposed buildings would be constructed on a pad area that is in Flood Zone X, following FEMA processes to remove the designated areas from the flood zone (AO). This would consist of three separate Conditional Letter of Map Revision submittals to FEMA.

The project is required to comply with Section 12.60.160 of the City's Municipal Code. Project design plans include water quality control and drainage features for the site (see design plan sheets C3.0 and C3.1). No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

e) 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?

See analysis under item a) and d) above.

f) Otherwise substantially degrade water quality?

See analysis under item a) above.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

See analysis under item d) above. The project is not located on a FEMA-designated floodplain. No impact would occur.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?

See analysis under item d) above.

i) Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?

As discussed on LSAP Draft EIR page 3.8-15, the LSAP area is located outside of the inundation area for Stevens Creek Reservoir and is not considered to be at risk of inundation in the event of a dam failure. The LSAP area is not in an area subject to flooding from levee failure or sea level rise. The project would not alter these conditions. Therefore, no new significant impacts or substantially more severe impacts would occur. The findings of the certified LSAP EIR remain valid and no further analysis is required.

j) Result in inundation by seiche, tsunami, or mudflow?

As discussed on LSAP Draft EIR page 3.8-15, seiches and tsunamis would not be expected to affect the LSAP area because it is more than 3 miles from San Francisco Bay. Mudflow would not present a hazard because there are no steep, erodible slopes near the LSAP area. The project would not alter these conditions. Therefore, no new significant impacts or substantially more severe impacts would occur. The findings of the certified LSAP EIR remain valid and no further analysis is required.

Mitigation Measures

Flooding impacts identified in the LSAP EIR that require application of Mitigation Measure MM 3.8.3 for subsequent projects in the Peninsula subarea and the agricultural parcel at the southernmost end of the LSAP area. The project is located outside of these areas and would not be subject to this mitigation measure.

CONCLUSION

No new circumstances or project changes have occurred nor has any new information been found requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid and approval of the project would not result in new or substantially more severe significant impacts to hydrology and water quality.

4.10 LAND USE AND PLANNING

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
10. Land Use and Planning. Would the project:				
a. Physically divide an established community?	Draft EIR Setting p. 3.1-1 to 3.1-9 Impacts 3.1.1 and 3.1.4	No	No	NA, no impact would occur.
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	Draft EIR Setting p. 3.1-1 to 3.1-9 Impacts 3.1.2 and 3.1.4	No	No	NA, this impact would remain less than significant.
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	Draft EIR Setting p. 3.1-1 to 3.1-9 Impact 3.1.3	No	No	NA, no impact would occur.

4.10.1 Discussion

No substantial change in the environmental and regulatory settings related to land use and planning, described in LSAP EIR Section 3.1, Land Use, has occurred since certification of the LSAP EIR. As previously noted, the City Council adopted an update to the City's LUTE of its General Plan in April 2017. The LUTE incorporates and integrates policy direction and land use patterns from other City of Sunnyvale planning documents, including the LSAP.

a) Physically divide an established community?

As noted in Impact 3.1.1 in the LSAP EIR, the LSAP area is developed with a combination of residential and non-residential uses. The EIR stated that the existing Caltrain tracks bisect the plan area, with Lawrence Expressway providing the only north-south connection between the areas to the north and to the south. The EIR stated that the conversion from non-residential to residential uses in the Peninsula subarea would result in development consistent with the adjoining residential areas, and no physical division would occur. This was identified as a less-than-significant impact in the LSAP EIR.

LSAP policies implementation would ensure that new land uses in the LSAP area would not divide an establish community and would enhance the project area's connectivity with the City as a whole. Therefore, the LSAP would have a less-than-significant impact regarding the division of an established community (see Impacts 3.1.1 and 3.1.4). The LSAP includes several circulation network improvements to provide improved access through the plan area. In addition to providing new streets in the LSAP, improvements to existing streets would be implemented to ensure safety for all street users. Extensive bicycle and pedestrian facility enhancements would be implemented, including additional crosswalks, changes in signal timing, and two grade-separated pedestrian/bicycle crossings at the Caltrain tracks.

Project implementation would not physically divide an established community. No changes in development at the site have occurred since approval of the LSAP. Access to the project would be provided via two full-access driveways along Aster Avenue and third driveway (right-in, right-out) located in the northeast corner of the project site along the Willow Avenue frontage. The project includes bicycle facility improvements along its

project frontage. The proposed bicycle facility improvements would enhance the bicycle connectivity to the Lawrence Caltrain station. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid, and this impact would remain less than significant.

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

The City of Sunnyvale General Plan provides the united vision meant to guide comprehensive development in the City. The LSAP establishes the development of a mixed-use, compact and well-connected urban form that would further increase housing and employment opportunities in the City. The LSAP would change land use designations in certain areas of the plan area to accommodate future growth and to realize the City's vision. Further, the project outlines transportation and design guidelines that would mold the area to fit the sustainable growth vision. This impact for the LSAP would be less than significant.

The project land uses are consistent with the LSAP standards and is subject to LSAP policies and guidelines for design. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

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

The LSAP area is not located in a habitat conservation plan area. Thus, no conflict with an adopted habitat conservation plan would occur, and no impact would result. Therefore, no impact was identified. No new conservation plans have been adopted since approval of the LSAP. Therefore, there are no new significant impacts or substantially more severe impacts that would occur pertaining to conflicts with adopted conservation plans. The findings of the certified LSAP EIR remain valid and no further analysis is required.

Mitigation Measures

No mitigation measures were needed for the LSAP regarding land use and planning. No additional mitigation measures are required for project for this topic.

CONCLUSION

No new circumstances or project changes have occurred nor has any new information been identified requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid and approval of the project would not result in new or substantially more severe significant impacts to land use and planning.

4.11 MINERAL RESOURCES

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
11. Mineral Resources. Would the Project:				
a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	Scoped out at Notice of Preparation stage. Mineral resources do not exist in LSAP area.	No	No	NA
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?	Scoped out at Notice of Preparation stage. Mineral resources do not exist in LSAP area.	No	No	NA

4.11.1 Discussion and Conclusion

Mineral resource impacts were scoped out of the LSAP EIR at the Notice of Preparation stage, because no mineral resources exist in the LSAP area and the area is already developed with urban land uses. The project site is developed with existing uses and would be redeveloped with residential and retail uses. The project site does not contain any of these resources; therefore, the conclusions of the LSAP EIR remain valid and no impact would occur.

4.12 NOISE

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New or Substantially More Severe Significant Impacts?	Any Substantially Important New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents' Mitigations Address/Resolve Impacts?
12. Noise. Would the project result in:				
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Draft EIR Setting pp. 3.6-1 to 3.6-15 Impacts 3.6.1 and 3.6.5	No	No	NA, impact remains less than significant
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Draft EIR Setting pp. 3.6-1 to 3.6-15 Impact 3.6.3	No	No	NA, impact remains less than significant
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Draft EIR Setting pp. 3.6-1 to 3.6-15 Impacts 3.6.2 and 3.6.5	No	No	NA, impact remains less than significant
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Draft EIR Setting pp. 3.6-1 to 3.6-15 Impact 3.6.4	No	No	Yes, impact would remain less than significant with the application of the adopted mitigation measure.
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, would the project expose people residing or working in the project area to excessive noise levels?	Draft EIR p 3.6-16 No Impact	No	No	NA, no impact would occur.
f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	Draft EIR p 3.6-16 No Impact	No	No	NA, no impact would occur.

4.12.1 Discussion

No substantial change in the environmental and regulatory settings related to Noise, described in the LSAP Draft EIR Section 3.6, "Noise," has occurred since certification of the EIR in 2016.

Since preparation of the LSAP EIR, a California Supreme Court decision, and subsequent revisions to the CEQA Guidelines, resulted in changes to CEQA regarding the effects of existing environmental conditions on a project's future users or residents. The effects of the environment on a project are generally outside the scope of CEQA unless the project would exacerbate these conditions, as concluded by the California Supreme Court (see *California Building Industry Association v. Bay Area Air Quality Management District* [2015] 62 Cal.4th 369, 377 ["we conclude that agencies generally subject to CEQA are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users."])). Changes to the State CEQA Guidelines to reflect this decision were adopted on December 28, 2018. As noted in the BAAQMD's revised CEQA thresholds of significance, local agencies are not precluded from considering the impact of locating

new development in areas subject to existing environmental hazards; however, CEQA cannot be used by a lead agency to require a developer or other agency to obtain an EIR or implement mitigation measures solely because the occupants or users of a new project would be subjected to the level of emissions specified. However, previous and updated discussions of effects of the environment related to noise on future residents are included herein for disclosure purposes.

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?

Residential and mixed-use residential land uses in the LSAP area are located along major roadways including the Lawrence Expressway, which runs north-south through the LSAP area. As discussed in the LSAP Draft EIR, traffic noise levels along Lawrence Expressway directly east of the project site range from 72.8 to 74.1 dBA L_{dn} under existing conditions with traffic from build out of the LSAP (see LSAP Draft EIR Table 3.6-6), a conditionally acceptable noise environment for all land uses according to City noise standards. Under the cumulative conditions, buildout of the Plan would not result in cumulatively considerable roadway noise level increases beyond noise level thresholds at all vicinity roadway segments (see LSAP Draft EIR Table 3.6-10). Under cumulative conditions, Lawrence Expressway between Kifer Road and Reed Avenue would exceed the 75 dBA L_{dn} threshold established in the City's General Plan noise standards for residential uses. However, the LSAP EIR determined that the LSAP's contribution to this noise level would not be perceptible, and future development in this area would be required to meet interior noise standards of 45 dBA L_{dn} . There are no stationary noise source issues within the LSAP, and future LSAP uses would be required to comply with City noise standards. In addition, a noise study has been completed for the project and includes recommendations to meet the City's interior and exterior noise standards. The study includes recommendations for windows and exterior doors to meet the City's residential interior noise criterion and for windows to meet the City's non-residential interior noise criterion. Regarding exterior common areas, the noise study discusses the need for sound fences along the north property line near the exiting Caltrain noise source (Charles M. Salter Associates, October 2019). As discussed above, noise levels on future residents from existing uses is not considered a CEQA impact; however, the City and project applicant would continue to work together to construct necessary sound wall and incorporate appropriate doors and windows to meet the City's noise criteria.

The project is consistent with the land use designations and intensities set forth in the LSAP and its contribution to traffic noise is addressed in the LSAP EIR. Thus, traffic noise impacts from the project would be less than significant.

Based on the traffic study conducted for the project, traffic noise levels along the project's frontage at Aster Avenue is currently 68.6 dB L_{dn} and would increase to 70.5 dB L_{dn} under existing plus project conditions and would be within the City's noise standards for residential and retail uses (see LSAP Draft EIR Tables 3.6-4, 3.6-6 and 3.6-10). No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid, and this impact would be less than significant.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

As discussed in Impact 3.6.2 of the LSAP EIR, the LSAP includes sensitive land uses in portions of the city adjacent to the existing Caltrain corridors. Ground vibration from conventional railroad trains or light rail trains passing could exceed the guidelines set forth by the Federal Transit Administration (FTA) if new buildings with sensitive uses such as residences are constructed within approximately 100 feet of the tracks. Such uses located in these areas could be exposed to ground vibration levels exceeding FTA guidelines. As identified in the LSAP Draft EIR, 85 VdB is the level considered by the FTA to be acceptable, though only if there are an infrequent number of events per day. The LSAP includes policies and guidelines specific to each subarea within the plan area that are intended to highlight overall design considerations and address potential noise impacts at a programmatic level. The project is located within the Peninsula area within the LSAP adjacent to the Caltrain tracks, which contains provisions to address groundborne vibration.

Design Guideline PS-UDG3 states that for development directly adjoining the Lawrence Station and Caltrain tracks, landscape and building design measures must be incorporating to mitigate the negative effects of noise and vibration. Examples of mitigation that address groundborne vibration include the use setbacks, the use of structural design features, or both.

Measured groundborne VdB levels for the Caltrain corridor in Sunnyvale have reached as high 77 VdB at 50 feet from the tracks, which is a perceptible level (see Table 3.6-1 of the LSAP EIR). Based on project design plans, residential land uses included as part of the Aster Avenue project could be located within approximately 85 feet of the adjacent Caltrain tracks. Therefore, vibration levels would be below 77 VdB at the nearest residential building residential on the project site and would be below the 85 VdB level considered to be acceptable by the FTA.

Construction activities would require the use of off-road equipment such as tractors, jackhammers, and haul trucks. The FTA vibration impact threshold of 85 VdB for construction, which is the vibration level that is considered by the FTA to be acceptable if there are an infrequent number of events per day, can be applied to construction activities. Groundborne vibration levels associated with representative construction equipment are summarized in LSAP Draft EIR Table 3.6-8. Based on the vibration levels presented in the table, ground vibration generated by most construction equipment would not be anticipated to exceed 85 VdB at 50 feet. The majority of construction equipment does not result in VdB in excess of FTA thresholds, even at 50 feet. The closest sensitive receptors to the project site are townhomes along the southside of Aster Avenue, located approximately 80 feet away from the location of the nearest anticipated construction activity. Therefore, construction activity would not occur within 50 feet of the nearest sensitive receptors and would be below the 85 VdB threshold set by FTA. Per Municipal Code Chapter 16.08, the construction activity in the City is permitted between the hours of 7:00 a.m. and 6:00 p.m. Monday through Friday, and between 8:00 a.m. and 5:00 p.m. on Saturdays. These hours are intended to minimize temporary noise impacts, including groundborne vibration impacts, by avoiding construction during nighttime periods that would disturb noise-sensitive land uses (residential). Groundborne vibration or groundborne noise levels during construction activity would be temporary, intermittent, short in duration, and would take place during the permitted hours of construction. The project does not include the operation of any new major vibration sources (e.g., roadways, transit stations) and would not locate new sensitive receptors near existing major sources of vibration. For the reasons described, this impact would be less than significant during both operation and construction for the project.

No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid.

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

LSAP Draft EIR Table 3.6-5 shows General Plan standards for evaluating a project's contribution to ambient noise level increases. The primary factor contributing to the ambient noise environment as a result of the LSAP would be the increase of vehicular traffic from increased densities. The LSAP Draft EIR Tables 3.6-7 and 3.6-8 show the calculated roadway noise levels under existing and cumulative traffic levels compared to the buildout of the LSAP. The LSAP EIR stated that, in comparison to existing and cumulative traffic noise levels, the LSAP would result in a predicted increase in traffic noise levels below the applicable noise level thresholds. Therefore, predicted traffic noise levels would not result in a substantial permanent increase in traffic noise levels along other primarily affected roadways.

The project is consistent with the land use designations and intensities set forth in the LSAP. As noted above under Checklist item 4.12(a), traffic noise levels along the project's frontage at Aster Avenue is currently 68.6 dB L_{dn} and would increase to 70.5 dB L_{dn} under existing plus project conditions. This noise level increase would not be substantial and would be within the City's noise standards for residential and retail uses (see LSAP Draft EIR Tables 3.6-4, 3.6-6 and 3.6-10). No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid, and this impact would be less than significant.

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

As identified in Impact 3.6.4 of the LSAP DEIR, major noise-generating construction activities associated with development under the LSAP would include removal of existing pavement and structures, site grading and excavation, installation of utilities, the construction of building foundations, cores, and shells, paving, and landscaping. The highest noise levels would be generated during the demolition of existing structures when impact tools are used (e.g., jackhammers, hoe rams) and during the construction of building foundations. Site grading and excavation activities would also generate high noise levels, as these phases often require the simultaneous use of multiple pieces of heavy equipment such as dozers, excavators, scrapers, and loaders. Lower noise levels result from building construction activities when these activities move indoors, and less heavy equipment is required to complete the tasks. Construction equipment would typically include, but would not be limited to, earth-moving equipment and trucks, mobile cranes, compressors, pumps, generators, paving equipment, and pneumatic, hydraulic, and electric tools. As depicted in LSAP Draft EIR Table 3.6-9, noise levels generated by individual pieces of construction equipment typically range from approximately 74 dBA to 89 dBA L_{max} at 50 feet. This impact was identified in the LSAP EIR as potentially significant and was mitigated by Mitigation Measure 3.6.4. This mitigation measure requires that subsequent projects in the LSAP shall employ site-specific noise attenuation measures during construction to reduce the generation of construction noise.

As explained in the project description, above, construction activities associated with the project would include demolition activities, excavation, and relocation of soil on the site, backfilling and compaction of soils, construction of infrastructure improvements, and construction of residential and community open space uses. These construction activities would also include cleanup of existing on-site contamination associated with the planned removal of a gasoline and diesel underground storage tanks. Construction equipment would vary day-to-day depending on the project phase and the activities occurring, but could involve operation of demolition equipment, graders, dozers, excavators, scrapers, other tractors, cranes, forklifts, generator sets, curb equipment, pavers, paving equipment, rollers, welders, and air compressors. The project applicant has provided a construction noise memorandum (Charles M. Salter Associates, October 2018) that identifies a list of construction noise control measures based on expected project construction activities consistent with Mitigation Measure MM 3.6.4. As explained in the memorandum, project construction would adhere to Chapter 16.08 of the Sunnyvale Municipal Code, and construction activities would occur Monday through Friday from 7:00 a.m. to 6:00 p.m. and on Saturday from 8:00 a.m. to 5:00 p.m. No construction would be permitted on Sunday or federal holidays when City offices are closed.

No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

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, would the project expose people residing or working in the project area to excessive noise levels?

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

As identified on LSAP Draft EIR page 3.6-16, the Moffett Federal Airfield Comprehensive Land Use Plan (City of Sunnyvale 2016) shows the LSAP area outside of the Moffett Federal Airfield noise contours. The LSAP is not located near a private airstrip.

No changes to the Moffett Federal Airfield Comprehensive Land Use Plan have occurred and no new private airstrips have been developed within the LSAP area at the time the project application was completed, and this environmental checklist was prepared. There are no new circumstances or new information requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR regarding airports and private airstrips remain valid, and no impact would occur.

Mitigation Measures

The following mitigation measure was identified in the LSAP EIR and would continue to remain applicable if the project were approved. Measures that are not applicable to the project (such as for pile driving) would not be required.

▲ Mitigation Measure 3.6.4:

- Subsequent projects in the LSAP shall employ site-specific noise attenuation measures during construction to reduce the generation of construction noise. These measures shall be included in a Noise Control Plan that shall be submitted for review and approval by the City of Sunnyvale Building Services Division. Measures specified in the Noise Control Plan and implemented during construction shall include, at a minimum, the following noise control strategies:
- Equipment and trucks used for construction shall use the best available noise control techniques (e.g., improved mufflers, equipment redesign, use of intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds;
- Impact tools (e.g., jack hammers, pavement breakers, and rock drills) used for construction shall be hydraulically or electrically powered wherever possible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatic tools is unavoidable, an exhaust muffler on the compressed air exhaust shall be used; this muffler can lower noise levels from the exhaust by up to about 10 dBA. External jackets on the tools themselves shall be used where feasible; this could achieve a reduction of 5 dBA. Quieter procedures, such as use of drills rather than impact tools, shall be used; and
- Stationary noise sources shall be located as far from adjacent receptors as possible, and they shall be muffled and enclosed within temporary sheds, incorporate insulation barriers, or include other measures.
- Noise reducing pile-driving techniques shall be employed during Project construction. These techniques shall include:
 - Installing intake and exhaust mufflers on pile-driving equipment;
 - Vibrating piles into place when feasible, and installing shrouds around the pile-driving hammer where feasible;
 - Implement “quiet” pile-driving technology (such as pre-drilling of piles and the use of more than one pile driver to shorten the total pile driving duration), where feasible, in consideration of geotechnical and structural requirements and conditions; - Use cushion blocks to dampen impact noise, if feasible based on soil conditions. Cushion blocks are blocks of material that are used with impact hammer pile drivers. They consist of blocks of material placed atop a piling during installation to minimize noise generated when driving the pile. Materials typically used for cushion blocks include wood, nylon and micarta (a composite material); and - At least 48 hours before pile-driving activities, the applicant shall notify building owners and occupants within 600 feet of the Project area of the dates, hours, and expected duration of such activities.

CONCLUSION

No new circumstances or project changes have occurred nor has any substantially important new information been found requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid and project approval would not result in new or substantially more severe significant noise impacts. No further analysis is required.

4.13 POPULATION AND HOUSING

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
13. Population and Housing. Would the project:				
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Draft EIR Setting pp. 3.2-1 to 3.2-6 Impacts 3.2.1 and 3.2.3	No	No	NA, impact remains less than significant
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	Draft EIR Setting pp. 3.2-1 to 3.2-6 Impacts 3.2.2 and 3.2.4	No	No	NA, impact remains less than significant
c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	Draft EIR Setting pp. 3.2-1 to 3.2-6 Impacts 3.2.2 and 3.2.4	No	No	NA, impact remains less than significant

4.13.1 Discussion

No substantial change in the regulatory settings related to population and housing, described in LSAP Draft EIR, Population and Housing, has occurred since certification of the LSAP EIR. As described in the project description, the project is consistent with LSAP and would contribute to the anticipated population growth expected under the LSAP.

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

As identified in Impact 3.2.1, the LSAP provides for approximately 1.2 million square feet of additional office/R&D/industrial uses. This would further increase employment opportunities in the City. Some of the new jobs would likely be filled by those already residing in the City and the surrounding area where commute times and distances are relatively short. However, for those wishing to relocate into the City, the potential increase in housing demand in the City and the plan area, specifically, could be accommodated by the new residential units. Table 3.2-3 in the LSAP EIR lists the net increase in housing units from the LSAP as 2,323. Of these units, 520 have been approved as part of the Greystar project at 1120-1130 Kifer Road. The 741 units proposed as part of the project would be within the projected net increase in the LSAP EIR. The physical environmental effects of this growth are addressed in the LSAP EIR.

The project is consistent with the land use designations and anticipated residential and employment growth set forth in the LSAP. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

- b) **Displace substantial numbers of existing homes, necessitating the construction of replacement housing elsewhere?**
- c) **Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?**

As discussed in Impact 3.2.2, the LSAP land use designations allow a broad and flexible mix of land uses that would support both residential and commercial growth, and would provide a wider range of housing choices to complement Sunnyvale's existing range of residential densities. The areas for new residential development are in locations that contain non-residential uses. As such, projects developed under the LSAP would not displace housing. The LSAP addresses also affordable housing through LSAP policies H-P1, H-P2, and H-P3. Further, the LSAP also includes an "Anti-Displacement" component. As stated in the LSAP, to avoid displacement of lower-income residents, no upzoning or increases in allowable densities on sites currently occupied by housing would occur. Retaining existing density allowances would minimize the financial incentive to demolish and replace existing units to achieve higher property values, thus minimizing the concern that existing residents would be physically displaced by new development. Because subsequent projects that could be developed under the LSAP would not displace substantial numbers of housing units or people and would not necessitate the construction of replacement housing elsewhere, there would be no impact under existing or cumulative conditions.

The project would not result in the removal of existing housing. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Mitigation Measures

No mitigation measures were needed for the certified LSAP EIR regarding population and housing. No additional mitigation measures are required for the project for this issue.

CONCLUSION

No new circumstances or project changes have occurred nor has any new information been found requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid and approval of the project would not result in new or substantially more severe significant impacts to population and housing.

4.14 PUBLIC SERVICES

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
14. Public Services				
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, to maintain acceptable service ratios, response times or other performance objectives for any public services:				
i. Fire protection?	Draft EIR Setting pp. 3.11-1 to 3.11-3 Impacts 3.11.1.1 and 3.11.1.2	No	No	NA, impact remains less than significant
ii. Police protection?	Draft EIR Setting pp. 3.11-5 to 3.11-6 Impacts 3.11.2.1 and 3.11.2.2	No	No	NA, impact remains less than significant
iii. Schools?	Draft EIR Setting pp. 3.11-7 to 3.11-9 Impacts 3.11.3.1 and 3.11.3.2	No	No	NA, impact remains less than significant
iv. Parks?	See below in Section 4.15, Recreation	See below in Section 4.15, Recreation	See below in Section 4.15, Recreation	See below in Section 4.15, Recreation

4.14.1 Discussion

Since release of the LSAP Final EIR, state voters approved Proposition 51 (Funding for K-12 School and Community College Facilities. Initiative Statutory Amendment) in November 2016 that will provide nine billion dollars in general obligation bonds for educational facilities (seven billion dollars would be available to K-12 public school facilities). This would provide an additional funding source for school facility needs for the Sunnyvale School District, Santa Clara Unified School District, and the Fremont Union High School District. This change in funding opportunities would not alter the environmental impact conclusions provided in the certified LSAP EIR.

- a) **Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or 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:**

Fire protection?

As identified in Impact 3.11.1.1 and 3.11.1.2 of the LSAP EIR, additional residents and retail, commercial, and office/research and development (R&D) uses in the LSAP would increase the need for fire protection services, including an increased need for additional inspectors, permit issuance, etc. It is currently expected that the LSAP itself would not necessitate the need to construct a fire station or emergency medical facility. There are two City of Sunnyvale Fire Department stations within approximately half a mile west and southwest of the plan area boundary, and Santa Clara County has a fire station on Corvin Drive, just north of the plan area boundary along Kifer Road. The LSAP does not contain any policies regarding the provision of fire protection services, but public uses such as a fire station or emergency medical facility would be a permitted use in all land use classifications, subject to review and City approval. As subsequent development projects are proposed in the LSAP area, the City would ensure that equipment and facilities (e.g., fire trucks and new or modified fire stations) are provided and maintained to meet reasonable standards of safety, dependability, and compatibility with fire service operations and that rapid emergency response times are met. Therefore, fire protection and emergency medical services impacts would be less than significant for the LSAP under project and cumulative conditions.

The project is required to meet all City requirements regarding fire protection, including fire access (see project design plans – sheet C7.0). No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Police protection?

Additional residents and retail, commercial, and office/R&D uses in the LSAP would increase the need for law enforcement protection services (see Impact 3.11.2.1 and 3.11.2.2). The LSAP recognizes that a variety of public facilities would be needed to serve the area as development proceeds. Some of these would be provided through mandatory fees and assessments consistent with existing City policy. The LSAP does not contain any policies regarding the provision of law enforcement services, but public uses such as a police station would be a permitted use in all land use designations, subject to review and City approval. Therefore, law enforcement services impacts would be less than significant under project and cumulative conditions.

The project is required to meet all City site design requirements regarding public safety. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Schools?

The LSAP EIR stated that projected growth under the LSAP would increase student enrollment in the Sunnyvale, Santa Clara Unified, and Fremont Union High school districts (see Impact 3.11.3.1 and 3.11.3.2). Buildout of the LSAP's 2,323 housing units would result in 114 elementary and middle school students attending Ellis Elementary School and/or Sunnyvale Middle School and 52 high school students attending Fremont High School. The LSAP EIR discussed the potential for enrollment capacity at these schools to be exceeded, and concluded that exceeding school capacity is not considered a physical impact under CEQA. The EIR stated that subsequent projects developed under the LSAP would be required to pay applicable school impact fees in accordance with state law. The school districts would address the need for expansion of school facilities or development of new school facilities, and such development would be subject to the appropriate CEQA environmental review. The LSAP impacts would be less than significant.

The project's 741 dwelling units would generate approximately 163 elementary and middle school students and 74 high school students, based on the LSAP EIR generation rates. The project would be subject to local school districts' school impact fees (Sunnyvale School District and the Fremont Union High School District). As noted above, under Population and Housing, the 741 units proposed as part of the project would be within the projected net increase in the LSAP EIR. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Parks?

See the discussion, below, under checklist item in Section 4.15, "Recreation."

Mitigation Measures

No mitigation measures were needed for the certified LSAP EIR regarding public services. No additional mitigation measures are required for the project.

CONCLUSION

The conclusions of the LSAP EIR remain valid and approval of the project would not result in new or substantially more severe significant impacts to public services.

4.15 RECREATION

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
15. Recreation				
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?	Draft EIR Setting pp. 3.0-2 and 3.11-11 to 3.11-12 Impacts 3.11.4.1 and 3.11.4.2	No	No	NA, impact remains less than significant
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?	Draft EIR Setting pp. 3.11-11 to 3.11-12 Impacts 3.11.4.1 and 3.11.4.2	No	No	NA, impact remains less than significant

4.15.1 Discussion

No substantial change in the regulatory settings related to recreation, described in the LSAP Draft EIR Section 3.11.4, Parks and Community Services, has occurred since certification of the LSAP EIR.

- a) **Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?**
- b) **Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?**

As addressed in Impact 3.11.4.1 and 3.11.4.2, the additional population associated with the LSAP (5,622) would generate a demand for approximately 28 acres of park and recreation facilities. With the proposed Land Use and Transportation Element Update (LUTE) the city-wide demand for parkland would be approximately 698 acres in year 2035. This demand would not occur immediately, but would occur over time as subsequent projects are developed. As required under the City's Municipal Code Chapter 18.10, subsequent projects would be required to dedicate land, pay a fee in lieu thereof, or both, for park or recreational purposes at a ratio of 5 acres per 1,000 residents. The LSAP has identified measures that could be used to meet the need generated by future development projects and proposes an open space framework illustrating key elements of a parks and open space system for the plan area at a conceptual level (LSAP Draft EIR Figure 2.0-4; see Section 2.0, Project Description). Under the LSAP, approximately 32.5 to 39.0 acres of new open spaces and plazas open to the public throughout the plan area could be established. Per the City's Municipal Code, subsequent projects would also be required to dedicate land, pay a fee in lieu thereof, or both, for park or recreational purposes at a ratio of 5 acres per 1,000 residents.

Typical environmental effects regarding improvements to and use of parks and recreational facilities may involve issues with noise (during construction and with use of playfields and playgrounds), air quality (during the construction of the facility), biological resources (depending on location), historic/cultural resources (depending on location), public services and utilities (demand for police and fire protection, electric, water, and wastewater service), and traffic on a local neighborhood level. The environmental effects of construction and operation of such facilities in the plan area have been considered in the technical analyses of the Draft EIR as part of overall development of projects anticipated under the LSAP. Impacts on existing facilities and the development of new facilities within the LSAP area would be less than significant under project and cumulative conditions.

The project is a residential and retail development project and would generate direct demand for recreation facilities. The project includes construction of a publicly accessible open space area on the project site. The proposed open space area would be approximately 2.3 acres on the southwestern corner of the project site. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Mitigation Measures

No mitigation measures were identified in for the certified LSAP EIR regarding recreation, nor are any additional mitigation measures required the project.

CONCLUSION

No new circumstances or project changes have occurred nor has any new information been identified requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid and approval of project would not result in new or substantially more severe significant impacts to recreation.

4.16 TRANSPORTATION/TRAFFIC

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
16. Transportation/Traffic. Would the project:				
a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Draft EIR Setting pp. 3.4-1 to 3.4-23 Impact 3.4.6	No	Yes	Yes, but impact remains significant and unavoidable
b. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	Draft EIR Setting pp. 3.4-1 to 3.4-23 Impact 3.4.6	No	Yes	Yes, but impact remains significant and unavoidable
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	Draft EIR p 3.4-33 No impact	No	No	NA
d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Draft EIR Setting pp. 3.4-1 to 3.4-23 Impact 3.4.4	No	Yes	No, impact remains less than significant
e. Result in inadequate emergency access?	Draft EIR Setting pp. 3.4-1 to 3.4-23 Impact 3.4.5	No	Yes	No, impact remains less than significant
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	Draft EIR Setting pp. 3.4-1 to 3.4-23 Impacts 3.4.1, 3.4.2, and 3.4.3	No	Yes	No, impact remains less than significant

4.16.1 Discussion

No substantial change in the regulatory settings related to transportation and traffic, described in the LSAP Draft EIR Section 3.4, Transportation and Circulation, has occurred since certification of the LSAP EIR.

The project is estimated to generate more than 100 peak hour trips; and thus, the potential impacts of the project were evaluated following the standards and methodologies set forth by the City of Sunnyvale and the Santa Clara Valley Transportation Authority (VTA) which administers the County Congestion Management

Program (CMP). The Aster Avenue Transportation Impact Analysis (TIA) includes analysis of a.m. and p.m. peak hour traffic conditions for the following 29 intersections in the vicinity of the project site:

- ▲ Fair Oaks Avenue & US 101 Northbound Ramps
- ▲ Fair Oaks Avenue & Duane Avenue
- ▲ Fair Oaks Avenue & Evelyn Avenue
- ▲ Wolfe Road & Stewart Drive
- ▲ Wolfe Road & Arques Avenue
- ▲ Wolfe Road & Central Expressway Ramps
- ▲ Wolfe Road & Kifer Road
- ▲ Wolfe Road & Evelyn Avenue
- ▲ Wolfe Road & Old San Francisco Road/Reed Avenue
- ▲ Wolfe Road & El Camino Real *
- ▲ Wolfe Road & Fremont Avenue
- ▲ Sequoia Drive & Reed Avenue
- ▲ Evelyn Avenue & Aster Avenue
- ▲ Evelyn Avenue & Reed Avenue
- ▲ Willowbend Driveway & Aster Avenue (unsignalized)
- ▲ Timberpine Avenue & Reed Avenue
- ▲ Willow Avenue & Reed Avenue (unsignalized)
- ▲ Willow Avenue & Aster Avenue (unsignalized)
- ▲ Lawrence Expressway & US 101 Northbound Ramps
- ▲ Lawrence Expressway & US 101 Southbound Ramps
- ▲ Lawrence Expressway & Oakmead Parkway/Duane Avenue
- ▲ Lawrence Expressway & Arques Avenue *
- ▲ Lawrence Expressway & Kifer Road
- ▲ Lawrence Expressway & Monroe Street/Reed Avenue *
- ▲ Lawrence Expressway & Cabrillo Avenue [City of Santa Clara]
- ▲ Lawrence Expressway & El Camino Real Ramps [City of Santa Clara] *
- ▲ French Street & Agate Drive [City of Santa Clara] (unsignalized)
- ▲ Monticello Way & Agate Drive [City of Santa Clara] (unsignalized)
- ▲ Monticello Way & Monroe Street [City of Santa Clara]

Four of the study intersections are CMP intersections (* on list above denotes CMP intersections) and five of the study intersections are unsignalized. The study intersections were selected to include locations at which the project is expected to generate 10 or more peak-hour trips per lane.

The VTA CMP guidelines require that freeway segments be evaluated to determine the impact of projects that generate trips equal to or greater than one percent of the freeway segment's capacity. Within the project vicinity, two freeway segments were analyzed following the CMP guidelines. Additionally, the TIA includes analysis of volume-to-capacity (V/C) ratios for four freeway ramps at the interchanges of US 101 and Fair Oaks Avenue and US 101 and Lawrence Expressway.

Traffic conditions were evaluated for the scenarios described below.

- ▲ Existing Conditions. Existing conditions are based on recent traffic counts collected at the study intersections. Existing traffic count data is provided in the Transportation Impact Analysis in Appendix A.
- ▲ Existing Plus Project Conditions. Existing Plus Project conditions were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing Plus Project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- ▲ Background Conditions. Background conditions were estimated by adding to existing traffic volumes the project traffic from approved but not yet completed and occupied developments in the study area.

Approved project trips and approved project trip information were obtained from the City of Sunnyvale and the City of Santa Clara. In addition, roadway improvements associated with the approved developments were assumed as directed by City staff.

- ▲ **Background Plus Project Conditions.** Background traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Background Plus Project conditions were evaluated relative to Background conditions in order to determine potential project impacts.

Because the project is located within, and is consistent with the adopted LSAP, the cumulative project impacts are included in the *LSAP EIR* which are summarized in this section.

For a detailed discussion of methodology and analysis results, please refer to Appendix A of this checklist.

- a) **Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?**

and

- b) **Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?**

Intersection Operations

Impact 3.4.6 of the LSAP EIR identified that the following intersections would be significantly impacted by the LSAP at build out in the year 2035 in combination with implementation of the City's Land Use and Transportation Element (LUTE) update that was adopted in 2017 as compared to existing conditions for level of service (LOS) operations for a.m. and p.m. peak hour conditions. This includes Santa Clara County Congestion Management Plan (CMP) facilities and intersections in the City of Santa Clara:

- ▲ Lawrence Expressway & Tasman Drive (#2) (CMP intersection) – from LOS D in a.m. and E in p.m. under existing conditions to LOS F in a.m. and p.m. under 2035 conditions.
- ▲ Lawrence Expressway & Lakehaven Drive (#3) (CMP intersection) – from LOS E in a.m. and p.m. under existing conditions to LOS F in a.m. and p.m. under 2035 conditions.
- ▲ Lawrence Expressway & Oakmead Parkway (#6) (CMP intersection) – from LOS D in a.m. and E in p.m. under existing conditions to LOS F in a.m. and p.m. under 2035 conditions.
- ▲ Lawrence Expressway & Arques Avenue (#7) (CMP intersection) – from LOS E in a.m. and F in p.m. under existing conditions to LOS F in p.m. under 2035 conditions.
- ▲ Wolfe Road & Arques Avenue (#12) – from LOS C in a.m. and p.m. under existing conditions to LOS E in a.m. under 2035 conditions.
- ▲ Wolfe Road & Kifer Road (#13) – from LOS C in a.m. and p.m. under existing conditions to LOS F in a.m. and p.m. under 2035 conditions.

- ▲ Wolfe Road & Reed Avenue (#15) – from LOS C in a.m. and p.m. under existing conditions to LOS E in a.m. under 2035 conditions.
- ▲ Wolfe Road & Fremont Avenue (#18) – from LOS D in a.m. and p.m. under existing conditions to LOS E in a.m. and F in p.m. under 2035 conditions.
- ▲ Lawrence Expressway & Cabrillo Avenue (#25) (CMP intersection in the City of Santa Clara)– from LOS E in a.m. and p.m. under existing conditions to LOS F in a.m. and p.m. under 2035 conditions.
- ▲ Lawrence Expressway & Benton Street (#27) (CMP intersection in the City of Santa Clara)– from LOS F in a.m. and LOS E in p.m. under existing conditions to LOS F in a.m. and p.m. under 2035 conditions.
- ▲ Lawrence Expressway & Homestead Road (#28) (CMP intersection in the City of Santa Clara) – from LOS F in a.m. and p.m. under existing conditions to LOS F in a.m. and p.m. under 2035 conditions.
- ▲ Lawrence Expressway & Pruneridge Avenue (#29) (CMP intersection in the City of Santa Clara) – from LOS E in a.m. and LOS D in p.m. under existing conditions to LOS F in a.m. and p.m. under 2035 conditions
- ▲ Lawrence Expressway & I-280 Southbound Ramp (#33) (CMP intersection) – from LOS E in a.m. and LOS D in p.m. under existing conditions to LOS F in a.m. and LOS E in p.m. under 2035 conditions.
- ▲ Bowers Avenue & Central Expressway (#38) – from LOS E in a.m. and p.m. under existing conditions to LOS F in a.m. and p.m. under 2035 conditions.
- ▲ Bowers Avenue & Kifer Road (#39) – from LOS C in a.m. and p.m. under existing conditions to LOS E in p.m. under 2035 conditions.
- ▲ Bowers Avenue & Monroe Street (#41) – From LOS C in a.m. and p.m. under existing conditions to LOS F in p.m. under 2035 conditions.

LSAP traffic would also result in significant contributions to the anticipated deficient operation of the following intersections:

- ▲ Lawrence Expressway & Cabrillo Avenue (#25) (CMP intersection in the City of Santa Clara)
- ▲ Lawrence Expressway & Benton Street (#27) (CMP intersection in the City of Santa Clara)
- ▲ Lawrence Expressway & Homestead Road (#28) (CMP intersection in the City of Santa Clara)
- ▲ Lawrence Expressway & Pruneridge Avenue (#29) (CMP intersection in the City of Santa Clara)

This would be a cumulatively considerable and significant traffic operation impact. The LSAP Draft EIR identifies a series of possible mitigation measures consisting of at-grade and grade-separated intersection improvements and concludes that these mitigation measures (with the exception of Mitigation Measure MM 3.4.6) are infeasible (see LSAP Draft EIR pages 3.4-55 through 3.4-57). This impact was identified as cumulatively considerable and a significant and unavoidable impact.

The project is consistent with the land use designations and intensities set forth in the LSAP and its contribution to traffic is addressed in the LSAP EIR.

For the analysis conducted as part of the TIA, the criteria used to determine significant impacts on signalized and unsignalized intersections are based on the City of Sunnyvale and VTA's CMP LOS standards.

Signalized Intersections Significance Criteria

The project would result in a significant impact on traffic operating conditions at a signalized intersection in the City of Sunnyvale or the City of Santa Clara if for the study peak hour:

- ▲ The LOS at the intersection drops below its respective LOS standard when project traffic is added; or
- ▲ An intersection that operates below its LOS standard without the project experiences an increase in critical-movement delay of four or more seconds, *and* the critical V/C ratio is increased by 0.01 or more when project traffic is added.

The exception to this threshold is when the addition of project-generated traffic reduces the amount of average control delay for critical movements (i.e., the change in average control delay for critical movements are negative). In this case, the threshold is when the project increases the critical V/C value by 0.01 or more.

The operation of principal arterials and state highways located within urbanized Santa Clara County is measured by the LOS at CMP Intersections. CMP intersections are generally high-volume intersections located along these thoroughfares. The definition of a significant impact at a CMP intersection is the same as for the City of Sunnyvale and City of Santa Clara, except that the standard for acceptable LOS for all CMP and regional intersections is LOS E or better.

A significant impact by the City of Sunnyvale, City of Santa Clara and CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to its LOS standard or to an average delay that eliminates the project impact.

Unsignalized Intersections Significance Criteria

Per City of Sunnyvale guidelines, for determining the LOS for unsignalized intersections, the average intersection delay is used for all-way stop controlled intersections, and the worst movement delay is used for side-street stop-controlled intersections. Project impacts at the City of Sunnyvale's unsignalized intersections would be considered significant if:

- ▲ An intersection operates at an acceptable LOS (i.e. LOS D or better) without the project and degrades to an unacceptable LOS (i.e. LOS E or F) with the addition of project traffic.
- ▲ An intersection operates at an unacceptable LOS (i.e. LOS E or F) without the project and the addition of project traffic increases:
 - The average intersection delay by four seconds or more, and the V/C value by 0.01 or more for all-way stop controlled intersections; or
 - The worst movement delay by four seconds or more, and the V/C value by 0.01 or more for side-street stop controlled.
- ▲ An Intersection meets the warrant(s) for installation of a traffic signal as per the latest edition of California Manual on Uniform Traffic Control Devices.

Project TIA Intersection Analysis

The City of Santa Clara does not have officially adopted significance criteria for unsignalized intersections. According to previous studies, significant impacts occur when the addition of project traffic causes the average intersection delay for all-way stop-controlled intersections or the worst movement/approach for side-street stop-controlled intersections to degrade to LOS F and the intersection satisfies the peak-hour signal warrant from CA MUTCD. A significant impact is considered mitigated when the installation of traffic signals causes the intersection to operate at an acceptable level.

The TIA includes intersection LOS analysis (see Appendix A) showing that based on the intersection significance criteria listed above, all of TIA study intersections would operate at acceptable levels with the implementation of the project under the Existing Plus Project and Background Plus Project conditions. Therefore, no new significant impacts or substantially more severe impacts would occur. The findings of the certified LSAP EIR remain valid and no further analysis is required.

FREEWAY OPERATIONS

Impact 3.4.6 of the LSAP EIR identifies that the following mixed-flow lanes on the following directional study freeway segments are expected to operate at LOS F with the LSAP during either the a.m. or p.m. peak hour under 2035 conditions with the LUTE update:

- ▲ State Route (SR) 237, eastbound from Lawrence Expressway to Great America Parkway in a.m. and p.m.
- ▲ SR 237, westbound from Great America Parkway to Lawrence Expressway in a.m. and p.m.
- ▲ US 101, southbound from Mathilda Avenue to Bowers Avenue/Great America Parkway in a.m. and p.m.
- ▲ US 101, southbound from Bowers Avenue/Great America Parkway to Montague Expressway/San Tomas Expressway in p.m.
- ▲ US 101, northbound from Montague Expressway/San Tomas Expressway to SR 237 in a.m.
- ▲ Interstate (I)-280, southbound from Lawrence Expressway to Saratoga Avenue in p.m.
- ▲ I-280, northbound from Saratoga Avenue to Lawrence Expressway in a.m. and p.m.

The HOV lanes on the following directional study freeway segments are expected to operate at LOS F during either the a.m. or p.m. peak hour under 2035 conditions:

- ▲ SR 237, eastbound from Lawrence Expressway to Great America Parkway in a.m. and p.m.
- ▲ SR 237, westbound from Great America Parkway to Lawrence Expressway in a.m. and p.m.
- ▲ US 101, southbound from SR 237 to Montague Expressway/San Tomas Expressway in p.m.
- ▲ US 101, northbound from Montague Expressway/San Tomas Expressway to Bowers Avenue/Great America Parkway in a.m. and p.m.
- ▲ US 101, northbound from Bowers Avenue/Great America Parkway to Fair Oaks Avenue in a.m.
- ▲ US 101, northbound from Fair Oaks Avenue to SR 237 in a.m. and p.m.
- ▲ I-280, southbound from Lawrence Expressway to Saratoga Avenue in p.m.
- ▲ I-280, northbound from Saratoga Avenue to Lawrence Expressway in a.m.

LSAP traffic would result in significant contributions to the following freeway segments as compared to existing conditions:

- ▲ SR 237, eastbound from Lawrence Expressway to Great America Parkway in a.m. in mixed flow lanes.
- ▲ SR 237, westbound from Great America Parkway to Lawrence Expressway in a.m. in mixed flow lanes and HOV lanes in a.m. and p.m.

- ▲ US 101, southbound N. Mathilda Avenue to N. Fair Oaks Avenue in a.m. in mixed flow lanes and HOV lanes in p.m.
- ▲ US 101, southbound N. Fair Oaks Avenue to Lawrence Expressway in HOV lanes in p.m.
- ▲ US 101, southbound Lawrence Expressway to Bower Avenue/Great American Parkway in p.m. in mixed flow lanes and HOV lanes.
- ▲ US 101, southbound Bower Avenue/Great American Parkway to Montague Expressway/San Tomas Expressway in p.m. in HOV lanes.
- ▲ US 101, northbound Montague Expressway/Santa Thomas Expressway to Bower Avenue/Great American Parkway in a.m. in mixed flow lanes and HOV lanes.
- ▲ US 101, northbound Bower Avenue/Great American Parkway to Lawrence Expressway in a.m. in mixed flow lanes and HOV lanes.
- ▲ US 101, northbound Lawrence Expressway to N. Fair Oaks Avenue in a.m. in HOV lanes.
- ▲ US 101, northbound N. Mathilda Avenue to SR 237 in a.m. in mixed flow lanes.

The VTA Valley Transportation Plan (VTP) identifies freeway express lane projects along both SR 237 and US 101 that would consist of converting existing HOV lanes to express lanes and the addition of an express lane on US 101. This would mitigate impacts to US 101, but not to impacts on SR 237. Current development along both SR 237 and US 101 currently restrict the ability to expand these freeway facilities. Development in the LSAP is required to pay fair-share fees towards improvements. However, the City does not have jurisdiction on state highway facilities to ensure these improvements are constructed. Freeway segment impacts would be cumulatively considerable and a significant and unavoidable impact for the LSAP.

The project is consistent with the land use designations and intensities set forth in the LSAP and its contribution to traffic is addressed in the LSAP EIR.

For the analysis conducted as part of the TIA, the criteria used to determine significant impacts on freeway facilities are based on the City of Sunnyvale and VTA's CMP level of service (LOS) standards.

Freeway Segments Significance Criteria

Per CMP requirements, the project is said to create a significant impact along a freeway segment if for either peak hour:

- ▲ The LOS of the freeway segment drops below the LOS E standard when project traffic is added; or
- ▲ The LOS of the freeway segment is LOS F under existing conditions and the number of new trips added by the project is more than one percent of the freeway capacity.

Freeway Ramps Significance Criteria

The project is said to create a significant impact on a freeway ramp if its implementation:

- ▲ Causes the V/C ratio of the freeway ramp to exceed 1.0; or
- ▲ Increases the amount of traffic on a freeway ramp that is already exceeding its capacity by more than one percent of the ramp's capacity.

Project TIA Freeway Facility Analysis

The TIA (see Appendix A) analyzed impacts to freeways segments and ramps. The analysis in the TIA shows that the freeway segments currently operating at acceptable LOS would continue to operate at acceptable LOS with the addition of project-generated traffic. For freeway segments currently operating at unacceptable LOS F, the project-generated freeway traffic would not exceed one percent; thus, the project freeway segment impacts would be less than significant. The results of the ramp analysis from the TIA shows that the study freeway ramps currently have sufficient capacity to serve the existing traffic volumes and the ramps would maintain sufficient capacity to serve the traffic volumes with the addition of project-generated traffic under Existing Plus Project conditions.

The project is expected to add traffic to the Lawrence Expressway and Central Expressway square loop ramps. The project is expected to add six trips during the a.m. peak hour and seven trips during the p.m. peak hour to the westbound Central Expressway to southbound Lawrence Expressway off-ramp. In addition, the project is expected to add 9:00 a.m. peak hour trips and 4:00 p.m. peak hour trips to the northbound Lawrence Expressway to eastbound Central Expressway on-ramp. This equates to a range of approximately one vehicle every 6 to 15 minutes. The TIA concluded that the Lawrence Expressway and Central Expressway square loop ramps do not have any existing significant operational issues, and the proposed project would add minimal traffic to the Lawrence Expressway and Central Expressway square loop ramps and is not expected to considerably affect the ramp operations under Existing Plus Project conditions.

Therefore, no new significant impacts or substantially more severe impacts would occur. The findings of the certified LSAP EIR remain valid.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The LSAP is outside the Moffett Airport's influence area and safety zones and would not involve changes in air traffic operations. There have been no changes to the Moffett Airport's operations since certification of the LSAP EIR. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

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

As identified in Impact 3.4.4, the LSAP incorporates a "complete streets" approach for circulation planning that accommodates all travel modes. Complete streets are designed and operated to enable safe and convenient access for all users, including pedestrians, bicyclists, and motorists. The LSAP includes several circulation network improvements to provide improved access through the plan area. In addition to providing new streets in the LSAP, improvements to existing streets would be implemented to ensure safety for all street users. Extensive bicycle and pedestrian facility enhancements would be implemented, including additional crosswalks, changes in signal timing, and two grade-separated pedestrian/bicycle crossings at the Caltrain tracks. All of the proposed improvements would help reduce the potential for pedestrian/bicycle and vehicle conflicts. All roadway and pedestrian/bicycle facilities would be designed in accordance with City standards.

Access to the project would be provided via two full-access driveways along Aster Avenue and third driveway (right-in, right-out) located in the northeast corner of the project site along the Willow Avenue frontage. Additionally, in accordance with City standards, the project would provide adequate sight distance at all access points. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Caltrain Tracks

There are barriers between existing development and the Caltrain tracks in the LSAP. Barriers on the north side are typically solid masonry walls that define the boundaries of the various properties that adjoin the Caltrain right-of-way. There is a chain-link fence on the south side of the tracks in the LSAP area (e.g., at the boundary of the Calstone/Peninsula Building Materials operations). While the LSAP would attract more

people into the area who could engage in either illegal or scofflaw behavior, the LSAP does not propose any changes in Caltrain operations that would increase the number or frequency of trains that pass through the plan area, nor are any modifications to Caltrain tracks or Lawrence station anticipated to accommodate new buildings and circulation network improvements identified in the LSAP.

As identified in Impact 3.4.4, results of the traffic modeling show that intersection conditions near roadway crossings of the tracks would not worsen as a result of the LSAP, indicating the LSAP-generated traffic volumes at the at-grade crossing would not substantially increase. As such, no substantial increased risk of vehicle/train conflicts is anticipated due to LSAP traffic. The LSAP proposes two new grade-separated crossings at the Caltrain tracks, one on the east side of the plan area and one on the west side. These crossings would be for non-vehicular travel only and would provide two new options for pedestrians and bicyclists traveling between the north and south sides of the plan area to safely cross the tracks. Design and construction of the track crossings would need to be coordinated with Caltrain. Thus, this impact would be less than significant under project and cumulative conditions.

The project would provide direct access to the adjacent Caltrain station but would not include on-site access to the Caltrain tracks directly north of the project site where no station is present. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

e) Result in inadequate emergency access?

As identified in Impact 3.4.5, the LSAP includes several circulation network improvements to provide improved access through the LSAP area. The Loop would provide an additional full access point to Central Expressway west of Lawrence Expressway, which could reduce traffic volumes on Lawrence Expressway. Extending the connectivity of Sonora Court to both Kifer Road and the east side of the Lawrence Expressway overcrossing could reduce traffic volumes on Kifer Road. The Loop would also provide additional access routes to the Lawrence Caltrain Station. The San Ysidro Way extension would provide the opportunity to close San Zeno Way, allowing for a clearer and less circuitous connection in the station area. These improvements, along new secondary streets, would provide additional access through and around the LSAP. All improvements would be required to meet City of Sunnyvale roadway design standards. Because the LSAP would provide adequate access for emergency vehicles, impacts would be less than significant for the LSAP.

The project is required to meet all City requirements regarding emergency access, including fire access. The project design shows that all drive aisles on the project site would exceed the minimum 20-foot width requirement for emergency vehicle access and circulation. Thus, no new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

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

Potential conflicts with public transit, bicycle and pedestrian facilities and uses are addressed in Impacts 3.4.1 (public transit), 3.4.2 (bicycle facilities) and 3.4.3 (pedestrian facilities) of the LSAP EIR.

Public Transit

The mode share for transit within the LSAP area would increase from existing (1.5%) to current GP (3.5%) to the 2035 proposed LUTE update conditions (4.5%). This could increase the demand for transit services and related facilities. Diversifying land uses and increasing densities envisioned under the LSAP would support the long-term viability of the Lawrence Caltrain station. Daily transit ridership is estimated to increase to levels comparable to those at the California Avenue Caltrain station in Palo Alto, a station that supports a range of users, including visitors and employees of the California Avenue retail district. Caltrain has plans to increase the number of trains serving the Lawrence Station from the existing 56 trains per day to 66 trains per day during weekdays.

The project design would comply with LSAP policies regarding site design and would not conflict with any transit service in the area and all existing transit services have sufficient capacity to serve the project. Additionally, the project would provide the benefit of direct pedestrian access to the Lawrence Caltrain Station via the proposed sidewalks along the Willow Avenue and Aster Avenue project frontages, and existing pedestrian facilities and crossings. Thus, no new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Pedestrian and Bicycle

As identified in Impacts 3.4.2 and 3.4.3 of the LSAP EIR, the LSAP identifies various bicycle and pedestrian facility improvements to close the gaps in the existing and planned network. The planned bicycle network would provide a continuous system of Class I and Class II facilities that would allow improved and safe connections throughout the plan area. The LSAP identifies two new bicycle/pedestrian crossings at the Caltrain tracks, one in the vicinity of Calabazas Creek on the east and one in the west side of the plan area connecting The Loop near Sonora Court to Aster Avenue. These grade-separated crossings would increase north-south connectivity for bicyclists, as well as pedestrians, and would provide increased safety.

The project would be in compliance with LSAP policies regarding site design including policies regarding street design to create safe and comfortable movement on foot, including streetscape amenities like street trees, furniture, and street lights. The project would provide sidewalks along the Willow Avenue and Aster Avenue project frontages; thus, creating a continuous pedestrian path between the project site and the Lawrence Caltrain Station. Additionally, the project would install a crosswalk along the west leg of the Willow Avenue and Aster Avenue intersection. This crosswalk would create a continuous pedestrian route between the project site, Reed Avenue, and Lawrence Expressway. The project also proposes studying and potentially installing a mid-block crosswalk across Aster Avenue at the western end of the project site to provide pedestrian/bicycle connectivity to the proposed open space or the on-site bicycle/pedestrian trails.

The project includes bicycle facility improvements along its project frontage. Aster Avenue along the project frontage currently has two five-foot bike lanes. The project proposes to restripe the roadway to widen the bike lanes to six feet. Willow Avenue currently has no bike lanes along the project frontage. The project proposes to restripe the roadway to include two six-foot bike lanes. The proposed bicycle facility improvements would enhance the bicycle connectivity to the Lawrence Caltrain station.

Thus, due to the pedestrian and bicycle improvements proposed as part of the project and project consistency with LSAP design policies, no new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

Mitigation Measures

Mitigation Measure MM 3.4.6 was adopted with the LSAP; however, is no longer applicable due to adoption of the Land Use and Transportation Element Update in 2017.

CONCLUSION

No new circumstances or project changes have occurred nor has any substantially important new information been found requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid and approval project would not result in new or substantially more severe significant noise impacts. No further analysis is required.

4.17 UTILITIES AND SERVICE SYSTEMS

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
17. Utilities and Service Systems. Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Draft EIR Setting pp. 3.11-30 to 3.11-34 Impact 3.11.6.1 and 3.11.6.3	No	No	NA, impact remains less than significant
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Draft EIR Setting pp. 3.11-14 to 3.11-34 Impact 3.11.5.2, 3.11.5.4, 3.11.6.1, 3.11.6.2, and 3.11.6.3	No	No	NA, impact remains less than significant
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	See discussion under 4.9, Hydrology and Water Quality.	No	No	NA, impact remains less than significant
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	Draft EIR Setting pp. 3.11-14 to 3.11-24 Impact 3.11.5.1 and 3.11.5.3	No	No	NA, impact remains less than significant
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Draft EIR Setting pp. 3.11-30 to 3.11-34 Impact 3.11.6.1, 3.11.6.2, and 3.11.6.3	No	No	NA, impact remains less than significant
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Draft EIR Setting pp. 3.11-37 to 3.11-41 Impact 3.11.7.1 and 3.11.7.3	No	No	NA, impact remains less than significant
g. Comply with federal, state, and local statutes and regulations related to solid waste?	Draft EIR Setting pp. 3.11-37 to 3.11-41 Impact 3.11.7.2	No	No	NA, impact remains less than significant
h. Create demand for natural gas, electricity, telephone, and other utility services that cannot be met.	Draft EIR Setting pp. 3.11-44 to 3.11-47 Impact 3.11.8.1	No	No	NA, impact remains less than significant
i. Result in inefficient, wasteful, and unnecessary consumption of energy.	Draft EIR Setting pp. 3.11-44 to 3.11-47 Impact 3.11.8.1	No	No	NA, impact remains less than significant

4.17.1 Discussion

Since completion of the LSAP Draft EIR, the City of Sunnyvale has adopted a 2015 Urban Water Management Plan (UWMP). The LSAP Water Supply Assessment (WSA) was based in part on information from the City's 2010 UWMP. While there is some variation between the WSA and 2015 UWMP in the estimates of water supply and demand for build out of the City, both the WSA and 2015 UWMP conclude that there is adequate

water supply available to meet normal, single-dry, and multiple-dry year conditions. Thus, the 2015 UWMP does not substantially change the water supply impact analysis provided in the LSAP EIR.

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

As addressed in Impact 3.11.6.1, 3.11.6.2 and 3.11.6.3, increased population associated with the LSAP would result in an additional approximately 0.62 mgd of wastewater flows. Current flows treated by the City's Water Pollution Control Plant (WPCP) are approximately 11.4 mgd. The addition of LSAP flows to existing flows would be approximately 12 mgd, which would be within the current permitted average dry weather flow (ADWF) design flow capacity of the WPCP and would also be within the 19.5-mgd ADWF design flow capacity. Although there would be an increase in wastewater flows to the WPCP, the constituents in the wastewater flows to the plant would remain similar to existing conditions (i.e., residential, retail, office/R&D). No increase in industrial or commercial land uses or other types of land uses typically associated with hazardous pollutant discharges to the sewer system are proposed. The LSAP determined this would result in a less-than-significant impact.

The project consists of residential and retail uses and is expected to generate constituents in the wastewater flows to the plant would remain similar to existing conditions. The project's contribution to wastewater flows were factored in the LSAP EIR given that its land use and intensities are consistent with the LSAP. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

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

As addressed in Impacts 3.11.5.2, 3.11.5.4, 3.11.6.1, 3.11.6.2, and 3.11.6.3 in the LSAP EIR, LSAP contributions to water demand and wastewater are anticipated to be accommodated with existing infrastructure facilities. The LSAP Draft EIR acknowledges that there may be some future need to upgrade infrastructure in the LSAP area, and the LSAP EIR programmatically evaluates the potential environmental impacts of such improvements that require construction traffic control, construction air quality and noise mitigation (Mitigation Measures MM 3.5.3a and b and MM 3.6.4) and City water quality control standards. These impacts were identified as less than significant in the LSAP EIR.

The proposed project would demolish an existing corporation yard totaling approximately 16.82 acres and would construct new residential units consisting of 412 apartments, 189 condominium units, and 140 townhomes. The project includes on-site infrastructure improvements (see Planning Application Submittal Final Plans – sheet C4.0). The project would connect to the existing 24-inch public sewer main in Aster Avenue. A sanitary sewer analysis completed for the project calculated the net increase in sanitary sewer flow for the project by calculating the expected overall average and peak sewage generation and subtracting the estimated flow from the existing uses. The net increase is estimated to be 0.09 million gallons per day (MGD), with a peak flow of 0.22 MGD. The sewer analysis concluded that the existing sewer main has the capacity to handle the increase in peak wet weather flow from the project (BKF Engineers 2019). The project is consistent with the LSAP, and the project-specific analysis determined that the existing conveyance infrastructure is adequate for the project. Therefore, no new significant impacts or substantially more severe impacts would occur, and the findings of the certified LSAP EIR remain valid. This would remain a less-than-significant impact.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

See analysis under 4.9, Hydrology and Water Quality. The project includes on-site drainage improvements (see project design plans– sheet C3.1). No off-site drainage improvements are proposed for the project.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

As described in Impact 3.11.5.1 and 3.11.5.3, cumulative development in Sunnyvale, including in the LSAP, would result in a net additional water demand of 2,274 acre-feet per year. For the LSAP plan area, the net additional demand is 677 AFY, or approximately 30 percent of the net increase in citywide demand under projected 2035 conditions. The LSAP WSA identifies that there is adequate water supply available to meet build out of the City in year 2035 as well as the LSAP under normal, single-dry, and multiple-dry years. This impact was identified as less than significant in the LSAP EIR.

The project is consistent with LSAP land use designations and development intensities that were utilized in the WSA. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

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

As addressed in Impact 3.11.6.2 and 3.11.6.3 of the LSAP EIR, increased population associated with the LSAP would result in an additional approximately 0.62 mgd of wastewater flows. Current flows treated by the City's WPCP are approximately 11.4 mgd. The addition of LSAP flows to existing flows would be approximately 12 mgd, which would be within the current permitted ADWF design flow capacity of the WPCP and would also be within the 19.5-mgd ADWF design flow capacity. Although there would be an increase in wastewater flows to the WPCP, the constituents in the wastewater flows to the plant would remain similar to existing conditions (i.e., residential, retail, office/R&D). No increase in industrial or commercial land uses or other types of land uses typically associated with hazardous pollutant discharges to the sewer system are proposed. Thus, the LSAP would result in a less than significant impact under project and cumulative conditions.

The project's contribution to wastewater flows were factored in the LSAP EIR given that its land use and intensities are consistent with the LSAP. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

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

As identified in Impact 3.11.7.1 and 3.11.7.3, the LSAP would generate approximately 19.6 tons per day of solid waste, which would represent approximately 2 percent of the current SMaRT Station throughput (or 1.3 percent of maximum permitted throughput) and less than 1 percent of the permitted daily throughput for the Kirby Canyon Landfill. The LSAP EIR stated that, on an annual basis, the LSAP would generate approximately 7,154 tons of solid waste that would be disposed of at the Kirby Canyon Landfill or at the Monterey Peninsula Landfill once the Kirby Canyon Landfill is closed in 2022. Additional growth in surrounding communities, such as Mountain View, Santa Clara, and Cupertino, would also generate solid waste. New development estimated to occur under the proposed LUTE update and the LSAP would increase the generation of solid waste in Sunnyvale. By 2035, approximately 412,979 pounds (206.49 tons) of solid waste would be generated per day in Sunnyvale (including the contribution from the LSAP). This amount of waste represents approximately 12.6 percent of the permitted daily throughput of the Kirby Canyon Landfill or 5.9 percent of the throughput at the Monterey Peninsula Landfill. Therefore, regional landfill facilities would be able to serve the growth expected to occur in the region as well as under the LSAP.

Project demolition would be required to obtain a demolition permit. As explained in the LSAP EIR, as part of the demolition permitting process, applicants are required to follow a list of general requirements based on the California Green Building Code and the Sunnyvale Municipal Code. A portion of the requirements includes consideration of deconstructing and/or salvage of reusable building materials to minimize the amount of demolition materials disposed of at landfills. The project is consistent with LSAP land use designations and development intensities that were utilized in the LSAP EIR solid waste analysis. No new

significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

As discussed in Impact 3.11.7.2, Sunnyvale had a waste diversion rate of 66 percent as of 2011, and under current methods for tracking progress with AB 939, the per capita disposal rates are less than the targets. The City has developed its new Zero Waste Strategic Plan, intended to identify the new policies, programs, and infrastructure that will enable the City to reach its Zero Waste goals of 75 percent diversion by 2020 and 90 percent diversion by 2030. Additionally, the City of Sunnyvale has committed to the waste reduction programs, plans, and policies that would apply to new development in the LSAP. Construction of subsequent projects under the LSAP that would result in demolition or renovation of existing structures would generate solid waste, and the City requires the recycling and reuse of materials to reduce landfill disposal. Therefore, the LSAP would not conflict with a federal, state, or local statute or regulation related to solid waste disposal. This impact would be less than significant.

The project would not generate solid waste in excess of what was evaluated in the LSAP EIR and is required to comply with solid waste reduction standards. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

h) Create demand for natural gas, electricity, telephone, and other utility services that cannot be met.

Impact 3.11.8.1 in the LSAP EIR identifies that PG&E currently provides electrical and natural gas services to Sunnyvale and would continue to provide these services to future development resulting from projects developed in the LSAP. PG&E is required by the California Public Utilities Commission to update the existing systems to meet any additional demand. PG&E builds new infrastructure on an as-needed basis. Any electrical and natural gas distribution lines, substations, transmission lines, delivery facilities, and easements required to serve buildout of the Lawrence Station Area Plan would be subject to CEQA review by PG&E. However, it is expected that much of the distribution infrastructure would be collocated with other utilities underground within roadway rights-of-way to minimize the extent of environmental effects. The LSAP EIR determined that buildout of the LSAP would not specifically trigger the need for off-site energy facility improvements, and no large-scale plan area improvements are anticipated.

The project includes on-site infrastructure improvements (see project design plans – sheet C4.1). Offsite construction would include public right-of-way improvements such as new sidewalks, bicycle lanes, a center two-way left turn lane on Aster Avenue, and the installation of the proposed traffic signage at the intersection of Reed Avenue and Willow Avenue. The project would demolish an existing corporation yard totaling approximately 16.82 acres and would construct new residential units consisting of 412 apartments, 189 condominium units, and 140 townhomes. The project also includes 1,500 square feet of retail space on the ground floor of the apartment building. Project operation would increase electricity and natural gas consumption at the project site relative to existing conditions. The project's natural gas and electricity demands would be served by PG&E. The project's land use and development intensities are consistent with the LSAP and what was assumed in the energy consumption analysis of the LSAP EIR. No new significant impacts or substantially more severe impacts would occur. Therefore, the findings of the certified LSAP EIR remain valid and no further analysis is required.

i) Result in inefficient, wasteful, and unnecessary consumption of energy.

As described in Impact 3.11.8.1, buildout of the LSAP would increase the consumption of energy. However, projects developed under the LSAP would need to comply with Building Energy Efficiency Standards included in Title 24 of the California Code of Regulations and implement the energy efficiency requirements of the City's CAP. Implementation of the LSAP would also result in an improvement in VMT per capita as compared to citywide VMT under the existing General Plan and the proposed Land Use and Transportation Element update (see LSAP Draft EIR Table 3.4-1 in Section 3.4, Transportation and Circulation). This is consistent with the intent of the LSAP to improve the use of alternative modes of transportation and reduce vehicle use

and associated VMT. It is also within the VMT per capita set forth in the City's Climate Action Plan (11.62 miles).

Project operation would increase electricity and natural gas consumption at the project site relative to existing conditions. However, the project would be constructed in compliance with the 2019 Title 24 Building Code which requires that renewable energy sources such as solar photovoltaic systems offset the electricity demand of new residential buildings. The project would also be required to comply with the City's CAP. Construction energy consumption would be temporary and would not require additional capacity or increased peak or base period demands for electricity or other forms of energy. The project site is also located near the Caltrain Lawrence Station and several bus routes. For these reasons, the project would not result in wasteful, inefficient, or unnecessary consumption of energy. Therefore, no new significant impacts or substantially more severe impacts would occur. The findings of the certified LSAP EIR remain valid and no further analysis is required.

Mitigation Measures

No mitigation measures were identified in for the certified LSAP EIR regarding utilities or energy, nor are any additional mitigation measures required the project.

CONCLUSION

No new circumstances or project changes have occurred nor has any new information been identified requiring new analysis or verification. Therefore, the conclusions of the LSAP EIR remain valid and approval of project would not result in new or substantially more severe significant impacts to utilities or energy.

4.18 MANDATORY FINDINGS OF SIGNIFICANCE

Environmental Issue Area	Where Impact Was Analyzed in the LSAP Draft and Final EIR.	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Do Prior Environmental Documents Mitigations Address/Resolve Impacts?
18. Mandatory Findings of Significance.				
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare or threatened species or eliminate important examples of the major periods of California history or prehistory?	Draft EIR Sections 3.9, Biological Resources, and 3.10, Cultural Resources	No	Yes, discussed throughout environmental checklist	Yes
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when view in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	Draft EIR Sections 3.1 through 3.13	No	Yes, discussed throughout environmental checklist	Yes
c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	Draft EIR Sections 3.3, Hazards and Human Health; 3.5, Air Quality; and 3.6, Noise	No	Yes, discussed throughout environmental checklist	Yes

CONCLUSION

Since the LSAP EIR was certified, there have been regulatory changes noted in the above checklist. However, no new significant impacts or substantially more severe impacts were identified.

All approved mitigation in the LSAP EIR would continue to be implemented with the project, as indicated in this checklist. Therefore, no new significant impacts would occur with implementation of the project.

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Final Transportation Impact Analysis

Prepared for:

City of Sunnyvale

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Transportation Planning Traffic Calming Traffic Control Plans Traffic Simulation Traffic Impact Analysis Traffic Signal Design Travel Demand Forecasting

Table of Contents

Executive Summary	i
1. Introduction	1
2. Existing Conditions	14
3. Background Conditions	31
4. Project Conditions	38
5. Other Transportation Issues	58
6. Conclusions.....	71

Appendices

Appendix A	Traffic Counts
Appendix B	Volume Summary
Appendix C	Level of Service Calculations
Appendix D	Signal Warrant Worksheet

List of Tables

Table ES- 1 Trip Generation Summary	iii
Table ES- 2 Signalized Intersection Level of Service Summary	vi
Table ES- 3 Unsignalized Intersection Level of Service Summary	vii
Table 1 Signalized Intersection Level of Service Definitions Based on Delay	7
Table 2 Unsignalized Intersection Level of Service Based on Delay.....	8
Table 3 Freeway Segment Level of Service Definitions Based on Density	9
Table 4 Existing Transit Services	15
Table 5 Existing Level of Service Summary - Signalized Intersections	25
Table 6 Existing Level of Service Summary - Unsignalized Intersections	26
Table 7 Existing Freeway Level of Service Summary	26
Table 8 Existing Freeway Ramp Capacity Summary	27
Table 9 Background Level of Service Summary - Signalized Intersections.....	36
Table 10 Background Level of Service Summary - Unsignalized Intersections	37
Table 11 Trip Generation Summary.....	40
Table 12 Existing Plus Project Level of Service Summary - Signalized Intersections.....	51
Table 13 Existing Plus Project Level of Service Summary - Unsignalized Intersections.....	52
Table 14 Background Plus Project Level of Service Summary - Signalized Intersections	54
Table 15 Background Plus Project Level of Service Summary - Unsignalized Intersections	55
Table 16 Project Conditions Freeway Analysis Summary	56
Table 17 Project Conditions Freeway Ramp Analysis.....	56
Table 18 Queuing Analysis Summary.....	61
Table 19 Transit Travel Time Delay Analysis.....	65
Table 20 Proposed Project Vehicle Parking Supply and Requirement	69
Table 21 Proposed Project Bicycle Parking Supply and Requirement	70

List of Figures

Figure 1	Site Location and Study Intersections.....	2
Figure 2	Proposed Project Site Plan.....	3
Figure 3	Existing Transit Services	16
Figure 4	Existing Bicycle Facilities.....	19
Figure 5	Existing Lane Configurations	20
Figure 6	Existing Traffic Volumes	22
Figure 7	Approved Developments	32
Figure 8	Background Traffic Volumes.....	33
Figure 9	Project Trip Distribution - Residential Use	41
Figure 10	Project Trip Distribution - Commercial Use	42
Figure 11	Net Project Trip Assignment	44
Figure 12	Existing Plus Project Traffic Volumes.....	46
Figure 13	Background Plus Project Traffic Volumes	48

AUTO TRIP REDUCTION STATEMENT

UPDATED: October 2014



PROJECT INFORMATION		Relevant TIA Section:		Chapter 1
Project Name: 1155 & 1175 Aster Avenue Residential Development				
Location: 1155 & 1175 Aster Avenue, Sunnyvale				
Description: The project proposes to demolish the existing industrial facilities on-site and construct a residential complex including 412 apartments, 189 condominiums, 140 townhomes, an approximately 2-acre park and a 1,500 square foot coffee shop.				
Size (net new):	741	D.U. Residential	1500	Sq. Ft. Comm. Acres (Gr.)
Density:	51	D.U. / Acre	Floor Area Ratio (FAR)	
Located within 2000 feet walking distance of an LRT, BRT, BART or Caltrain station or major bus stop? Yes				

PROJECT AUTO TRIP GENERATION		Relevant TIA Section:		Chapter 4
Auto Trips Generated:	268 net	AM Pk Hr	299 net	PM Pk Hr 3788 net Total Weekday
Methodology (check one)	<input checked="" type="checkbox"/> ITE		<input type="checkbox"/> Other (Please describe below)	

AUTO TRIP REDUCTION APPROACH		Relevant TIA Section:		Chapter 4
<input checked="" type="checkbox"/> Standard	<input type="checkbox"/> Peer/Study-Based	<input type="checkbox"/> Target-Based	<input type="checkbox"/>	
Complete Table A below	Complete Table B below	Complete Table C below		

TRIP REDUCTION REQUIREMENTS		Relevant TIA Section:		
Is the project required to meet any trip reduction requirements or targets? Yes/No If so, specify percent:				
Reference code or r				

--	--	--	--	--

A. STANDARD APPROACH		Relevant TIA Section:		Chapter 4	
Type of Reduction <i>Specify reduction. See Table 2 in TIA Guidelines</i>		% Reduction from ITE Rates	Total Trips Reduced (AM/PM/Daily)	%	Trips
Transit	Within 2,000-foot walk of Caltrain station	9%	23/31/386	24% AM/ 15% PM/ 14% Daily	105 AM/ 61 PM/ 686 Daily
Mixed-Use	Housing-Retail Mixed-Use	15%	44/16/162		
Financial Incentives					
Shuttle					

B. PEER/STUDY-BASED APPROACH				N/A
Basis of Reduction			TOTAL REDUCTION CLAIMED	
			%	Trips

Last updated 11/4/2014

C. TARGET-BASED APPROACH		Relevant TIA Section:		N/A		
Type of Reduction (check all that apply)					TOTAL REDUCTION CLAIMED	
<input type="checkbox"/> % Trip Reduction	<input type="checkbox"/> % SOV mode share	<input type="checkbox"/> Trip Cap		%	Trips	
Description						
Time period for reduction	Peak Hour	Peak Period	Full Day			
	<input type="checkbox"/> AM/PM	AM/PM	<input type="checkbox"/>			

OTHER TDM/REDUCTION MEASURES			
Bicycle/Pedestrian	Yes	Relevant TIA Section:	Chapter 5
Install a crosswalk along the west leg of the Willow Avenue and Aster Avenue intersection. Install sidewalks along its Willow Avenue and Aster Avenue frontages. Widen the bike lanes on Aster Avenue fronting the project site to six feet. Install bike lanes along its Willow Avenue frontage. Provide long-term bike lockers in accordance with LSAP requirements.			
Parking Management	No		
Transit	No	Relevant TIA Section:	
Site Planning and Design	Yes	Relevant TIA Section:	Chapter 4
The project is located directly adjacent to the Lawrence Caltrain station.			
TDM Program	No	Relevant TIA Section:	

IMPLEMENTATION		Relevant TIA Section:	N/A
Have the project sponsor and Lead Agency agreed to any of the following measures?			
<input type="checkbox"/> Monitoring			
<input type="checkbox"/> Enforcement			
<input type="checkbox"/> Data Sharing			

Executive Summary

This report presents the results of the transportation impact analysis (TIA) conducted for a residential project proposed on a 16.82-acre site located at 1155 and 1175 Aster Ave in Sunnyvale, California. The project proposes to demolish the existing industrial facilities on-site and construct a residential complex including 412 apartments, 189 condominiums, 140 townhomes, an approximately 2-acre park and a 1,500 square foot (s.f.) coffee shop. Access to the site would be provided via Aster Avenue and Willow Avenue.

This study was conducted for the purpose of identifying the potential near-term traffic impacts related to the proposed development. Because the project is consistent with the recently-adopted Lawrence Station Area Plan (LSAP), potential long-term traffic impacts have already been studied in the *Lawrence Station Area-Wide Transportation Plan and Near-Term TIA* dated December 18, 2015, prepared by Hexagon Transportation Consultants, Inc.

Project Trip Generation

Trip generation resulting from new development proposed within the City of Sunnyvale typically is estimated using the trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition (2017)*. Trip generation rates for the proposed apartments and condominiums are based on the average rates published for "Multifamily Housing (Mid Rise)" (Land Use Code 221). Trip generation rates for the proposed townhomes are based on the average rates published for "Multifamily Housing (Low Rise)" (Land Use Code 220). Trip Generation rates for the proposed coffee shop are based on the average rates published for "Coffee/Donut Shop without Drive-Through Window" (Land Use Code 936).

Trip Reductions

A mixed-use development with complementary land uses such as residential and retail will generate and attract trips internally between the uses. Thus, the number of vehicle trips generated for each use may be reduced, since a portion of the trips would not require entering or exiting the site. The VTA's *Congestion Management Program Transportation Impact Analysis Guidelines* (October 2014) indicates a trip reduction of up to 15 percent is allowed for residential and retail mixed-use developments. The reduction is first applied to the smaller of the two complimentary trip generators (in this case, the retail use), and the same number of trips is then subtracted from the larger trip generator (in this case, the residential use) to account for both trip ends. Trip reductions also factor in that this project is also a Transit Oriented Development (TOD) due to its proximity to the Caltrain station. The VTA's CMP TIA guidelines indicate a trip reduction of up to 9% is allowed for residential uses within a 2,000-foot walk of a Caltrain station. Also, the coffee shop trip generation can be reduced due to Diverted Linked trips. Diverted Link trips are generated by traffic that diverts from its current route to include a stop by the coffee shop, and then ultimately continues on its original path. As documented in the Institute of Transportation Engineers' (ITE) *Trip Generation Handbook, 3rd Edition*, coffee shops have, on average, pass-by trips accounting for 89% of all trips. Since the proposed coffee shop is not located on a busy street where trips could pass-by on their way to their final destination, Hexagon assumed that these trips would instead divert slightly from their original route to the coffee shop. For the purpose of this analysis, Hexagon assumed that the coffee shop could have as high as 89% of all trips be diverted-linked trips. However, the VTA's CMP TIA guidelines indicate a trip reduction of up to 30% is allowed for retail uses to account for diverted-linked trips. Therefore, a 30% diverted-linked trip reduction was applied for the coffee shop trips.

In addition, the proposed project would receive trip credits for the trips generated by the existing on-site use. AM and PM peak hour counts were collected at the existing site driveways on Thursday, May 17, 2018.

Net Project Trips

After applying the ITE trip generation rates and the applicable trip reductions, the proposed project is estimated to generate a net increase of 268 vehicle trips during the AM peak hour (71 inbound and 197 outbound) and 299 vehicle trips during the PM peak hour (189 inbound and 110 outbound).

The trip generation for the proposed project is summarized in Table ES-1.

Table ES- 1
Trip Generation Summary

Land Use	Size	Daily		AM Peak Hour			PM Peak Hour				
		Rate ¹	Trips	Rate ¹	In	Out	Total	Rate ¹	In	Out	Total
Proposed											
Residential											
Apartments ²	412 d.u.	5.44	2,241	0.36	38	110	148	0.44	110	71	181
Condominiums ²	189 d.u.	5.44	1028	0.36	18	50	68	0.44	51	32	83
Townhomes ³	140 d.u.	7.32	1025	0.46	15	49	64	0.56	49	29	78
Gross Residential Trips			4,294		71	209	280		210	132	342
Mixed-Use Reduction ⁴			(81)		(11)	(11)	(22)		(4)	(4)	(8)
Transit Reduction ⁵			(386)		(5)	(18)	(23)		(19)	(12)	(31)
Net New Residential Trips			3,827		55	180	235		187	116	303
Commercial											
Coffee Shop ⁶	1,500 s.f.	360	540	101.14	78	74	152	36.31	27	27	54
Mixed-Use Reduction ⁴			(81)		(11)	(11)	(22)		(4)	(4)	(8)
Diverted Linked Reduction ⁷			(138)		(19)	(19)	(38)		(7)	(7)	(14)
Net New Commercial Trips			321		48	44	92		16	16	32
Subtotal Net New Project Trips			4,148		103	224	327		203	132	335
Existing											
Driveway Counts ⁸			(360)		(32)	(27)	(59)		(14)	(22)	(36)
Net Project Trips			3,788		71	197	268		189	110	299
Notes											
d.u. = dwelling units, s.f. = square feet											
¹ Rate expressed in trips per d.u. for the residential units and trips per 1,000 s.f. for the coffee shop.											
² Trip generation rates for the proposed apartments and condominiums are based on the ITE's <i>Trip Generation Manual, 10th Edition</i> average rates published for "Multifamily Housing (Mid-Rise)" (Land Use Code 221).											
³ Trip generation rates for the proposed townhomes are based on the ITE's <i>Trip Generation Manual, 10th Edition</i> average rates published for "Multifamily Housing (Low-Rise)" (Land Use Code 220).											
⁴ As prescribed by the <i>VTA Transportation Impact Analysis Guidelines, 2014</i> , a maximum trip reduction of 15% of the smaller trip generator for mixed-use development projects with housing and retail components was applied to project's trip generation.											
⁵ As prescribed by the <i>VTA Transportation Impact Analysis Guidelines, 2014</i> , a maximum trip reduction of 9% for housing within a 2,000 foot walk of a Caltrain station was applied to proposed residential units. Note that the transit reduction is applied after the mixed-use trip reduction.											
⁶ The peak hour trip generation rates for the proposed coffee shop are based on the ITE's <i>Trip Generation Manual, 10th Edition</i> average rates published for "Coffee/Donut Shop without Drive-Through Window" (Land Use Code 936). The daily trips is derived from the assumption that the PM peak hour represents 10% of the total daily vehicle trips.											
⁷ As prescribed by the <i>VTA Transportation Impact Analysis Guidelines, 2014</i> , a maximum trip reduction of 30% for diverted linked trips was applied to the coffee shop trips. Note that the diverted linked trip reduction is applied after the mixed-use trip reduction.											
⁸ Existing AM and PM peak-hour driveway counts were collected on Thursday, May 17, 2018. The existing daily trips is derived from the assumption that the PM peak hour represents 10% of the total daily vehicle trips.											

Intersection Level of Service Results

The intersection level of service analysis (see Tables ES-2 and ES-3) showed that based on City of Sunnyvale intersection impact criteria, the project would generate a significant intersection impact at the unsignalized study intersection of Willow Avenue and Reed Avenue during both the AM and PM peak hours.

Mitigation Strategy

Mitigation would require installing a sign restricting left-turns from southbound Willow Avenue onto Reed Avenue during the AM (7-9 AM) and PM (4-6 PM) peak periods. With the proposed left-turn restriction during the peak hours, the intersection at Willow Avenue and Reed Avenue would operate at acceptable levels of service. It is assumed that vehicles on southbound Willow Avenue heading to eastbound Reed Avenue would instead turn right onto westbound Reed Avenue first and then perform a legal U-turn on Reed Avenue west of Willow Avenue. The added westbound U-turns on Reed Avenue would not deteriorate roadway operations, thus the proposed mitigation would not create secondary impacts at other locations. With the proposed mitigation, the project impact at the intersection of Willow Avenue and Reed Avenue would be *less than significant*. The project applicant will be responsible for the cost of the proposed mitigation.

Freeway Impacts

The results of the CMP freeway analysis show that the freeway segments currently operating at acceptable levels of service would continue to operate at acceptable levels of service under project conditions. For freeway segments currently operating at unacceptable LOS F, the project generated freeway traffic would not exceed 1%, thus the project freeway impacts would be less than significant.

Freeway Ramp Impacts

The results of the ramp analysis show that the study freeway ramps currently have sufficient capacity to service the existing traffic volumes and the ramps would continue to have sufficient capacity to serve the project traffic volumes under project conditions.

Other Transportation Issues

Hexagon conducted a site plan review, queuing analysis, pedestrian, bicycle and transit facility analysis and parking analysis for the proposed project. Our recommendations are listed below.

Recommendations

- The project proposes a mid-block crosswalk across Aster Avenue at the western end of the project site. Mid-block crosswalks should be installed only after an engineering study determining the feasibility of the crosswalk. The project applicant shall coordinate with City staff to determine the need for a mid-block crosswalk across Aster Avenue at the western end of the project site upon project completion.
- The project applicant shall ensure that there would not be tall vegetation or objects that could block a driver's view 200 feet down the road as they exit the project driveways on Aster Avenue.
- The site plan shows multiple dead-end aisles inside the parking garages. The project applicant shall ensure that parking spaces next to the dead-end aisles are provided sufficient turn-around space.
- To minimize potential conflict of use between loading trucks and trash staging at the two shared-use loading/trash staging areas, it is recommended that the trash bins for the condominiums and apartment be placed in the loading zone only on garbage collection day and that they be removed after the garbage has been collected.
- The project applicant shall ensure the adequate number of accessible parking spaces are located within the condominium garages. The project applicant shall also ensure the van accessible spaces are clearly indicated.

1155 & 1175 Aster Avenue Final TIA

Table ES- 2
Signalized Intersection Level of Service Summary

ID #	Intersection	Control	LOS Standard	Peak Hour	Existing			Existing Plus Project				Background		Background Plus Project			
					Count Date	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Change in Crit. Delay (sec)	Change in Crit. v/c	Avg. Delay	LOS	Avg. Delay (sec)	LOS	Change in Crit. Delay (sec)	Change in Crit. v/c
1	Fair Oaks Avenue & US 101 NB Ramps	Signal	E	AM	05/08/18	29.7	C	34.9	C-	8.9	0.016	47.2	D	50.9	D	6.1	0.016
				PM	05/08/18	31.3	C	32.0	C	0.8	0.015	48.8	D	50.6	D	2.1	0.015
2	Fair Oaks Avenue & Duane Avenue	Signal	D	AM	05/08/18	36.1	D+	36.1	D+	-0.1	0.001	37.4	D+	37.7	D+	0.0	0.001
				PM	05/08/18	35.7	D+	35.7	D+	-0.1	0.007	39.5	D	39.7	D	0.4	0.007
3	Fair Oaks Avenue & Evelyn Avenue	Signal	D	AM	05/08/18	46.5	D	46.7	D	0.2	0.003	51.7	D-	51.9	D-	0.3	0.002
				PM	05/08/18	39.5	D	39.6	D	0.0	0.002	49.9	D	49.9	D	0.0	0.002
4	Wolfe Road & Stewart Drive	Signal	D	AM	11/15/17	14.5	B	14.2	B	-0.2	0.002	13.7	B	13.5	B	-0.2	0.002
				PM	11/15/17	27.8	C	27.6	C	-0.6	0.006	26.8	C	26.7	C	-0.3	0.005
5	Wolfe Road & Arques Avenue	Signal	D	AM	11/14/17	49.4	D	49.6	D	-0.2	0.001	52.0	D-	52.2	D-	-0.1	0.001
				PM	11/14/17	43.9	D	43.5	D	-0.2	0.010	44.5	D	44.2	D	-0.2	0.009
6	Wolfe Road & Central Expressway Ramps	Signal	E	AM	12/06/17	37.4	D+	38.8	D+	5.7	0.014	59.3	E+	63.7	E	11.6	0.014
				PM	12/06/17	84.4	F	85.5	F	1.5	0.018	110.7	F	112.0	F	1.8	0.019
7	Wolfe Road & Kifer Road	Signal	D	AM	11/14/17	26.2	C	26.0	C	-0.4	0.003	36.7	D+	36.6	D+	0.0	0.012
				PM	11/14/17	36.8	D+	37.2	D+	-0.7	0.007	46.5	D	46.5	D	-1.2	0.007
8	Wolfe Road & Evelyn Avenue	Signal	D	AM	11/15/17	34.3	C-	35.9	D+	2.5	0.040	34.4	C-	36.2	D+	2.8	0.040
				PM	11/15/17	35.8	D+	32.8	C-	31.1	-0.154	34.0	C-	32.3	C-	31.1	-0.164
9	Wolfe Road & Old San Francisco Road/Reed Avenue	Signal	D	AM	11/14/17	38.5	D+	39.4	D	0.4	0.010	37.4	D+	38.3	D+	0.4	0.009
				PM	11/14/17	41.2	D	42.0	D	0.9	0.018	41.5	D	42.3	D	0.9	0.018
10	Wolfe Road & El Camino Real*	Signal	E	AM	11/14/17	61.1	E	61.0	E	0.0	0.000	63.3	E	63.3	E	0.0	0.000
				PM	11/10/16	43.0	D	43.0	D	0.1	0.001	43.9	D	43.9	D	0.0	0.001
11	Wolfe Road & Fremont Avenue	Signal	D	AM	11/14/17	39.7	D	39.7	D	-0.1	0.002	39.9	D	39.9	D	0.0	0.003
				PM	11/14/17	49.5	D	49.4	D	0.1	0.000	50.8	D	50.7	D	0.0	0.001
12	Sequoia Drive & Reed Avenue	Signal	D	AM	05/15/18	14.2	B	14.6	B	0.7	0.037	14.2	B	14.6	B	0.7	0.037
				PM	05/15/18	13.5	B	13.5	B	0.0	0.013	13.5	B	13.5	B	0.0	0.013
13	Evelyn Avenue & Aster Avenue	Signal	D	AM	05/15/18	14.1	B	15.5	B	1.5	0.093	14.2	B	15.7	B	1.6	0.094
				PM	05/15/18	13.3	B	14.7	B	3.5	-0.116	13.6	B	14.8	B	3.9	-0.096
14	Evelyn Avenue & Reed Avenue	Signal	D	AM	11/15/17	9.5	A	9.7	A	0.1	0.023	9.5	A	9.7	A	0.1	0.024
				PM	11/15/17	12.0	B+	12.2	B	0.4	0.024	12.0	B	12.2	B	0.3	0.025
16	Timberpine Avenue & Reed Avenue	Signal	D	AM	05/15/18	20.3	C+	20.2	C+	0.0	0.004	20.3	C+	20.2	C+	0.0	0.004
				PM	05/15/18	17.6	B	17.7	B	-0.1	0.004	17.6	B	17.7	B	-0.1	0.004
19	Lawrence Expressway & US 101 NB Ramps (County)	Signal	E	AM	04/04/17	10.0	B+	10.0	B+	0.0	0.003	10.6	B+	10.6	B+	0.0	0.003
				PM	04/04/17	13.8	B	13.8	B	0.2	0.006	15.1	B	15.4	B	0.5	0.007
20	Lawrence Expressway & US 101 SB Ramps (County)	Signal	E	AM	04/04/17	6.6	A	6.5	A	0.0	0.003	7.3	A	7.3	A	-0.1	0.004
				PM	04/04/17	71.5	E	70.9	E	-1.3	0.006	88.9	F	88.2	F	-1.3	0.006
21	Lawrence Expressway & Oakmead Parkway/Duane Avenue (County)	Signal	E	AM	04/04/17	44.0	D	44.5	D	0.9	0.006	67.4	E	69.4	E	3.6	0.006
				PM	04/04/17	53.5	D-	53.9	D-	0.7	0.006	85.2	F	87.4	F	4.5	0.006
22	Lawrence Expressway & Arques Avenue* (County)	Signal	E	AM	04/04/17	48.2	D	48.6	D	0.7	0.006	59.7	E+	61.1	E	2.5	0.006
				PM	10/04/16	68.1	E	68.2	E	0.3	0.007	84.3	F	86.4	F	3.6	0.007
23	Lawrence Expressway & Kifer Road (County)	Signal	E	AM	03/07/18	54.4	D-	56.8	E+	3.7	0.007	80.8	F	83.4	F	3.9	0.008
				PM	03/07/18	101.6	F	102.0	F	-1.0	0.004	>120	F	>120	F	-1.0	0.004
24	Lawrence Expressway & Monroe Street/Reed Avenue* (County)	Signal	E	AM	03/07/18	114.8	F	116.3	F	2.8	0.016	>120	F	>120	F	2.8	0.015
				PM	10/05/16	74.1	E	74.0	E	3.4	0.131	83.8	F	87.1	F	5.6	0.008
25	Lawrence Expressway & Cabrillo Avenue (County)	Signal	E	AM	03/07/18	52.1	D-	52.0	D-	0.2	0.001	66.2	E	66.2	E	0.2	0.000
				PM	03/07/18	48.6	D	48.9	D	-0.2	0.004	60.7	E	61.3	E	1.1	0.002
26	Lawrence Expressway & El Camino Real Ramps* (SC)	Signal	E	AM	03/07/18	34.5	C-	34.7	C-	0.2	0.002	35.1	D+	35.3	D+	0.2	0.002
				PM	11/10/16	29.9	C	29.9	C	0.1	0.002	30.9	C	31.0	C	0.1	0.002
29	Monticello Way & Monroe Street (SC)	Signal	D	AM	05/15/18	7.8	A	7.7	A	-0.1	0.005	7.8	A	7.7	A	-0.1	0.005
				PM	05/15/18	5.6	A	5.5	A	0.0	0.002	5.6	A	5.5	A	0.0	0.002

Notes
 * = CMP, SC = Santa Clara, County = County of Santa Clara
 Level of service for signal controlled intersection is based on the average intersection delay.
 ">120" indicates the intersection experiences lengthy delay that is beyond the reasonable calculation range of the HCM2000 methodology.
BOLD indicates substandard level of service.

Table ES- 3
Unsignalized Intersection Level of Service Summary

ID #	Intersection	Control	LOS Standard	Peak Hour	Existing			Existing Plus Project					Background			Background Plus Project					
					Count Date	Avg. Delay (sec)	LOS	Signal Warrant Met ¹	Avg. Delay (sec)	LOS	Change in Crit. Delay (sec)	Change in Crit. v/c	Signal Warrant Met ¹	Avg. Delay (sec)	LOS	Signal Warrant Met ¹	Avg. Delay (sec)	LOS	Change in Crit. Delay (sec)	Change in Crit. v/c	Signal Warrant Met ¹
15	Willowbend Driveway & Aster Avenue	Side Street Stop	D	AM	05/15/18	10.2	B	-	11.1	B	0.9	0.003	-	10.3	B	-	11.2	B	0.9	0.003	-
17	Willow Avenue & Reed Avenue	Side Street Stop	D	PM	05/15/18	10.7	B	-	11.9	B	1.2	0.001	-	10.8	B	-	12.1	B	1.3	0.001	-
				AM	05/15/18	26.2	D	No	43.5	E	17.3	0.282	Yes	26.3	D	No	43.8	E	17.5	0.283	Yes
18	Willow Avenue & Aster Avenue	Side Street Stop	D	PM	05/15/18	52.6	F	Yes	85.6	F	33.0	0.215	Yes	53.2	F	Yes	86.9	F	33.7	0.217	Yes
				AM	05/15/18	9.1	A	-	10.1	B	1.0	0.045	-	9.1	A	-	10.1	B	1.0	0.045	-
27	French Street & Agate Drive (SC)	All Way Yield	D	PM	05/15/18	9.6	A	-	11.1	B	1.5	0.044	-	9.6	A	-	11.1	B	1.5	0.044	-
				AM	05/15/18	5.0	A	-	4.7	A	-	-	-	5.0	A	-	4.7	A	-	-	-
28	Monticello Way & Agate Drive (SC)	All Way Stop	D	PM	05/15/18	7.0	A	-	6.7	A	-	-	-	7.0	A	-	6.7	A	-	-	-
				AM	05/15/18	7.2	A	-	7.2	A	-	-	-	7.2	A	-	7.2	A	-	-	-
				PM	05/15/18	7.2	A	-	7.3	A	-	-	-	7.2	A	-	7.3	A	-	-	-
Notes																					
SC = Santa Clara																					
Level of service for side street stop controlled intersections is based on the delay experienced by the worst movement. Level of service for all way yield and all way stop controlled intersections is based on the average intersection delay.																					
BOLD indicates substandard level of service.																					
BOLD and boxed indicates a significant impact.																					
¹ The CA MUTCD peak-hour signal warrant is checked only if the intersection is operating at an unacceptable level of service.																					

1. Introduction

This report presents the results of the transportation impact analysis (TIA) conducted for a residential project proposed on a 16.82-acre site located at 1155 and 1175 Aster Ave in Sunnyvale, California (see Figure 1). The project proposes to demolish the existing industrial facilities on-site and construct a residential complex including 412 apartments, 189 condominiums, 140 townhomes, an approximately 2-acre park and a 1,500 square foot (s.f.) coffee shop. Access to the site would be provided via Aster Avenue and Willow Avenue (see Figure 2).

Scope of Study

This study was conducted for the purpose of identifying the potential near-term traffic impacts related to the proposed development. Because the project is consistent with the recently-adopted Lawrence Station Area Plan (LSAP), potential long-term traffic impacts have already been studied in the *Lawrence Station Area-Wide Transportation Plan and Near-Term TIA* dated December 18, 2015, prepared by Hexagon Transportation Consultants, Inc.

Since the project is estimated to generate more than 100 peak hour trips, the potential impacts of the project were evaluated following the standards and methodologies set forth by the City of Sunnyvale and the Santa Clara Valley Transportation Authority (VTA). The VTA administers the County Congestion Management Program (CMP). The traffic study includes an analysis of AM and PM peak hour traffic conditions for 29 intersections in the vicinity of the project site. Four of the study intersections are CMP intersections. Five of the study intersections are unsignalized intersections. The study intersections were selected to include locations where the proposed project is expected to generate 10 or more peak-hour trips per lane.

The Santa Clara County VTA CMP guidelines require that freeway segments be evaluated to determine the impact of added traffic for projects that generate trips equal to or greater than one percent of the freeway segment's capacity. Within the project vicinity, two freeway segments were analyzed following the CMP guidelines.

This study also includes an analysis of volume-to-capacity ratios for four freeway ramps at the interchanges of US 101 and Fair Oaks Avenue and US 101 and Lawrence Expressway.

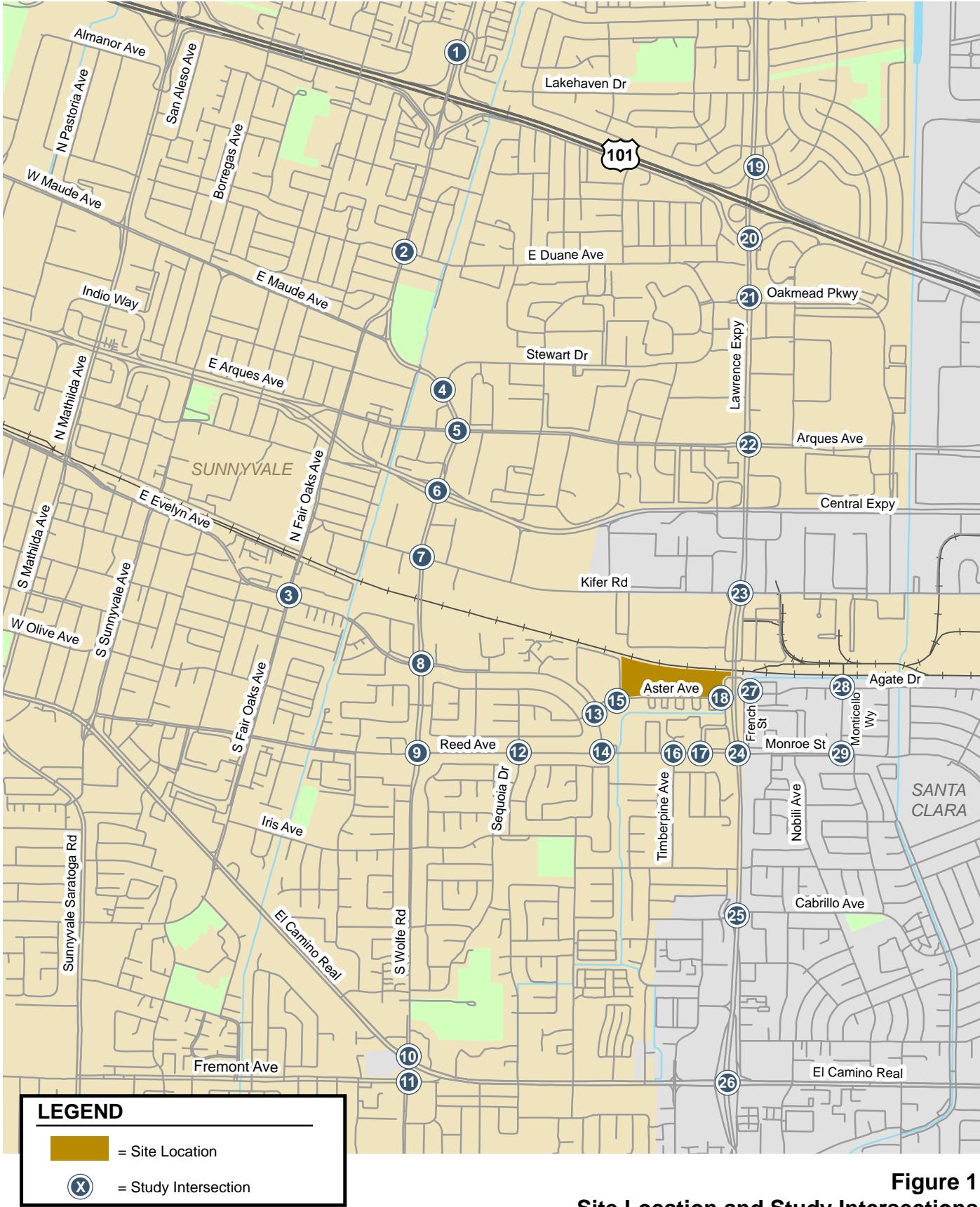


Figure 1
Site Location and Study Intersections



**STUDIO
T SQUARE**

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Planning
Urban Design

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1155 & 1175 Aster Avenue
Sunnyvale, CA

Olympic Residential Group
235 Montgomery St, Suite 950
San Francisco, CA

Sheet Title:
**ILLUSTRATIVE
SITE PLAN**

Job No. 17033
Date: 01/10/2019
Scale: 1" = 60'
Drawn By:

Sheet No:
SP-2.0

Figure 2
Proposed Project Site Plan

The study intersections, freeway segments, and freeway ramps are listed below.

Study Intersections

1. Fair Oaks Avenue & US 101 Northbound Ramps
2. Fair Oaks Avenue & Duane Avenue
3. Fair Oaks Avenue & Evelyn Avenue
4. Wolfe Road & Stewart Drive
5. Wolfe Road & Arques Avenue
6. Wolfe Road & Central Expressway Ramps
7. Wolfe Road & Kifer Road
8. Wolfe Road & Evelyn Avenue
9. Wolfe Road & Old San Francisco Road/Reed Avenue
10. Wolfe Road & El Camino Real *
11. Wolfe Road & Fremont Avenue
12. Sequoia Drive & Reed Avenue
13. Evelyn Avenue & Aster Avenue
14. Evelyn Avenue & Reed Avenue
15. Willowbend Driveway & Aster Avenue (unsignalized)
16. Timberpine Avenue & Reed Avenue
17. Willow Avenue & Reed Avenue (unsignalized)
18. Willow Avenue & Aster Avenue (unsignalized)
19. Lawrence Expressway & US 101 Northbound Ramps
20. Lawrence Expressway & US 101 Southbound Ramps
21. Lawrence Expressway & Oakmead Parkway/Duane Avenue
22. Lawrence Expressway & Arques Avenue *
23. Lawrence Expressway & Kifer Road
24. Lawrence Expressway & Monroe Street/Reed Avenue *
25. Lawrence Expressway & Cabrillo Avenue [City of Santa Clara]
26. Lawrence Expressway & El Camino Real Ramps [City of Santa Clara] *
27. French Street & Agate Drive [City of Santa Clara] (unsignalized)
28. Monticello Way & Agate Drive [City of Santa Clara] (unsignalized)
29. Monticello Way & Monroe Street [City of Santa Clara]

* Denotes CMP intersections

Freeway Segments

1. US 101 between Mathilda Avenue and Fair Oaks Avenue
2. US 101 south of Lawrence Expressway

Study Freeway Ramps

US 101 and Fair Oaks Avenue Interchange

1. Northbound On-Ramp
2. Southbound Off-Ramp to Southbound Fair Oaks Avenue

US 101 and Lawrence Expressway Interchange

3. Southbound On-Ramp from Northbound Lawrence Expressway
4. Northbound Off-Ramp

Traffic conditions at the study intersections, freeway segments, and freeway ramps were analyzed for the weekday AM and PM peak hours of commute traffic. In the study area, the AM peak hour typically occurs between 7:00 AM and 10:00 AM, and the PM peak hour typically occurs between 4:00 PM and 7:00 PM. These are the peak commute hours during which most traffic congestion occurs on the roadway network.

Traffic conditions were evaluated for the scenarios described below.

- Scenario 1:** *Existing Conditions.* Existing conditions are based on recent traffic counts collected at the study intersections. Existing traffic count data is provided in Appendix A.
- Scenario 2:** *Background Conditions.* Background conditions were estimated by adding to existing traffic volumes the project traffic from approved but not yet completed and occupied developments in the study area. Approved project trips and approved project trip information were obtained from the City of Sunnyvale and the City of Santa Clara. In addition, roadway improvements associated with the approved developments were assumed as directed by City Staff.
- Scenario 3:** *Existing Plus Project Conditions.* Existing plus project conditions were estimated by adding to existing traffic volumes the additional traffic generated by the project. Existing plus project conditions were evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- Scenario 4:** *Background Plus Project Conditions.* Background traffic volumes with the project were estimated by adding to background traffic volumes the additional traffic generated by the project. Background plus project conditions were evaluated relative to background conditions in order to determine potential project impacts.

According to VTA's CMP TIA guidelines, a scenario analyzing project impacts under cumulative conditions is also required. Because the project is located within and consistent with the recently-adopted Lawrence Station Area Plan (LSAP), the cumulative project impacts are included in the *Lawrence Station Area-Wide Transportation Plan and Near-Term TIA* report dated for December 18, 2015, prepared by Hexagon Transportation Consultants, Inc. The project's contribution to the cumulative impacts of the LSAP is discussed in this report.

Methodology

This section presents the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

Data Requirements

The data required for this traffic study were obtained from the City of Sunnyvale, the City of Santa Clara, the VTA CMP TRAFFIX database, county records for freeways and expressways, Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition (2017)*, field observations, and previous traffic studies. The following data were collected from these sources:

- Existing traffic volumes,
- Existing lane configurations,
- Signal timing and phasing,
- Applicable trip generation rates, and
- Approved projects information.

Level of Service Standards and Analysis Methodologies

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The level of service analysis was supplemented with a queuing analysis for selected movements at the study intersections and an analysis of freeway segments and freeway ramps in the study area. In addition, the unsignalized intersection of Willow Avenue and Reed Avenue was evaluated to determine if the intersection would meet the peak hour signal warrant. The various analysis methods are described in further detail below.

Signalized Study Intersections

The City of Sunnyvale and City of Santa Clara level of service methodology for signalized intersections is the *Highway Capacity Manual* (HCM) 2000 method. This method is applied using the TRAFFIX software. The HCM 2000 operations method evaluates signalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersection level of service methodology, the City of Sunnyvale and City of Santa Clara methodology employs the CMP default values for the analysis parameters.

The City of Sunnyvale General Plan level of service standard for signalized intersections is LOS D or better, except that intersections on roadways considered “regionally significant” have a standard of LOS E. In the study area, signalized intersections within Sunnyvale along Lawrence Expressway, El Camino Real, and ramp junctions at Central Expressway and US 101 are considered regionally significant. The correlation between average control delay and level of service is shown in Table 1.

CMP Intersections

The designated level of service methodology for the CMP also is the 2000 HCM operations method for signalized intersections, using TRAFFIX. The CMP level of service standard for signalized intersections within Sunnyvale is LOS E or better.

Unsignalized Study Intersections

The level of service for the unsignalized intersections was evaluated using the 2000 HCM methodology. Level of service for unsignalized (stop-controlled and yield controlled) intersections is evaluated based on the delay experienced by vehicles on the controlled approaches. For two-way or T-intersections, operations are defined by the average control delay experienced by the worst approach. For all-way stop controlled intersections, the level of service is reported based on the average delay for all approaches. The City of Sunnyvale General Plan level of service standard for unsignalized intersections is LOS D or better. The City of Santa Clara does not have an adopted level of service threshold for unsignalized intersections.

The correlation between delay and level of service for unsignalized intersections is shown in Table 2.

Traffic Signal Warrant Analysis

An assessment of the need for signalization was conducted for the unsignalized intersections. For this study, the need for signalization is assessed on the basis of the peak hour volume signal warrant (Warrant #3) described in the 2014 California Manual on Uniform Traffic Control Devices (CA MUTCD). This method provides an indication of whether traffic conditions and peak-hour traffic levels are, or would be, sufficient to justify the installation of a traffic signal. It should be noted that it is just one of the factors/warrants used to indicate whether installation of a traffic control signal is justified.

Table 1
Signalized Intersection Level of Service Definitions Based on Delay

Level of Service	Description	Average Control Delay Per Vehicle (sec/veh)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B+	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 12.0
B		12.1 to 18.0
B-		18.1 to 20.0
C+	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though may still pass through the intersection without stopping.	20.1 to 23.0
C		23.1 to 32.0
C-		32.1 to 35.0
D+	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 39.0
D		39.1 to 51.0
D-		51.1 to 55.0
E+	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur	55.1 to 60.0
E		60.1 to 75.0
E-		75.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major contributing causes of such delay levels.	greater than 80.0
Source:	Transportation Research Board, 2000 Highway Capacity Manual (Washington, D.C., 2000) p10-16. VTA Traffic Level of Service Analysis Guidelines (June 2003), Table 2.	

Table 2
Unsignalized Intersection Level of Service Based on Delay

Level of Service	Description	Average Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0
Source: Transportation Research Board, <i>2000 Highway Capacity Manual</i> (Washington, D.C., 2000) p17-2.		

Freeway Segments

As prescribed in the Santa Clara County CMP technical guidelines, the level of service for freeway segments is estimated based on vehicle density. Density is calculated by the following formula:

$$D = V / (N \cdot S)$$

Where:

D = density, in vehicles per mile per lane (vpmpl)

V = peak hour volume, in vehicle per hour (vph)

N = number of travel lanes

S = average travel speed, in miles per hour (mph)

The vehicle density on a segment is correlated to level of service as shown in Table 3. The CMP requires that mixed-flow lanes and auxiliary lanes be analyzed separately from high-occupancy vehicle (HOV) lanes (otherwise known as carpool lanes). The CMP specifies that a capacity of 2,300 vehicles per hour per lane (vphpl) be used for segments three lanes or wider in one direction, and a capacity of 2,200 vphpl be used for segments two lanes wide in one direction. HOV lanes are specified as having a capacity of 1,650 vphpl. The CMP defines an acceptable level of service for freeway segments as LOS E or better.

Freeway Ramps

A freeway ramp analysis was performed in order to verify that the freeway ramps would have sufficient capacity to serve the expected traffic volumes with and without the project. This analysis consisted of a volume-to-capacity ratio evaluation of the freeway ramps at the selected interchanges. The ramp capacities were obtained from the *Highway Capacity Manual 2000*, and consider the free-flow speed, the number of lanes on the ramp, and the ramp metering.

Table 3
Freeway Segment Level of Service Definitions Based on Density

Level of Service	Description	Density (vehicles/mile/lane)
A	Average operating speeds at the free-flow speed generally prevail. Vehicles are almost completely unimpeded in their ability to maneuver within the traffic stream.	11.0 or less
B	Speeds at the free-flow speed are generally maintained. The ability to maneuver within the traffic stream is only slightly restricted, and the general level of physical and psychological comfort provided to drivers is still high.	11.0 to 18.0
C	Speeds at or near the free-flow speed of the freeway prevail. Freedom to maneuver within the traffic stream is noticeably restricted, and lane changes require more vigilance on the part of the driver.	18.0 to 26.0
D	Speeds begin to decline slightly with increased flows at this level. Freedom to maneuver within the traffic stream is more noticeably limited, and the driver experiences reduced physical and psychological comfort levels.	26.0 to 46.0
E	At this level, the freeway operates at or near capacity. Operations in this level are volatile, because there are virtually no usable gaps in the traffic stream, leaving little room to maneuver within the traffic stream.	46.0 to 58.0
F	Vehicular flow breakdowns occurs. Large queues form behind breakdown points.	greater than 58.0
Source: Santa Clara County Valley Transportation Authority, Transportation Impact Analysis Guidelines, Updated March 2009 (Based on the Highway Capacity Manual (2000), Washington, D.C.)		

Vehicle Queuing

For selected high-demand movements at the study intersections, the estimated maximum vehicle queues were compared to the existing or planned storage capacity. The queuing analysis is presented for informational purposes only. The City of Sunnyvale does not have significant impact criteria for intersection queuing. However, in the City of Sunnyvale, a project is said to create an operational deficiency if the background plus project conditions increases the 95th percentile queue by one vehicle for a movement that is already over capacity compared to the background conditions.

Vehicle queues were calculated using a Poisson probability distribution, which estimates the probability of “n” vehicles for a vehicle movement using the following formula:

$$P(x = n) = \frac{\lambda^n e^{-(\lambda)}}{n!}$$

Where:

$P(x = n)$ = probability of “n” vehicles in queue per lane

n = number of vehicles in the queue per lane

λ = Average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95th percentile maximum number of queued vehicles per signal cycle for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement.

For signalized intersections, the 95th percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the 95th percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Therefore, left-turn pocket storage designs based on the 95th percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement. The 95th percentile queue length is also known as the “design queue length.”

Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. For this analysis, the criteria used to determine significant impacts on signalized and unsignalized intersections as well as freeway facilities are based on the City of Sunnyvale and VTA's CMP level of service standards.

The effects of the project on other transportation facilities, such as bicycle facilities and transit service, were determined on the basis of engineering judgment.

Definition of Significant Intersection Impacts at Signalized Intersections

The project is said to create a significant adverse impact on traffic conditions at a signalized intersection in the City of Sunnyvale and the City of Santa Clara if for the study peak hour:

1. The level of service at the intersection drops below its respective level of service standard when project traffic is added; or,
2. An intersection that operates below its level of service standard under no project conditions experiences an increase in critical-movement delay of four (4) or more seconds, *and* the critical volume-to-capacity ratio (v/c) is increased by 0.01 or more when project traffic is added.

The exception to this threshold is when the addition of project traffic reduces the amount of average control delay for critical movements, i.e., the change in average control delay for critical movements are negative. In this case, the threshold is when the project increases the critical V/C value by 0.01 or more.

The operation of principal arterials and state highways located within urbanized Santa Clara County is measured by the level of service at CMP Intersections. CMP intersections are generally high-volume intersections located along these thoroughfares. The definition of a significant impact at a CMP intersection is the same as for the City of Sunnyvale, except that the standard for acceptable level of service for all CMP and regional intersections is LOS E or better.

A significant impact by the City of Sunnyvale, City of Santa Clara and CMP standards is said to be satisfactorily mitigated when measures are implemented that would restore intersection conditions to its LOS standard *or* to an average delay that eliminates the project impact.

Definition of Significant Intersection Impacts at Unsignalized Intersections

City of Sunnyvale

Level of service analysis at unsignalized intersections is generally used to determine the need for modification in type of intersection control (i.e. all-way stop or signalization). As part of this evaluation, traffic volumes, delays, and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

Per City of Sunnyvale guidelines, for determining the level of service for unsignalized intersections, the average intersection delay is used for all-way stop controlled intersections, and the worst movement delay is used for side-street stop-controlled intersections. Project impacts at the City's unsignalized intersections would be considered significant if one of the following criteria is met:

1. If an intersection operates at an acceptable LOS (i.e. D or better) without the project and degrades to an unacceptable LOS (i.e. LOS E or F) with the addition of project traffic.
2. If an unsignalized intersection operates at an unacceptable LOS (i.e. LOS E or F) without the project and the addition of project traffic increases:
 - a. The average intersection delay by four (4) seconds or more, and the volume-to-capacity value by 0.01 or more for all-way stop controlled intersections; or
 - b. The worst movement delay by four (4) seconds or more, and the volume-to-capacity value by 0.01 or more for side-street stop controlled.
3. Intersection meets the warrant(s) for installation of a traffic signal as per the latest edition of California Manual on Uniform Traffic Control Devices.

City of Santa Clara

The City of Santa Clara does not have officially adopted significance criteria for unsignalized intersections. According to previous studies, significant impacts occur when the addition of project traffic causes the average intersection delay for all-way stop-controlled intersections or the worst movement/approach for side-street stop-controlled intersections to degrade to LOS F and the intersection satisfies the peak-hour signal warrant from CA MUTCD. A significant impact is considered mitigated when the installation of traffic signals causes the intersection to operate at an acceptable level.

Definition of Significant Freeway Impacts

For this analysis, the criteria used to determine impacts on freeway segments are based on CMP standards. Per CMP requirements, freeway impacts are measured relative to existing conditions (i.e. there is no evaluation of freeways under background conditions). The project is said to create a significant adverse impact on traffic conditions on a freeway segment if for either peak hour:

1. The level of service of the freeway segment drops below the LOS E standard when project traffic is added; or,

The level of service of the freeway segment is LOS F under existing conditions and the number of new trips added by the project is more than one percent of the freeway capacity.

Definition of Significant Freeway Ramp Impacts

A freeway ramp analysis was performed in order to verify that the freeway ramps would have sufficient capacity to serve the expected traffic volumes with and without the project. For the purpose of this study, the project is said to create a significant adverse impact on a freeway ramp if its implementation:

1. Causes the volume-to-capacity (v/c) ratio of the freeway ramp to exceed 1.0; or
2. Increases the amount of traffic on a freeway ramp that is already exceeding its capacity by more than one percent (1%) of the ramp's capacity.

Report Organization

The remainder of this report is divided into six chapters. Chapter 2 describes the existing roadway network, transit services, and pedestrian and bicycle facilities. Chapter 3 presents the traffic conditions in the study area under background conditions. Chapter 4 describes the methods used to estimate the project traffic on the roadway network and presents the intersection operations under existing plus project and background plus project conditions. Also included in Chapter 4 are the freeway segment and freeway ramp analyses. Chapter 5 provides an evaluation of other transportation related issues for the proposed project, such as vehicle queuing, potential project impacts on transit, pedestrian, and bicycle facilities, site access and circulation, and parking. Chapter 6 presents the traffic study conclusions, including a summary of any proposed mitigation measures and recommended improvements.

2. Existing Conditions

This chapter describes the existing conditions for transportation facilities in the vicinity of the site, including the roadway network, transit services, and pedestrian and bicycle facilities.

Existing Roadway Network

Regional access to the study area is provided by US 101.

US 101 is an eight-lane freeway (three mixed-flow lanes and one HOV lane in each direction) in the vicinity of the site. US 101 extends northward through San Francisco and southward through Gilroy. Access to and from the project area is provided via full interchanges at Fair Oaks Avenue and Lawrence Expressway.

Major roadways within or near the project area include: Lawrence Expressway, Central Expressway, Reed Avenue/Monroe Street, Wolfe Avenue, Evelyn Avenue, Aster Avenue, and Willow Avenue. These roads are described below.

Lawrence Expressway is a north-south, eight-lane expressway with a raised median and a posted speed limit of 50 mph in the study area. It begins at Saratoga Avenue in the south, crosses through Sunnyvale, and extends northward and transitions into Caribbean Drive. Lawrence Expressway connects with US 101 via full-access freeway interchanges. Lawrence Expressway provides access to the project site via Reed Avenue. In the study area, Lawrence Expressway includes sidewalks along both sides and crosswalks at the nearby signalized intersections.

Central Expressway is an east-west, four-lane to six-lane expressway. In the study area, Central Expressway has two eastbound lanes and two westbound lanes and a posted speed limit of 50 mph. It begins at Trimble Road in the east, crosses Sunnyvale, extends westward and transitions into Alma Street. Central Expressway connects to Wolfe Road and Lawrence Expressway in the project vicinity.

Reed Avenue/Monroe Street is a two-lane to four-lane roadway that begins west at Fair Oaks Avenue as Reed Avenue and extends southeast towards its terminal at Tisch Way in the City of San Jose. Reed Avenue/Monroe Street has posted speed limits of 25 and 35 mph in the study area. Reed Avenue is within the City of Sunnyvale, and transitions to Monroe Street in the City of Santa Clara at its intersection with Lawrence Expressway (Sunnyvale-Santa Clara city boundary). Reed Avenue/Monroe Street includes a center two-way left-turn lane. In the study

area, Reed Avenue includes sidewalks along both sides and crosswalks at the nearby signalized intersections. Reed Avenue provides access to the project site via Willow Avenue and Evelyn Ave.

Wolfe Road is a four-lane to six-lane, north-south arterial that begins at N. Fair Oaks Avenue, and extends into the City of Cupertino, ending at Stevens Creek Boulevard (its transition point into Miller Avenue). Wolfe Road has a raised center median and a posted speed limit of 35 mph in the study area. Wolfe Road has a full-access interchange with Central Expressway. In the study area, Wolfe Road includes sidewalks and bicycle lanes on both sides and crosswalks at the nearby signalized intersections. Wolfe Road provides access to the project site via Evelyn Avenue and Reed Avenue.

Evelyn Avenue is a two-lane to four-lane roadway that begins at Castro Street in the City of Mountain View and extends to its terminal at Reed Avenue in the City of Sunnyvale. In the study area, Evelyn Avenue includes a center two-way left-turn lane and has a posted speed limit of 30 mph. In the study area, Evelyn includes sidewalks and bicycle lanes in both directions and crosswalks at the nearby signalized intersections. Evelyn Avenue provides access to the project site via Aster Avenue.

Aster Avenue is a two-lane, east-west neighborhood street that extends from Willow Avenue in the east and terminates at Aster Court just west of the Evelyn Avenue and Aster Avenue intersection. In the project vicinity, Aster Avenue has a posted speed limit of 30 mph and includes a sidewalk along the south side of the road. Aster Avenue provides direct access to the project site.

Willow Avenue is a two-lane, north-south neighborhood street that extends from Reed Avenue in the south and becomes French Street in the north. Willow Avenue has a posted speed limit of 25 mph, includes some on-street parking, and includes sidewalks along both sides. Willow Avenue provides direct access to the project site.

Existing Transit Service

Existing transit service to the study area is provided by VTA, the Altamont Commuter Express (ACE), and Caltrain. These services are described below and shown on Figure 3.

VTA and ACE Bus Services

The VTA and ACE bus services that operate with the study area are listed in Table 4, including their terminus points, closest scheduled stop, and commute hour headways. VTA bus route 32 stops on Reed Street, south of the project site. VTA bus route 328 operates along Lawrence Expressway, and ACE route 822 operates along Arques Avenue and Kifer Road in the project vicinity.

Table 4
Existing Transit Services

Bus Route	Route Description	Closest Stop	Weekday Hours of Operation	Headway
Local Route 32	San Antonio shopping center to Santa Clara Transit Center	Reed/Willow	5:45 AM - 8:35 PM	30 min
Local Route 822	Ace Gray Shuttle	Kifer/San Ysidro	6:15 AM - 9:35 AM 3:10 PM - 6:40 PM	60 min
Limited Stop Route 328	Almaden Expressway/Camden to Lockheed Martin/Moffett	Lawrence/Kifer	6:00 AM - 8:45 AM 4:50 PM - 7:15 PM	90 min

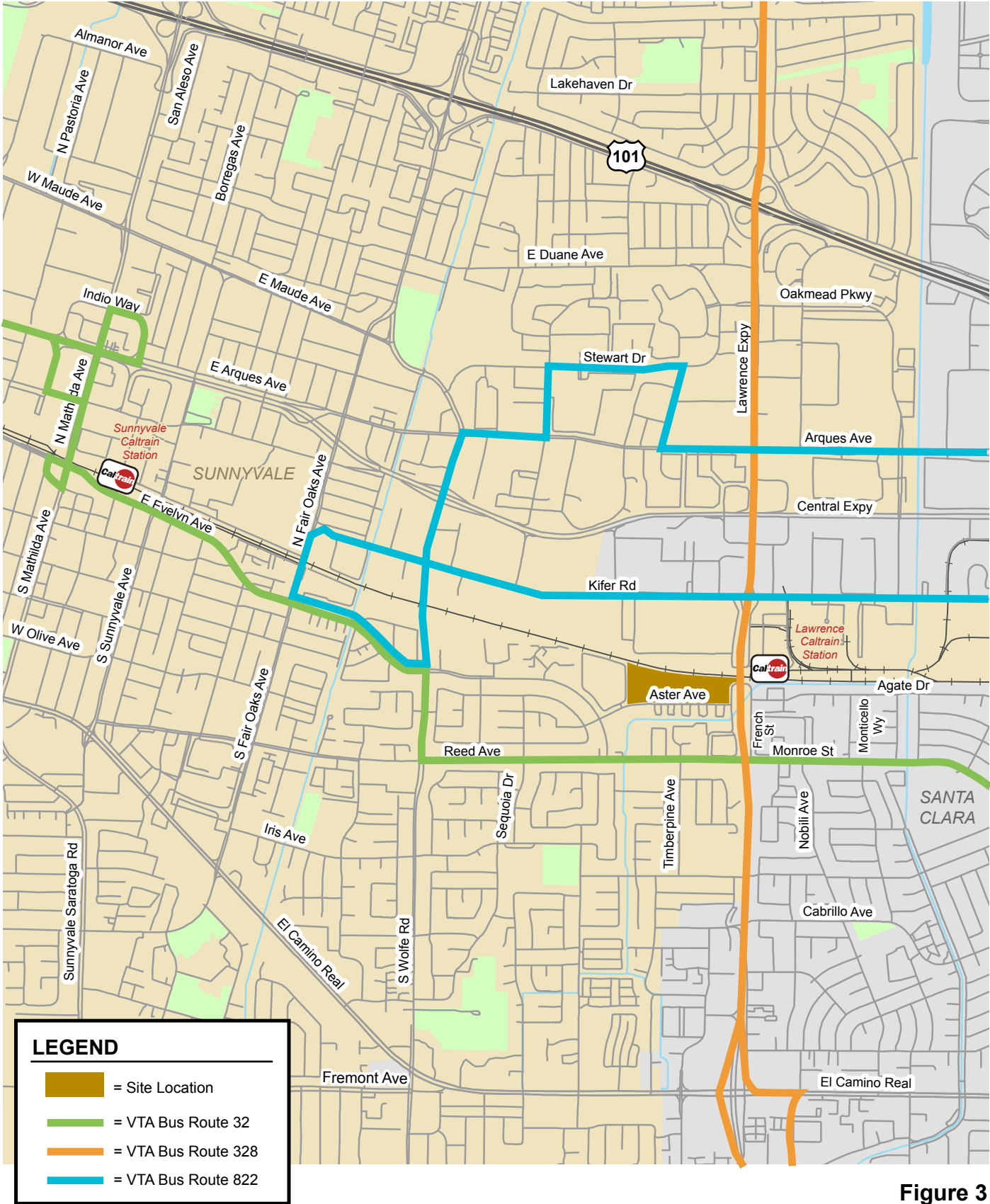


Figure 3
Existing Transit Services

Caltrain Service

The project site is located directly adjacent to the Lawrence Caltrain Station.

Caltrain provides service with approximately 20- to 30-minute headways during the weekday AM and PM commute hours and 60- to 90 -minute headways midday, at night and on weekends. The Lawrence Caltrain Station provides service for Local and Limited trains. Services are provided between 4:40 AM and 1:20 AM (next day). The baby-bullet train does not stop at Lawrence Station.

In addition to the commuter rail service, there are three Caltrain shuttles that provide service at the Lawrence Caltrain Station. These shuttles are described below.

- Duane Avenue Shuttle: This shuttle travels between the Mountain View Caltrain Station and the Lawrence Caltrain Station with stops near the businesses on Stewart Drive/Duane Avenue and Arques Avenue during the weekday commute hours. Shuttles are coordinated with Caltrain schedules.
- Bowers-Walsh Shuttle: This shuttle provides service between the Lawrence Caltrain Station and the Bowers/Walsh area office buildings during the weekday commute periods. Shuttles depart from the Caltrain station in the morning, and from the Bowers/Walsh area to the station in the evening. Shuttles are coordinated with Caltrain schedules.
- Mission Shuttle: This shuttle provides service between the Lawrence Caltrain Station and Mission Area office buildings during the weekday commute periods. Shuttles depart from the Caltrain Station in the morning towards the Intel campus via Mission College, and in the reverse direction in the evening. Shuttles are coordinated with Caltrain schedules.

Existing Pedestrian Facilities

Sidewalks are present along both sides of most major roadways within the project vicinity, including Reed Avenue, Evelyn Avenue, and Wolfe Road. Sidewalk is lacking along the project frontage on Aster Avenue and Willow Avenue. Pedestrian crosswalks and signal heads are present at the nearby signalized study intersections of Evelyn Avenue/Aster Avenue, Evelyn Avenue/Reed Avenue, Timberpine Avenue/Reed Avenue, and Lawrence Expressway/Reed Avenue.

Existing Bicycle Facilities

Bicycle facilities in the project vicinity include bike lanes and bike routes. Bike lanes are lanes on roadways designated for use by bicycles with special lane markings, pavement legends, and signage. Bike routes are streets that accommodate bicycles with pavement markings and signage but are not separate from the travel lanes.

The existing bicycle facilities in the study area are shown on Figure 4. Information about bicycle facilities in the study area is published in the *Sunnyvale Bike Map & Guide to Safe Cycling*, published by the City of Sunnyvale in 2018. The following bicycle facilities exist within the immediate project vicinity:

Bike Lanes:

- Aster Avenue
- Evelyn Avenue
- Reed Avenue/Old San Francisco Road between Sunnyvale Avenue and Lawrence Expressway
- Wolfe Road between Reed Avenue and Fair Oaks Avenue

Bike Routes:

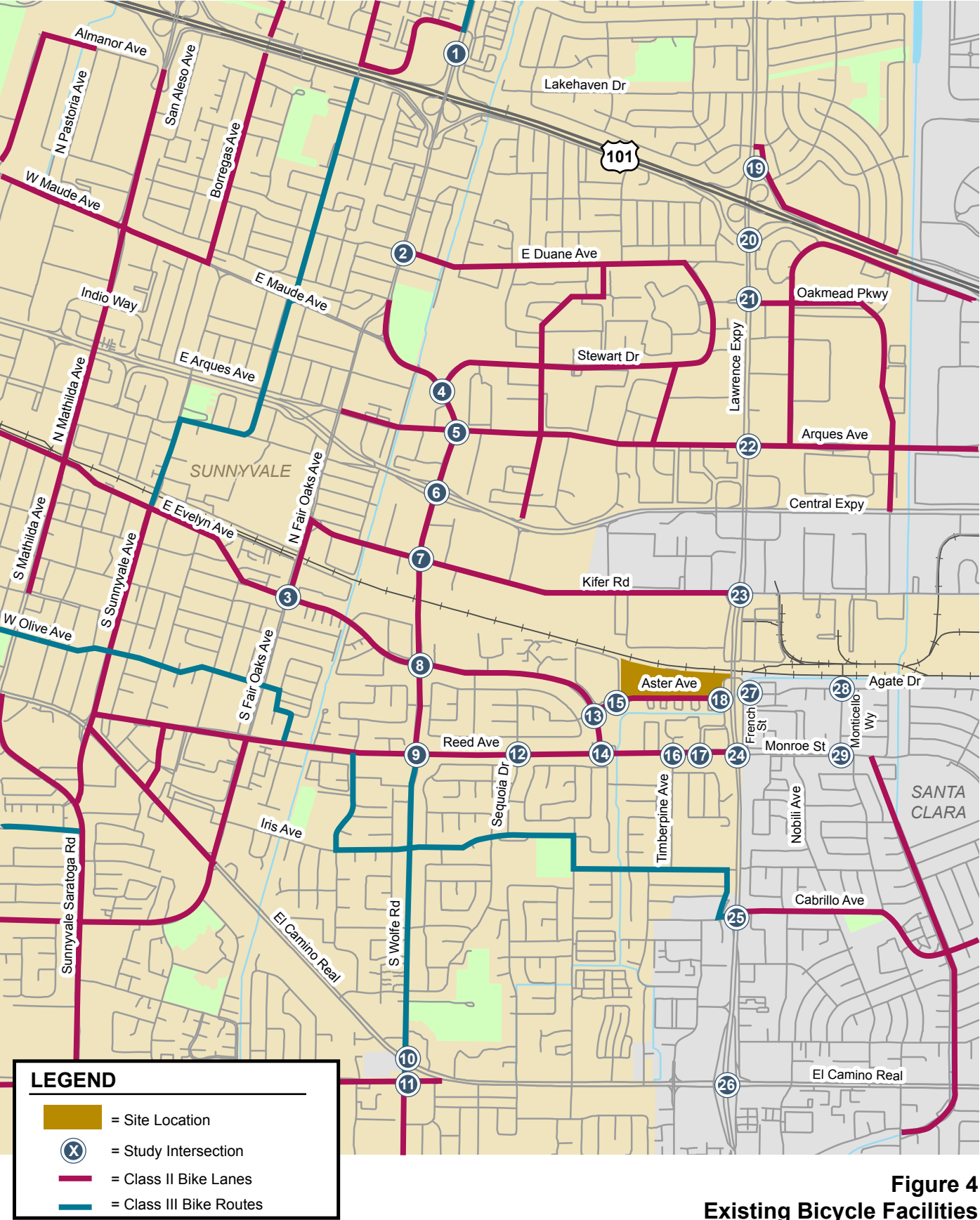
- Wolfe Road between Fremont Avenue and Reed Avenue
- Guided Bike Route 600

Existing Intersection Lane Configurations

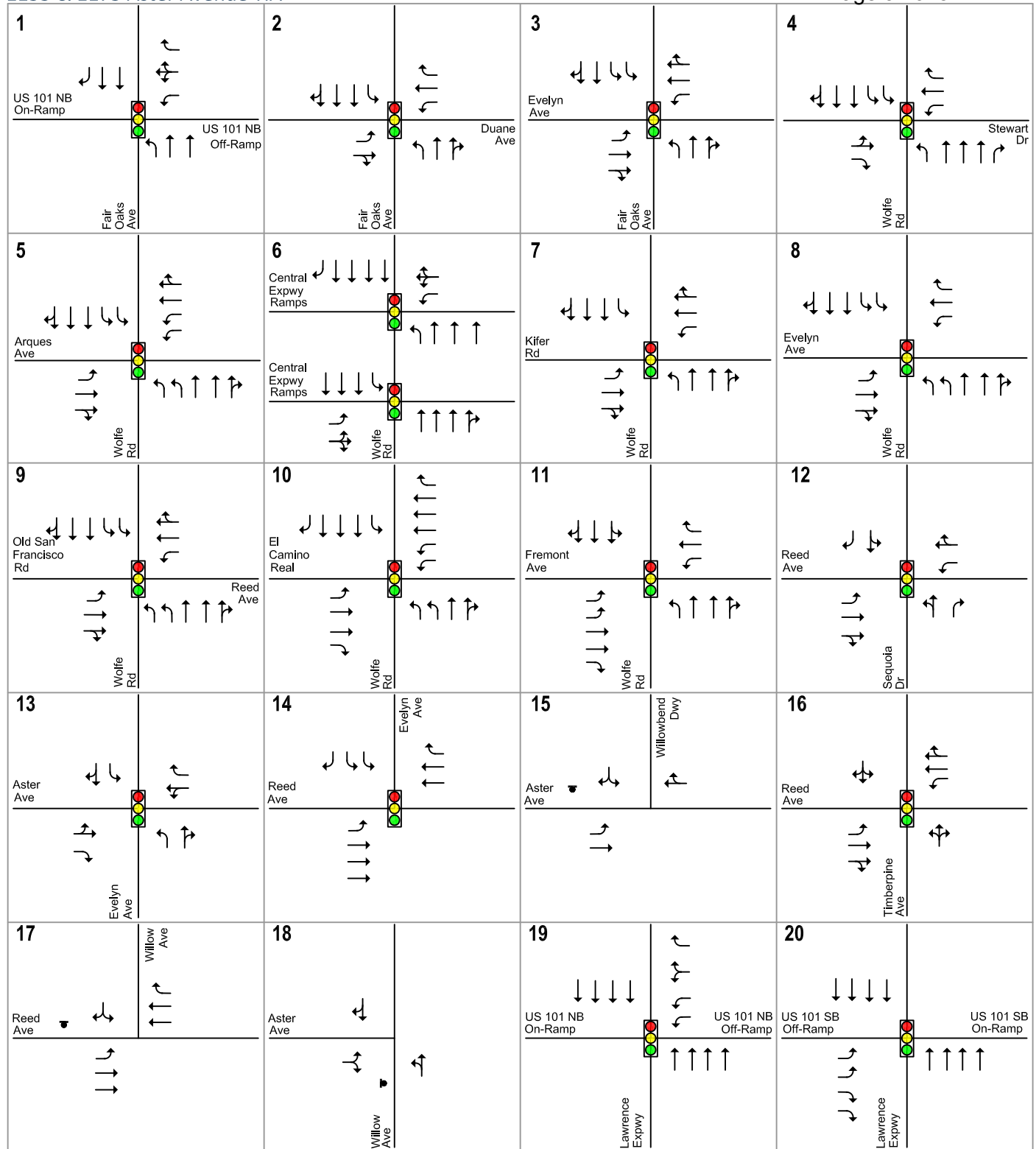
The existing lane configurations at the study intersections were obtained by observations in the field and are shown on Figure 5.

Existing Traffic Volumes

The existing traffic volumes were obtained from peak hour traffic counts collected in 2017 and 2018, except for the PM CMP existing traffic counts, which were collected in October 2016. The existing AM and PM peak hour traffic volumes are shown graphically on Figure 6. Traffic count data are included in Appendix A. Traffic volumes at the study intersections for all scenarios of the traffic study are tabulated in Appendix B.



1155 & 1175 Aster Avenue TIA



LEGEND


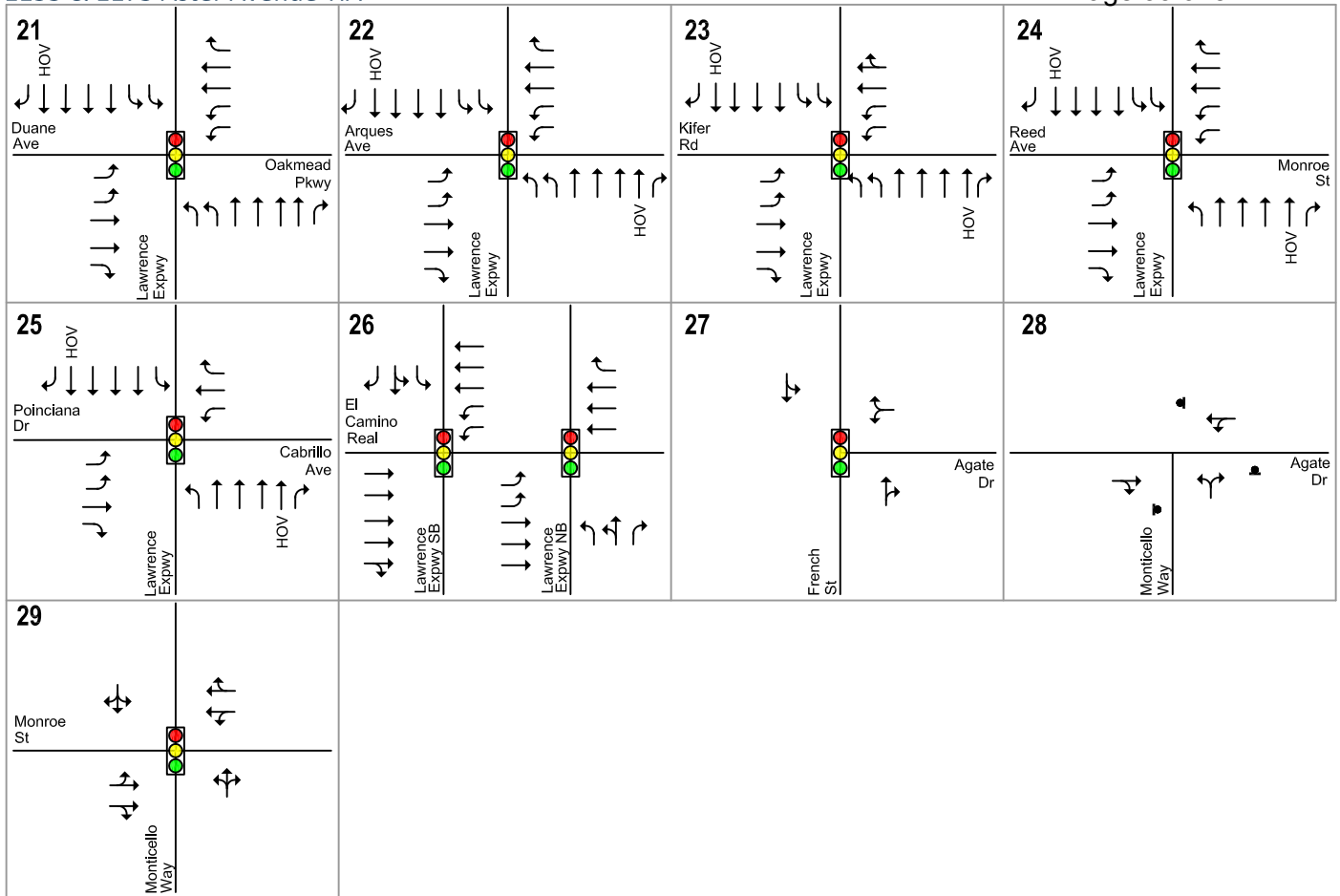
-  = Stop Sign
-  = Signalized Intersection

Figure 5
Existing Lane Configurations

1155 & 1175 Aster Avenue TIA



LEGEND



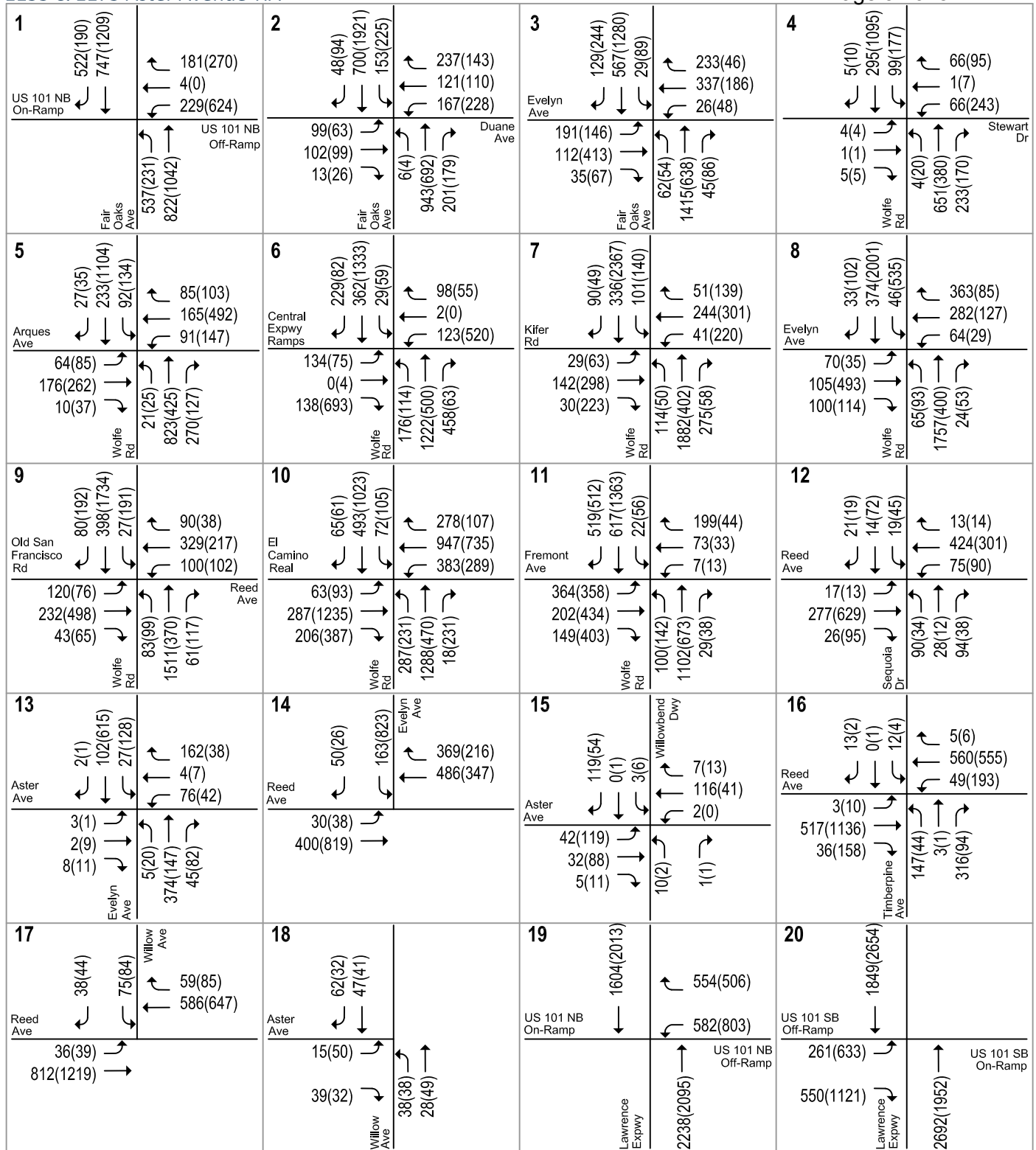
-  = Stop Sign
-  = Signalized Intersection

Figure 5
Existing Lane Configurations

1155 & 1175 Aster Avenue TIA

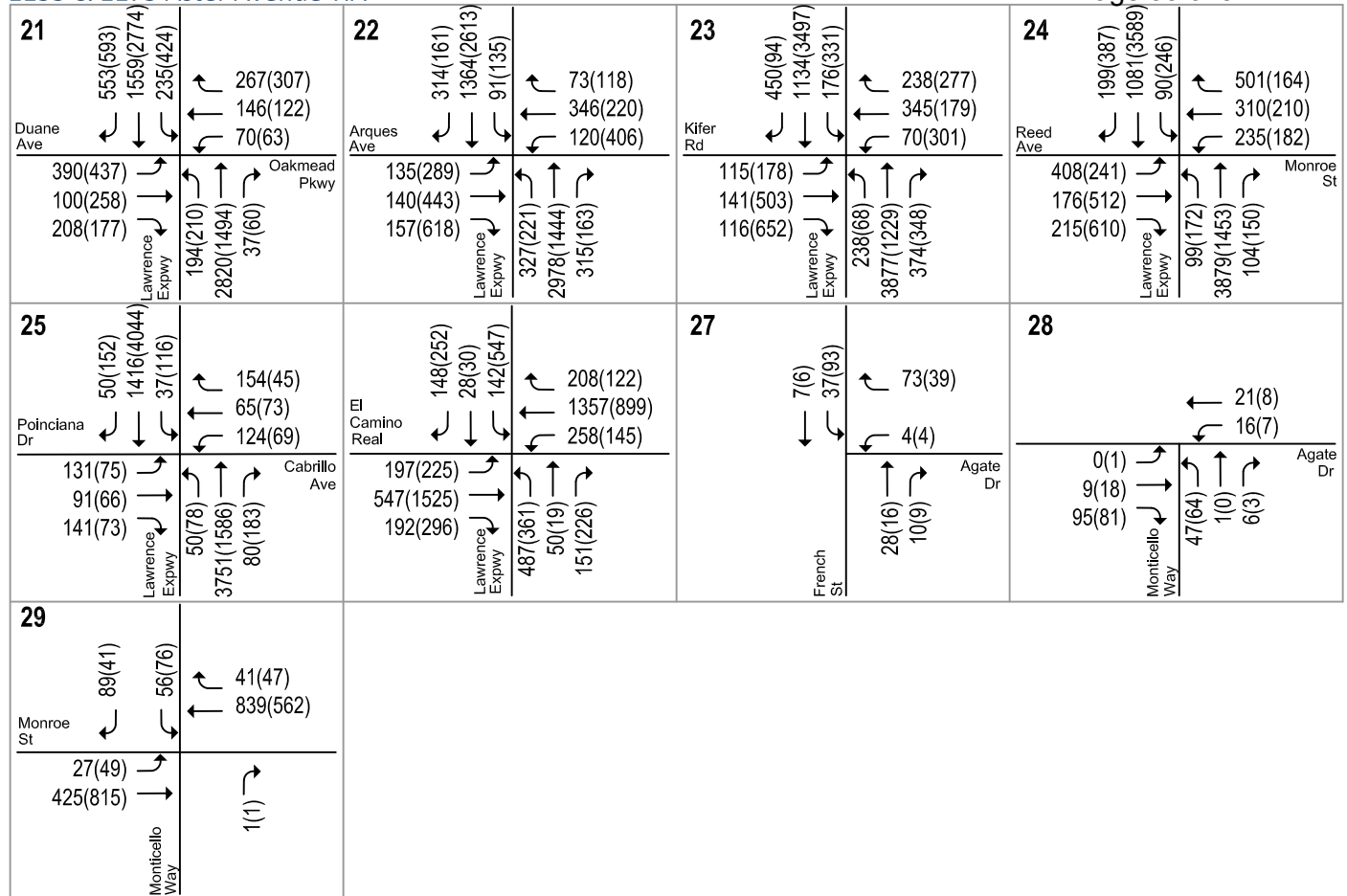


LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 6
Existing Traffic Volumes

1155 & 1175 Aster Avenue TIA



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 6
Existing Traffic Volumes

Existing Intersection Level of Service

The intersection level of service at the study intersections were evaluated against the respective city's and CMP standards. The results of the intersection level of service analysis under existing conditions are summarized in Table 5 for the signalized study intersections and Table 6 for the unsignalized study intersections. The results of the analysis show that the majority of the study intersections currently operate at acceptable levels. However, the following study intersections are currently operating below the LOS standard during at least one peak hour:

- Wolfe Road and Central Expressway Ramps (#6) – PM peak hour (LOS F)
- Willow Avenue and Reed Avenue (#17) – PM peak hour (LOS F)
- Lawrence Expressway and Kifer Road (#23) – PM peak hour (LOS F)
- Lawrence Expressway and Monroe Street/Reed Avenue (#24) – AM peak hour (LOS F)

As shown on Table 6, the unsignalized intersection at Willow Avenue and Reed Avenue is currently operating at an unacceptable LOS F during the PM peak hour for the worst approach (the southbound movement). This southbound movement currently experiences lengthy delays because the southbound left-turn movement must wait for a gap in both directions of travel on Reed Avenue before turning. The peak-hour signal warrant was checked for this intersection, and the results show that this intersection currently meets the peak-hour signal warrant during the PM peak hour. All other unsignalized study intersections currently operate at LOS B or better and were thus not checked for signal warrants. The intersection level of service sheets are included in Appendix C. The peak-hour signal warrant worksheet is included in Appendix D.

Table 5
Existing Level of Service Summary - Signalized Intersections

ID #	Intersection	Control	LOS Standard	Peak Hour	Existing		LOS
					Count Date	Avg. Delay (sec)	
1	Fair Oaks Avenue & US 101 NB Ramps	Signal	E	AM	05/08/18	29.7	C
				PM	05/08/18	31.3	C
2	Fair Oaks Avenue & Duane Avenue	Signal	D	AM	05/08/18	36.1	D+
				PM	05/08/18	35.7	D+
3	Fair Oaks Avenue & Evelyn Avenue	Signal	D	AM	05/08/18	46.5	D
				PM	05/08/18	39.5	D
4	Wolfe Road & Stewart Drive	Signal	D	AM	11/15/17	14.5	B
				PM	11/15/17	27.8	C
5	Wolfe Road & Arques Avenue	Signal	D	AM	11/14/17	49.4	D
				PM	11/14/17	43.9	D
6	Wolfe Road & Central Expressway Ramps	Signal	E	AM	12/06/17	37.4	D+
				PM	12/06/17	84.4	F
7	Wolfe Road & Kifer Road	Signal	D	AM	11/14/17	26.2	C
				PM	11/14/17	36.8	D+
8	Wolfe Road & Evelyn Avenue	Signal	D	AM	11/15/17	34.3	C-
				PM	11/15/17	35.8	D+
9	Wolfe Road & Old San Francisco Road/Reed Avenue	Signal	D	AM	11/14/17	38.5	D+
				PM	11/14/17	41.2	D
10	Wolfe Road & El Camino Real*	Signal	E	AM	11/14/17	61.1	E
				PM	11/10/16	43.0	D
11	Wolfe Road & Fremont Avenue	Signal	D	AM	11/14/17	39.7	D
				PM	11/14/17	49.5	D
12	Sequoia Drive & Reed Avenue	Signal	D	AM	05/15/18	14.2	B
				PM	05/15/18	13.5	B
13	Evelyn Avenue & Aster Avenue	Signal	D	AM	05/15/18	14.1	B
				PM	05/15/18	13.3	B
14	Evelyn Avenue & Reed Avenue	Signal	D	AM	11/15/17	9.5	A
				PM	11/15/17	12.0	B+
16	Timberpine Avenue & Reed Avenue	Signal	D	AM	05/15/18	20.3	C+
				PM	05/15/18	17.6	B
19	Lawrence Expressway & US 101 NB Ramps (County)	Signal	E	AM	04/04/17	10.0	B+
				PM	04/04/17	13.8	B
20	Lawrence Expressway & US 101 SB Ramps (County)	Signal	E	AM	04/04/17	6.6	A
				PM	04/04/17	71.5	E
21	Lawrence Expressway & Oakmead Parkway/Duane Avenue (County)	Signal	E	AM	04/04/17	44.0	D
				PM	04/04/17	53.5	D-
22	Lawrence Expressway & Arques Avenue* (County)	Signal	E	AM	04/04/17	48.2	D
				PM	10/04/16	68.1	E
23	Lawrence Expressway & Kifer Road (County)	Signal	E	AM	03/07/18	54.4	D-
				PM	03/07/18	101.6	F
24	Lawrence Expressway & Monroe Street/Reed Avenue* (County)	Signal	E	AM	03/07/18	114.8	F
				PM	10/05/16	74.1	E
25	Lawrence Expressway & Cabrillo Avenue (County)	Signal	E	AM	03/07/18	52.1	D-
				PM	03/07/18	48.6	D
26	Lawrence Expressway & El Camino Real Ramps* (SC)	Signal	E	AM	03/07/18	34.5	C-
				PM	11/10/16	29.9	C
29	Monticello Way & Monroe Street (SC)	Signal	D	AM	05/15/18	7.8	A
				PM	05/15/18	5.6	A

Notes

* = CMP, SC = Santa Clara, County = County of Santa Clara

Level of service for signal controlled intersection is based on the average intersection delay.

">120" indicates the intersection experiences lengthy delay that is beyond the reasonable calculation range of the HCM 2000 methodology.

BOLD indicates substandard level of service.

Table 6
Existing Level of Service Summary - Unsignalized Intersections

ID #	Intersection	Control	LOS Standard	Peak Hour	Existing			
					Count Date	Avg. Delay (sec)	LOS	Signal Warrant Met ¹
15	Willowbend Driveway & Aster Avenue	Side Street Stop	D	AM	05/15/18	10.2	B	-
				PM	05/15/18	10.7	B	-
17	Willow Avenue & Reed Avenue	Side Street Stop	D	AM	05/15/18	26.2	D	No
				PM	05/15/18	52.6	F	Yes
18	Willow Avenue & Aster Avenue	Side Street Stop	D	AM	05/15/18	9.1	A	-
				PM	05/15/18	9.6	A	-
27	French Street & Agate Drive (SC)	All Way Yield	D	AM	05/15/18	5.0	A	-
				PM	05/15/18	7.0	A	-
28	Monticello Way & Agate Drive (SC)	All Way Stop	D	AM	05/15/18	7.2	A	-
				PM	05/15/18	7.2	A	-

Notes
SC = Santa Clara
Level of service for side street stop controlled intersections is based on the delay experienced by the worst movement.
Level of service for all way yield and all way stop controlled intersections is based on the average intersection delay.
BOLD indicates substandard level of service.
¹ The CAMUTCD peak-hour signal warrant is checked only if the intersection is operating at an unacceptable level of service.

Existing Freeway Level of Service

Existing weekday AM and PM peak-hour traffic volumes on the study freeway segments were obtained from the *2017 CMP Monitoring & Conformance Report* published by Santa Clara VTA (see Table 7). Both study freeway segments are operating at LOS F in the northbound direction in the morning and LOS F in the southbound direction in the evening.

Table 7
Existing Freeway Level of Service Summary

Freeway	Dir.	Segment	Peak Hour	Existing Conditions - Mixed Flow Lanes ¹					LOS ²
				Avg. Speed (mph)	# of Lanes	Capacity	Density (pc/mi/ln)	Volume	
US 101	NB	Great America Parkway On-Ramp to Lawrence Expressway Off-Ramp	AM	16	3	6,900	74.0	3,477	F
			PM	62	3	6,900	25.6	4,803	C
US 101	NB	Fair Oaks Avenue On-Ramp to Mathilda Avenue Off-Ramp	AM	26	3	6,900	61.1	4,710	F
			PM	61	3	6,900	27.4	5,058	D
US 101	SB	Mathilda Avenue On-Ramp to Fair Oaks Avenue Off-Ramp	AM	62	3	6,900	26.3	4,893	D
			PM	25	3	6,900	61.5	4,674	F
US 101	SB	Lawrence Expressway On-Ramp to Bowers Avenue Off-Ramp	AM	58	3	6,900	31.8	5,577	D
			PM	7	3	6,900	89.9	1,845	F

Notes
Dir. = direction, NB = northbound, SB = southbound, mph = miles per hour, pc/mi/ln = passenger cars per mile per lane
¹ Existing freeway conditions information is published in the Santa Clara Valley Transportation Authority (VTA) *2017 CMP Monitoring and Conformance Report*.
² The Santa Clara VTA report references the Freeway LOS criteria presented in the *Traffic Level of Service Analysis Guidelines (June 2003)* published by Santa Clara VTA.
BOLD indicates substandard level of service.

Existing Freeway Ramp Capacity Analysis

This analysis consists of a volume-to-capacity ratio evaluation of four freeway ramps at the interchanges of US 101 and Fair Oaks Avenue and US 101 and Lawrence Expressway. The ramp capacities were obtained from the *Highway Capacity Manual 2000*, which considers the free-flow speed, the number of lanes on the study ramp, and ramp metering.

Hexagon conducted field observations at the study freeway ramps in May 2018. The field observations showed that the US 101 southbound on-ramp from northbound Lawrence Expressway was metered during the PM peak hour. The field observations showed minimal ramp queuing at this location, typically one to two vehicles. Due to the low observed queue length, a queuing analysis was omitted from the traffic study. The US 101 on-ramp from Fair Oaks Avenue has ramp meter equipment and Caltrans could turn on the ramp metering in the future. To be conservative, it was assumed that the US 101 on-ramp from Fair Oaks Avenue is metered during the AM peak hour.

It is assumed that the metered ramps would each have a capacity of 900 vehicles per hour for the mixed-flow lanes. A capacity of 900 vehicles per hour is assumed for the HOV lanes. The peak-hour freeway ramp volumes were obtained through intersection counts and Caltrans. As shown on Table 8, all freeway ramps currently have sufficient capacity to serve the existing traffic volumes, with volume-to-capacity ratios that are well below 1.0, which means that the existing traffic demand is lower than the ramp capacity during the AM and PM peak hours.

Table 8
Existing Freeway Ramp Capacity Summary

Interchange	Ramp	Type	Peak Hour	Lanes			Existing Conditions		
				Mixed-Flow	HOV	Meter ¹	Capacity ²	Peak Volume ³	v/c
US101/Fair Oaks Avenue	NB On-Ramp from Fair Oaks Avenue	Diagonal	AM	1	1	Equipment Present	1,800	1,061	0.59
			PM				1,800	416	0.23
	SB Off-Ramp to SB Fair Oaks Avenue	Diagonal	AM	1	-	-	2,000	363	0.18
US 101/Lawrence Expressway			PM				2,000	893	0.45
	NB Off-Ramp to Lawrence Expressway	Diagonal	AM	2	-	-	3,800	1,136	0.30
			PM				3,800	1,309	0.34
	SB On-Ramp from NB Lawrence Expressway	Diagonal	AM	2	1	Equipment Present	1,800	709	0.39
			PM				1,800	262	0.15

Notes:
NB=northbound, SB=southbound, v/c = volume-to-capacity ratio

¹ As a conservative approach, if an on-ramp has meter equipment present, the ramp is analyzed assuming it is metered.

² Ramp capacities were obtained from the Highway Capacity Manual, 2000 (pg 25-4), and considered the free-flow speed, the number of lanes on the ramp, and ramp metering.

³ Peak-hour volumes are obtained through intersection counts and Caltrans.

Observed Existing Conditions

Traffic conditions were observed in the field in order to identify existing operational deficiencies and to confirm the accuracy of calculated intersection levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to level of service, and (2) to identify any locations where the level of service analysis does not accurately reflect existing traffic conditions. Hexagon conducted field observations in 2017 and 2018 during the AM peak commute period (7:00 AM to 10:00 AM) and during the PM peak commute period (4:00 PM to 7:00 PM). During the peak commute periods, most of the study intersections had no significant operational issues, and vehicular queues on all approaches were mostly able to clear in one cycle. The observed operational issues at the study intersections are identified below.

Note that the discussion below indicates occasional instances when specific movements could not make it through the intersection in one cycle. Intersection level of service calculations for signalized intersections are based on the average delay of all movements within the peak hour. Therefore, if one movement is failing to clear within one signal cycle but other movements receive minimal delays, the intersection could still operate at an acceptable level of service.

Fair Oaks Avenue and US 101 Northbound Ramps

During the AM peak commute period, the northbound left-turn queues were observed to occasionally extend beyond the existing turn pocket storage space and required two signal cycles to clear the intersection.

During the PM peak commute period, the westbound left-turn movement received heavy traffic volumes and occasionally required two signal cycles to clear the intersection.

Fair Oaks Avenue and Duane Avenue

During the AM peak commute period, southbound and westbound left-turn movements received heavy traffic volumes and required two signal cycles to clear the intersection. This congestion was observed to occur only during the peak 15-minute drop-off operations of the nearby King's Academy school.

Wolfe Road and Arques Avenue

During the PM peak hour, westbound left-turn traffic was heavy and consistently required two signal cycles to clear.

Wolfe Road and Central Expressway Ramps

The intersections on Wolfe Road at the Central Expressway eastbound and westbound ramps were observed to operate as one intersection during the AM and PM peak commute periods. Due to the signal operations, the northbound left-turning vehicles and southbound left-turning vehicles were observed to experience long delays. During the AM peak commute period, the northbound left-turn queues were observed to occasionally extend beyond the storage space.

During the PM peak commute period, the southbound through queues were observed to occasionally spillback to the upstream intersection at Wolfe Road/Arques Avenue and required two signal cycles to clear the intersection.

Wolfe Road and Kifer Road

During the PM peak commute period, westbound left-turn traffic was heavy and consistently required two signal cycles to clear.

Wolfe Road and Evelyn Avenue

During the PM peak commute period, the southbound through queues were observed to extend beyond the entrance to the left-turn pocket which would prevent southbound left-turn vehicles from entering the storage space.

Wolfe Road and El Camino Real

During the AM peak commute period, there was an imbalance of lane use for westbound left-turning vehicles in favor of the outer left-turn lane (second from the left lane). Queues from the outer left-turn lane would extend beyond the turn pocket and block the inner left-turn lane. Westbound left-turn vehicles were observed to fail to clear the intersection in one cycle length. In addition, westbound through queues extended approximately 750 feet and would occasionally fail to clear the intersection in one cycle length.

During the PM peak commute period, southbound left-turn vehicles were observed to frequently fail to clear the intersection in one green cycle. In addition, eastbound through vehicles were observed to occasionally fail to clear the intersection in one green cycle.

Wolfe Road and Fremont Avenue

During the PM peak commute period, there was an imbalance of lane use for eastbound left-turning vehicles in favor of the outer left-turn lane. Queues from the outer left-turn lane would extend beyond the turn pocket and block the inner left-turn lane. Eastbound left-turn vehicles were observed to occasionally fail to clear the intersection in one cycle length. Eastbound through vehicle queues would extend approximately 450 feet and would occasionally fail to clear the intersection in one cycle length. In addition, occasionally there was eastbound downstream spillback from the stop sign at Fremont Avenue and El Camino Real, which caused congestion for eastbound vehicles progressing through the intersection.

Lawrence Expressway and US 101 Northbound Ramps

During the PM peak commute period, southbound vehicle queues would occasionally spill back from the downstream intersection of Lawrence Expressway and US 101 SB Ramps. This congestion would occasionally prevent southbound through vehicles from progressing through the intersection.

Lawrence Expressway and US 101 Southbound Ramps

During the PM peak commute period, southbound vehicle queues would occasionally spillback from the downstream intersection of Lawrence Expressway and Oakmead Parkway. This congestion would occasionally prevent southbound through and eastbound right-turn vehicles from progressing through the intersection. During the southbound red phase, the southbound queues were observed to occasionally spillback to the upstream intersection of Lawrence Expressway and US 101 NB Ramps, approximately 850 feet of queued vehicles. In addition, the eastbound left-turn and eastbound right-turn vehicle queues were observed to occasionally require more than one green cycle to clear the intersection.

Lawrence Expressway & Oakmead Parkway

During the AM peak commute period, northbound through traffic was heavy, but most vehicles cleared within one signal cycle. Vehicles at the back of the northbound left-turn queues occasionally required two cycles to clear the intersection.

During the PM peak commute period, southbound traffic was consistently heavy and required more than one signal cycle to clear.

Lawrence Expressway & Arques Avenue

During the AM peak commute period, vehicles at the back of the northbound left-turn queues occasionally required two cycles to clear the intersection.

During the PM peak commute period, southbound traffic was consistently heavy and required more than one signal cycle to clear.

Central Expressway Loop Ramps at Lawrence Expressway

Hexagon conducted field observations at the Central Expressway square loop ramps at the Lawrence Expressway interchange during the AM and PM peak commute periods. Central Expressway westbound is the AM peak commute direction and Central Expressway eastbound is the PM peak commute direction. During the AM peak commute period, vehicles from northbound Lawrence Expressway to westbound Central Expressway ramp via Cobalt Way would experience some delay due to limited gaps in westbound traffic on Central Expressway. However, the westbound Central Expressway traffic is metered by the upstream intersection at Oakmead Parkway/Central Expressway, and this creates large gaps between the platoons of westbound traffic, which allowed the Cobalt Way queues to fully dissipate. There were no traffic operational deficiencies observed during the PM peak commute period.

3.

Background Conditions

This chapter describes background traffic conditions, which are defined as conditions with the addition of traffic from approved but not yet constructed and occupied projects in the study area. Traffic volumes for background conditions comprise volumes from the existing traffic counts plus traffic generated by approved projects in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions.

Background Transportation Network

It is assumed in this analysis that the transportation network background conditions, including roadway and intersection lane configurations, would be the same as that described under the existing conditions.

Background Traffic Volumes

Background traffic volumes were estimated by adding traffic from approved but not yet completed developments in the study area. Approved developments are those developments that have been approved by local agencies, are under construction, or are built but not yet occupied. Approved project lists were obtained from the City of Sunnyvale and the City of Santa Clara. Based on a review of traffic studies prepared for these projects, the types and sizes of these developments, and their distances from the project site, a total of 43 approved projects were selected for inclusion in the background scenario. Trip generation for all background projects was based on their respective traffic reports provided by City staff, where available. The approved but not yet completed developments included in this study are shown on Figure 7. The AM and PM peak-hour traffic volumes at the study intersections under background conditions are shown on Figure 8.

1155 & 1175 Aster Avenue TIA

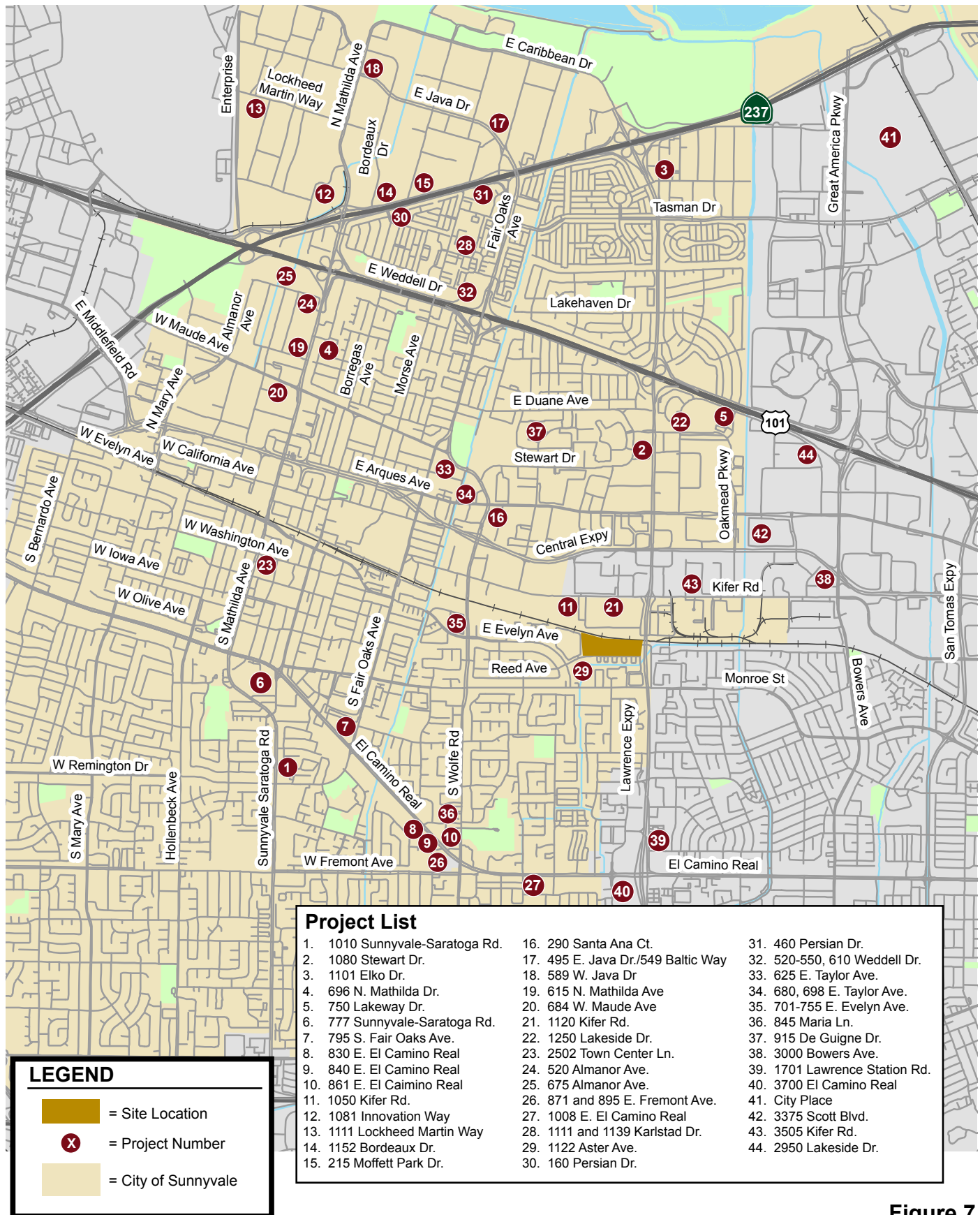
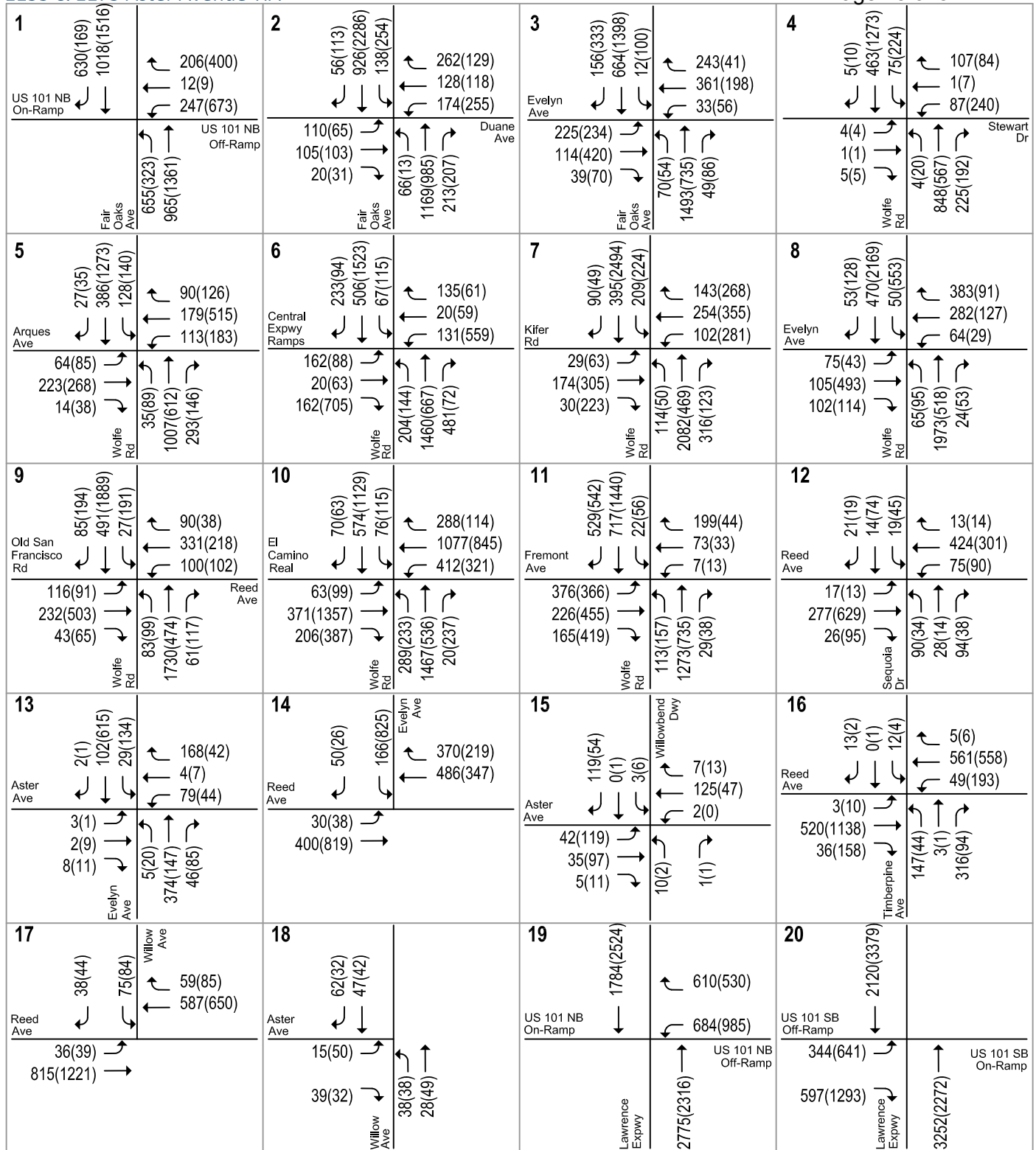


Figure 7
Approved Developments

1155 & 1175 Aster Avenue TIA

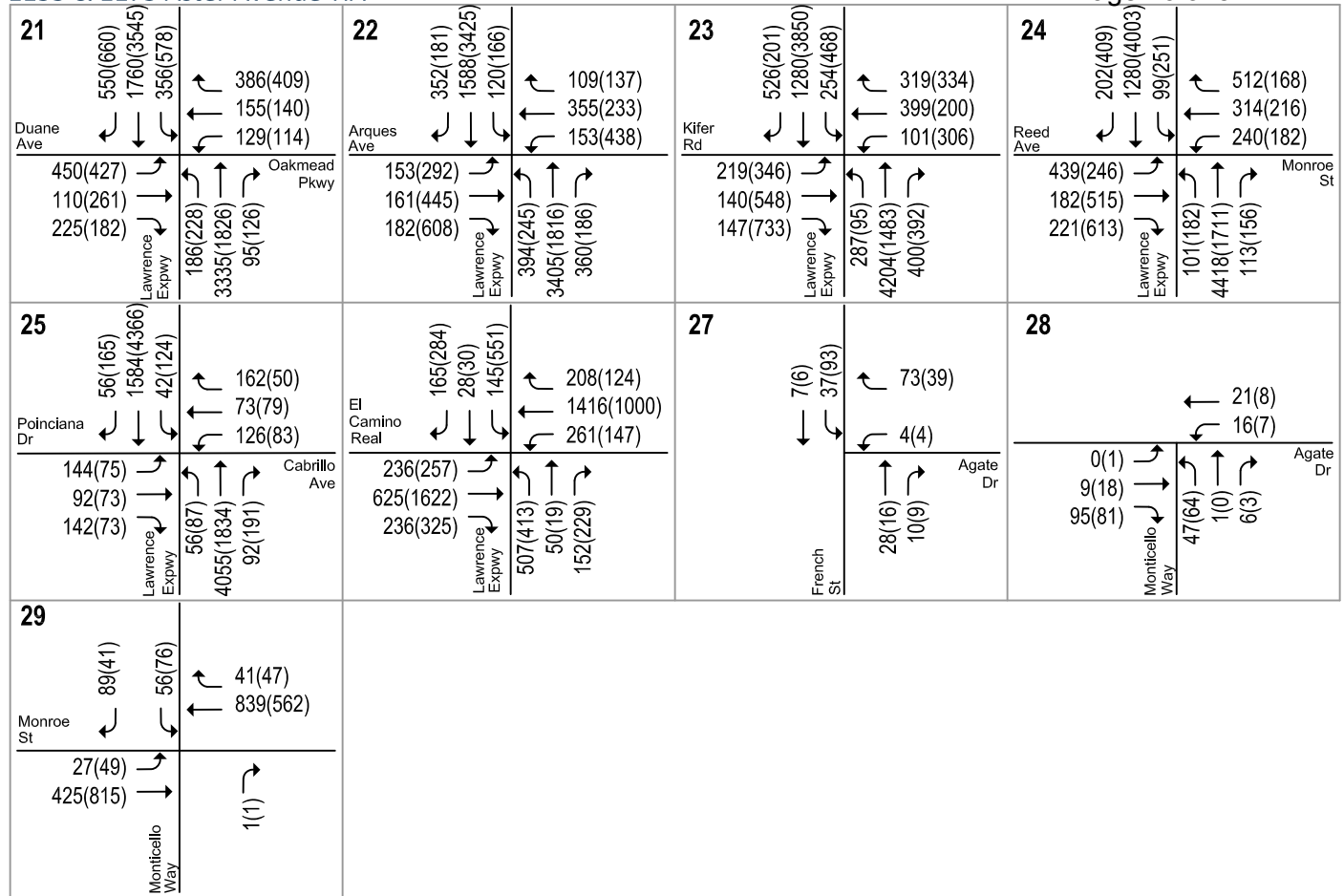


LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 8
Background Traffic Volumes

1155 & 1175 Aster Avenue TIA



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 8
Background Traffic Volumes

Background Intersection Level of Service

The results of the intersection level of service analysis under background conditions are summarized in Table 9 for the signalized study intersections and Table 10 for the unsignalized study intersections. The results of the analysis show that the majority of the study intersections would operate at acceptable levels. The following study intersections would operate below the LOS standard during at least one peak hour:

- Wolfe Road and Central Expressway Ramps (#6) – PM peak hour (LOS F)
- Willow Avenue and Reed Avenue (#17) – PM peak hour (LOS F)
- Lawrence Expressway and Oakmead Parkway/Duane Avenue (#21) – PM peak hour (LOS F)
- Lawrence Expressway and Arques Avenue (#22) – PM peak hour (LOS F)
- Lawrence Expressway and Kifer Road (#23) – AM and PM peak hour (LOS F)
- Lawrence Expressway and Monroe Street/Reed Avenue (#24) – AM and PM peak hour (LOS F)

Table 9

Background Level of Service Summary - Signalized Intersections

ID #	Intersection	Control	LOS Standard	Peak Hour	Existing		Background	
					Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
1	Fair Oaks Avenue & US 101 NB Ramps	Signal	E	AM PM	29.7 31.3	C C	47.2 48.8	D D
2	Fair Oaks Avenue & Duane Avenue	Signal	D	AM PM	36.1 35.7	D+ D+	37.4 39.5	D+ D
3	Fair Oaks Avenue & Evelyn Avenue	Signal	D	AM PM	46.5 39.5	D D	51.7 49.9	D- D
4	Wolfe Road & Stewart Drive	Signal	D	AM PM	14.5 27.8	B C	13.7 26.8	B C
5	Wolfe Road & Arques Avenue	Signal	D	AM PM	49.4 43.9	D D	52.0 44.5	D- D
6	Wolfe Road & Central Expressway Ramps	Signal	E	AM PM	37.4 84.4	D+ F	59.3 110.7	E+ F
7	Wolfe Road & Kifer Road	Signal	D	AM PM	26.2 36.8	C D+	36.7 46.5	D+ D
8	Wolfe Road & Evelyn Avenue	Signal	D	AM PM	34.3 35.8	C- D+	34.4 34.0	C- C-
9	Wolfe Road & Old San Francisco Road/Reed Avenue	Signal	D	AM PM	38.5 41.2	D+ D	37.4 41.5	D+ D
10	Wolfe Road & El Camino Real*	Signal	E	AM PM	61.1 43.0	E D	63.3 43.9	E D
11	Wolfe Road & Fremont Avenue	Signal	D	AM PM	39.7 49.5	D D	39.9 50.8	D D
12	Sequoia Drive & Reed Avenue	Signal	D	AM PM	14.2 13.5	B B	14.2 13.5	B B
13	Evelyn Avenue & Aster Avenue	Signal	D	AM PM	14.1 13.3	B B	14.2 13.6	B B
14	Evelyn Avenue & Reed Avenue	Signal	D	AM PM	9.5 12.0	A B+	9.5 12.0	A B
16	Timberpine Avenue & Reed Avenue	Signal	D	AM PM	20.3 17.6	C+ B	20.3 17.6	C+ B
19	Lawrence Expressway & US 101 NB Ramps (County)	Signal	E	AM PM	10.0 13.8	B+ B	10.6 15.1	B+ B
20	Lawrence Expressway & US 101 SB Ramps (County)	Signal	E	AM PM	6.6 71.5	A E	7.3 88.9	A F
21	Lawrence Expressway & Oakmead Parkway/Duane Avenue (County)	Signal	E	AM PM	44.0 53.5	D D-	67.4 85.2	E F
22	Lawrence Expressway & Arques Avenue* (County)	Signal	E	AM PM	48.2 68.1	D E	59.7 84.3	E+ F
23	Lawrence Expressway & Kifer Road (County)	Signal	E	AM PM	54.4 101.6	D- F	80.8 >120	F F
24	Lawrence Expressway & Monroe Street/Reed Avenue* (County)	Signal	E	AM PM	114.8 74.1	F E	>120 83.8	F F
25	Lawrence Expressway & Cabrillo Avenue (County)	Signal	E	AM PM	52.1 48.6	D- D	66.2 60.7	E E
26	Lawrence Expressway & El Camino Real Ramps* (SC)	Signal	E	AM PM	34.5 29.9	C- C	35.1 30.9	D+ C
29	Monticello Way & Monroe Street (SC)	Signal	D	AM PM	7.8 5.6	A A	7.8 5.6	A A

Notes

* = CMP, SC = Santa Clara, County = County of Santa Clara

Level of service for signal controlled intersection is based on the average intersection delay.

">120" indicates the intersection experiences lengthy delay that is beyond the reasonable calculation range of the HCM2000 methodology.

BOLD indicates substandard level of service.

Table 10
Background Level of Service Summary - Unsignalized Intersections

ID #	Intersection	Control	LOS Standard	Peak Hour	Existing			Background		
					Avg. Delay (sec)	LOS	Signal Warrant Met ¹	Avg. Delay (sec)	LOS	Signal Warrant Met ¹
15	Willowbend Driveway & Aster Avenue	Side Street Stop	D	AM	10.2	B	-	10.3	B	-
				PM	10.7	B	-	10.8	B	-
17	Willow Avenue & Reed Avenue	Side Street Stop	D	AM	26.2	D	No	26.3	D	No
				PM	52.6	F	Yes	53.2	F	Yes
18	Willow Avenue & Aster Avenue	Side Street Stop	D	AM	9.1	A	-	9.1	A	-
				PM	9.6	A	-	9.6	A	-
27	French Street & Agate Drive (SC)	All Way Yield	D	AM	5.0	A	-	5.0	A	-
				PM	7.0	A	-	7.0	A	-
28	Monticello Way & Agate Drive (SC)	All Way Stop	D	AM	7.2	A	-	7.2	A	-
				PM	7.2	A	-	7.2	A	-

Notes

SC = Santa Clara

Level of service for side street stop controlled intersections is based on the delay experienced by the worst movement. Level of service for all way yield and all way stop controlled intersections is based on the average intersection delay.

BOLD indicates substandard level of service.

¹ The CA MUTCD peak-hour signal warrant is checked only if the intersection is operating at an unacceptable level of service.

4. Project Conditions

This chapter describes the method by which project traffic is estimated, roadway traffic operations under existing plus project conditions and background plus project conditions, and any impacts caused by the project. Existing plus project traffic conditions could potentially occur if the project were to be occupied prior to the other approved projects in the area. However, it is unlikely that this traffic condition would occur, since some of the other approved projects expected to add traffic to the study area would likely be built and occupied during the time this project is going through the development review process.

Project Description

The project proposes to demolish the existing industrial facilities on-site and construct a residential complex, including 412 apartments, 189 condominiums, 140 townhomes, a 2-acre park, and a 1,500 square foot (s.f.) coffee shop. Access to the project would be provided via three driveways. Two full access driveways would be located along Aster Avenue and one right in/out only driveway would be located along Willow Avenue.

Project Trip Estimates

The magnitude of traffic produced by a new development and the locations where that traffic would appear are estimated using a three-step process: (1) trip generation, (2) trip distribution, and (3) trip assignment. In determining project trip generation, the magnitude of traffic traveling to and from the proposed project site was estimated for the AM and PM peak hours. As part of the project trip distribution, the directions to and from which the project trips would travel were estimated. In the project trip assignment, the project trips were assigned to specific streets and intersections. These procedures are described below.

Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic produced by common land uses. Thus, for the most common land uses there are standard trip generation rates that can be applied to help predict the future traffic increases that would result from a new development. The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rates by the size of the development. Trip generation resulting from new development proposed within the City of Sunnyvale typically is estimated using the trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* (2017). Trip generation rates for the proposed apartments and condominiums are based on the average rates published for "Multifamily Housing (Mid Rise)" (Land Use Code 221). Trip generation rates for the proposed townhomes are based on the average rates published for "Multifamily Housing (Low Rise)" (Land Use Code 220). Trip Generation rates for the proposed coffee shop are based on the average rates published for "Coffee/Donut Shop without Drive-Through Window" (Land Use Code 936).

Trip Reductions

A mixed-use development with complementary land uses such as residential and retail will generate and attract trips internally between the uses. Thus, the number of vehicle trips generated for each use may be reduced, since a portion of the trips would not require entering or exiting the site. The VTA's *Congestion Management Program Transportation Impact Analysis Guidelines* (October 2014) indicates a trip reduction of up to 15 percent is allowed for residential and retail mixed-use developments. The reduction is first applied to the smaller of the two complimentary trip generators (in this case, the retail use), and the same number of trips is then subtracted from the larger trip generator (in this case, the residential use) to account for both trip ends. Trip reductions also factor in that this project is also a Transit Oriented Development (TOD) due to its proximity to the Caltrain station. The VTA's CMP TIA guidelines indicate a trip reduction of up to 9% is allowed for residential uses within a 2,000 foot walk of a Caltrain station. Also, the coffee shop trip generation can be reduced due to Diverted Linked trips. Diverted Link trips are generated by traffic that diverts from its current route to include a stop by the coffee shop, and then ultimately continues on its original path. As documented in the Institute of Transportation Engineers' (ITE) *Trip Generation Handbook, 3rd Edition*, coffee shops have, on average, pass-by trips accounting for 89% of all trips. Since the proposed coffee shop is not located on a busy street where trips could pass-by on their way to their final destination, Hexagon assumed that these trips would instead divert slightly from their original route to the coffee shop. For the purpose of this analysis, Hexagon assumed that the coffee shop could have as high as 89% of all trips be diverted-linked trips. However, the VTA's CMP TIA guidelines indicate a trip reduction of up to 30% is allowed for retail uses to account for diverted-linked trips. Therefore, a 30% diverted-linked trip reduction was applied for the coffee shop trips. Trip assignment assumptions for these diverted-linked trips are discussed below.

In addition, the proposed project would receive trip credits for the trips generated by the existing on-site use. AM and PM peak hour counts were collected at the existing site driveways on Thursday, May 17, 2018.

Net Project Trips

After applying the ITE trip generation rates and the applicable trip reductions, the proposed project is estimated to generate a net increase of 268 vehicle trips during the AM peak hour (71 inbound and 197 outbound) and 299 vehicle trips during the PM peak hour (189 inbound and 110 outbound).

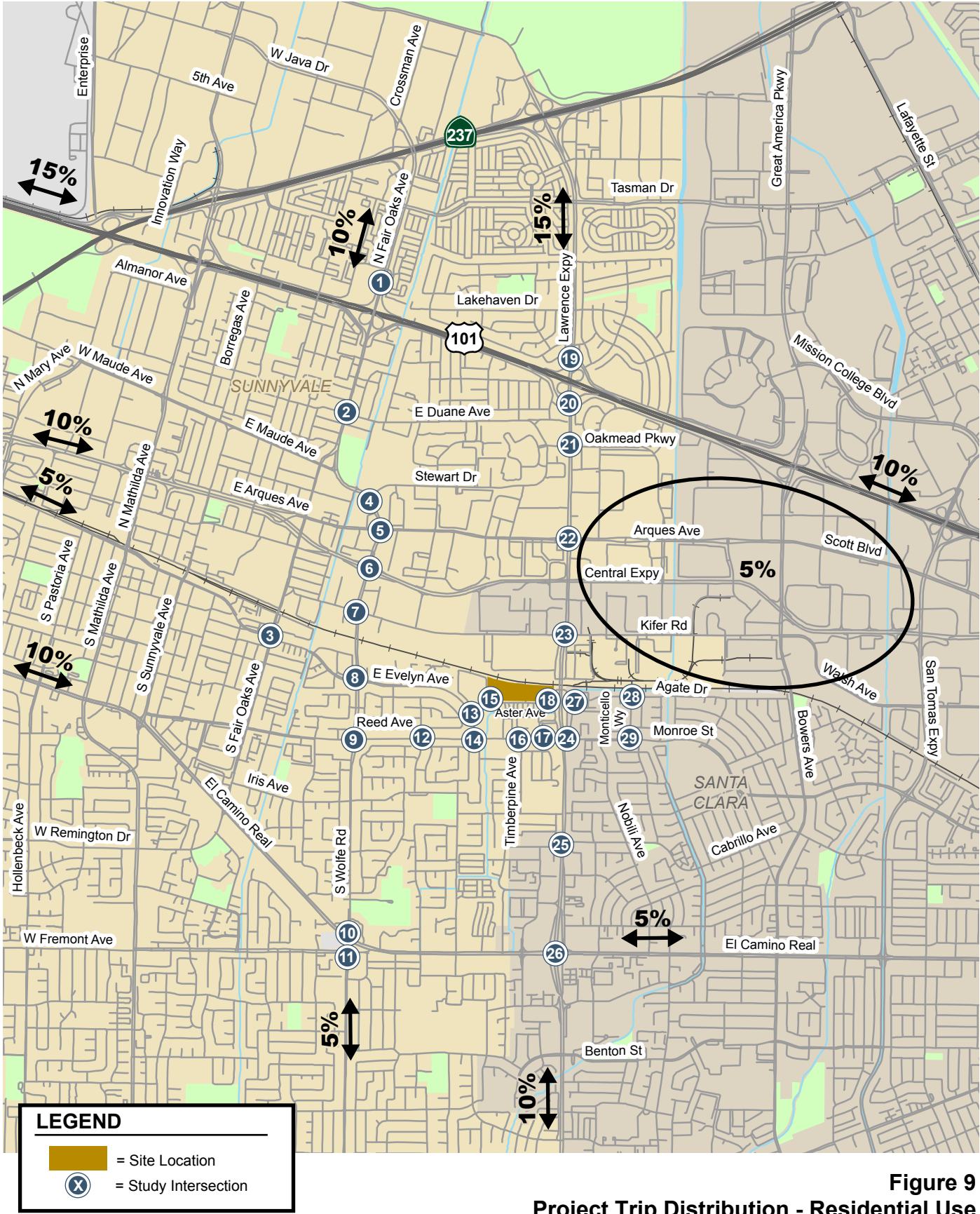
The trip generation for the proposed project is summarized in Table 11.

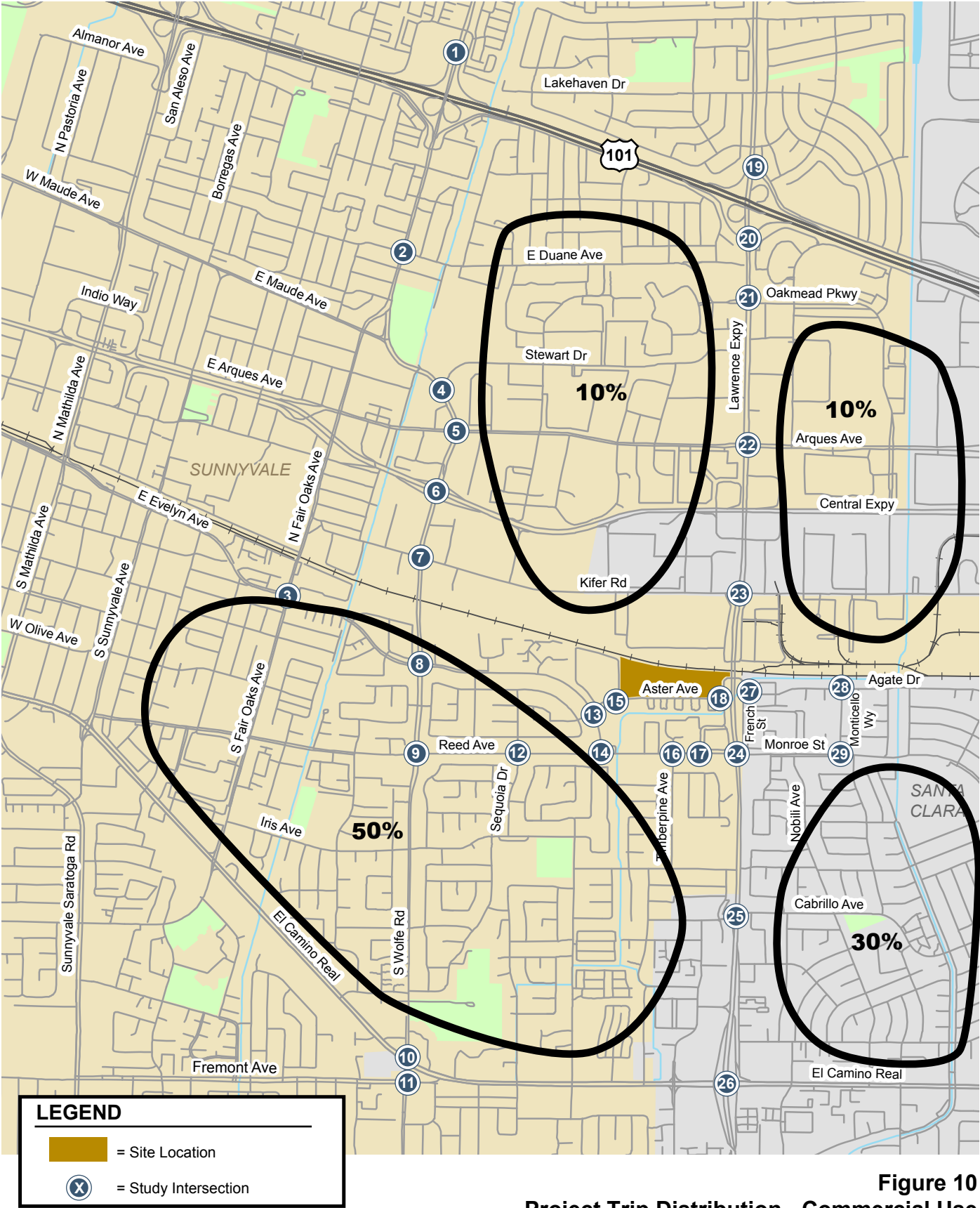
Table 11
Trip Generation Summary

Land Use	Size	Daily		AM Peak Hour			PM Peak Hour				
		Rate ¹	Trips	Rate ¹	In	Out	Total	Rate ¹	In	Out	Total
Proposed											
Residential											
Apartments ²	412 d.u.	5.44	2,241	0.36	38	110	148	0.44	110	71	181
Condominiums ²	189 d.u.	5.44	1028	0.36	18	50	68	0.44	51	32	83
Townhomes ³	140 d.u.	7.32	1025	0.46	15	49	64	0.56	49	29	78
Gross Residential Trips			4,294		71	209	280		210	132	342
Mixed-Use Reduction ⁴			(81)		(11)	(11)	(22)		(4)	(4)	(8)
Transit Reduction ⁵			(386)		(5)	(18)	(23)		(19)	(12)	(31)
Net New Residential Trips			3,827		55	180	235		187	116	303
Commercial											
Coffee Shop ⁶	1,500 s.f.	360	540	101.14	78	74	152	36.31	27	27	54
Mixed-Use Reduction ⁴			(81)		(11)	(11)	(22)		(4)	(4)	(8)
Diverted Linked Reduction ⁷			(138)		(19)	(19)	(38)		(7)	(7)	(14)
Net New Commercial Trips			321		48	44	92		16	16	32
Subtotal Net New Project Trips			4,148		103	224	327		203	132	335
Existing											
Driveway Counts ⁸			(360)		(32)	(27)	(59)		(14)	(22)	(36)
Net Project Trips			3,788		71	197	268		189	110	299
Notes											
d.u. = dwelling units, s.f. = square feet											
¹ Rate expressed in trips per d.u. for the residential units and trips per 1,000 s.f. for the coffee shop.											
² Trip generation rates for the proposed apartments and condominiums are based on the ITE's <i>Trip Generation Manual, 10th Edition</i> average rates published for "Multifamily Housing (Mid-Rise)" (Land Use Code 221).											
³ Trip generation rates for the proposed townhomes are based on the ITE's <i>Trip Generation Manual, 10th Edition</i> average rates published for "Multifamily Housing (Low-Rise)" (Land Use Code 220).											
⁴ As prescribed by the <i>VTA Transportation Impact Analysis Guidelines, 2014</i> , a maximum trip reduction of 15% of the smaller trip generator for mixed-use development projects with housing and retail components was applied to project's trip generation.											
⁵ As prescribed by the <i>VTA Transportation Impact Analysis Guidelines, 2014</i> , a maximum trip reduction of 9% for housing within a 2,000 foot walk of a Caltrain station was applied to proposed residential units. Note that the transit reduction is applied after the mixed-use trip reduction.											
⁶ The peak hour trip generation rates for the proposed coffee shop are based on the ITE's <i>Trip Generation Manual, 10th Edition</i> average rates published for "Coffee/Donut Shop without Drive-Through Window" (Land Use Code 936). The daily trips is derived from the assumption that the PM peak hour represents 10% of the total daily vehicle trips.											
⁷ As prescribed by the <i>VTA Transportation Impact Analysis Guidelines, 2014</i> , a maximum trip reduction of 30% for diverted linked trips was applied to the coffee shop trips. Note that the diverted linked trip reduction is applied after the mixed-use trip reduction.											
⁸ Existing AM and PM peak-hour driveway counts were collected on Thursday, May 17, 2018. The existing daily trips is derived from the assumption that the PM peak hour represents 10% of the total daily vehicle trips.											

Trip Distribution

Trips generated by the proposed project were distributed to the study network based on the existing travel patterns on the surrounding roadway system and the locations of complementary land uses. Residential uses generate mostly outbound trips in the morning and mostly inbound trips in the evening. The majority of the residential project trips would travel via US 101, Lawrence Expressway, and Central Expressway. The coffee shop project trips would have origins and destinations closer to the project site. The trip distribution for the residential use is shown on Figure 9 and for the coffee shop on Figure 10.





Trip Assignment

The project trips were assigned to the roadway network based on the direction of approach and departure, roadway network connections, freeway and expressway access points, and the locations of project driveways. It is assumed that all trips generated by the townhomes would use the western Aster Avenue driveway. All trips generated by the condominiums are assumed to use the eastern Aster Avenue driveway. For the apartment trips, most inbound trips are assumed to use the eastern Aster Avenue driveway. Only the inbound trips on Reed Avenue east of Lawrence Expressway are assumed to use the Willow Avenue driveway. All outbound apartment trips are assumed to use the Willow Avenue driveway as a conservative approach for the intersection analysis at the Willow Avenue and Aster Avenue intersection. For trips generated by the coffee shop, 85% of the inbound trips are assumed to use the eastern Aster Avenue driveway, and the remaining 15% of the inbound trips are assumed to use the Willow Avenue driveway. As a conservative approach, all outbound coffee shop trips are assumed to use the Willow Avenue driveway.

Based on the above assumptions, the net project trips assigned to the three driveways approximately follow the splits identified below:

- The western Aster Avenue driveway is assigned approximately 25% of the inbound and outbound net project trips.
- The eastern Aster Avenue driveway is assigned approximately 70% of the inbound and 10% of the outbound net project trips.
- The Willow Avenue right-in-right-out driveway is assigned approximately 5% of the inbound and 65% of the outbound net project trips.

As discussed above, 30% of the coffee shop trips are assumed as diverted-linked trips. Given the project location and proximity to comparable uses, Hexagon assumed that the diverted-linked trips would all be from trips originally travelling southbound on Evelyn Avenue at the Aster Avenue intersection.

The net project trips at the study intersections is shown on Figure 11.

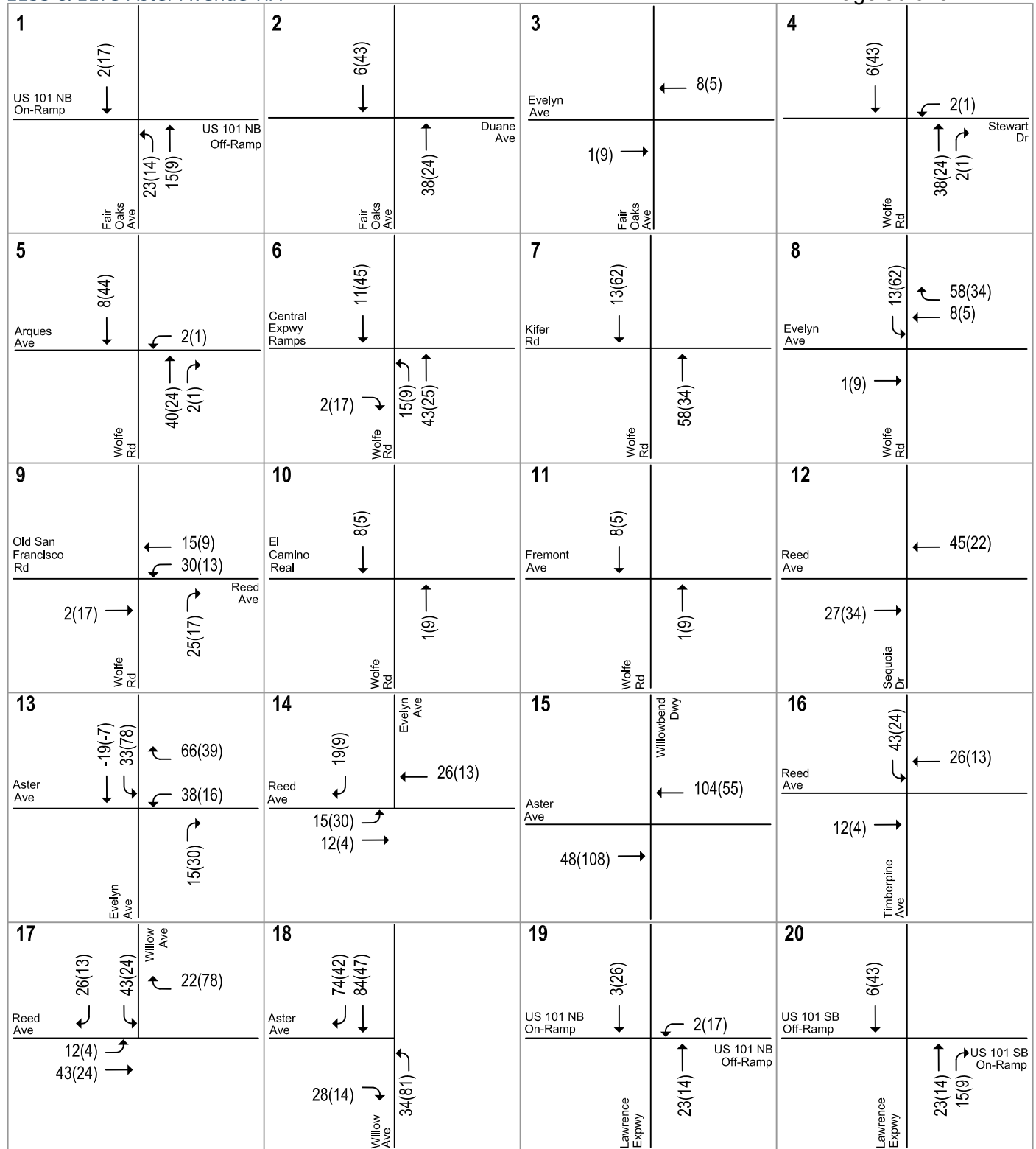
Intersection Traffic Volumes Under Project Conditions

Project impacts were evaluated relative to both (1) existing traffic volumes and (2) background traffic volumes. For the existing plus project scenario, the net new trips generated by the proposed project were added to the existing traffic volumes to derive the existing plus project traffic volumes. Figure 12 shows the intersection turning-movement volumes under existing plus project. For the background plus project scenario, the net new trips generated by the proposed project were added to the background traffic volumes to derive the background plus project traffic volumes. Figure 13 shows the intersection turning-movement volumes under background plus project conditions.

Transportation Network Under Project Conditions

It is assumed in this analysis that the transportation network under existing plus project and background plus project conditions, including roadways and intersection lane configurations, would be the same as that described under existing conditions at all study intersections.

1155 & 1175 Aster Avenue TIA

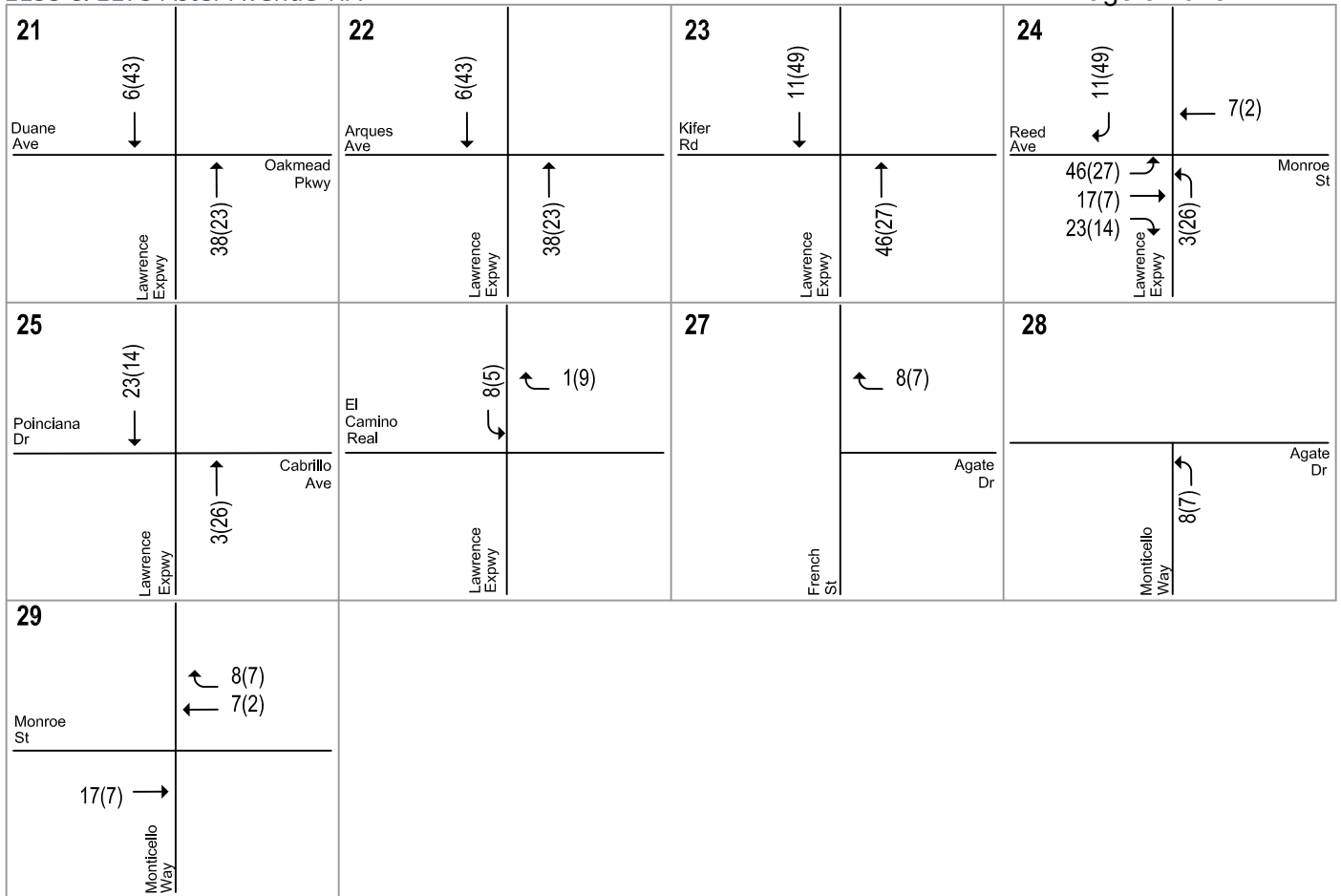


LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

Figure 11
Net Project Trip Assignment

1155 & 1175 Aster Avenue TIA



LEGEND

XX(XX) = AM(PM) Peak-Hour Trips

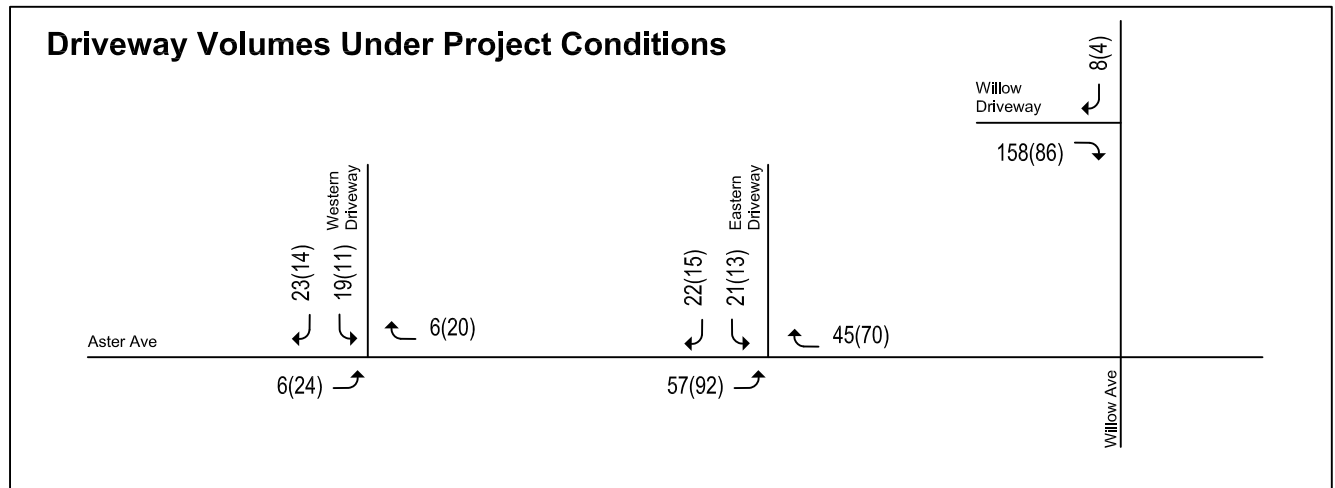
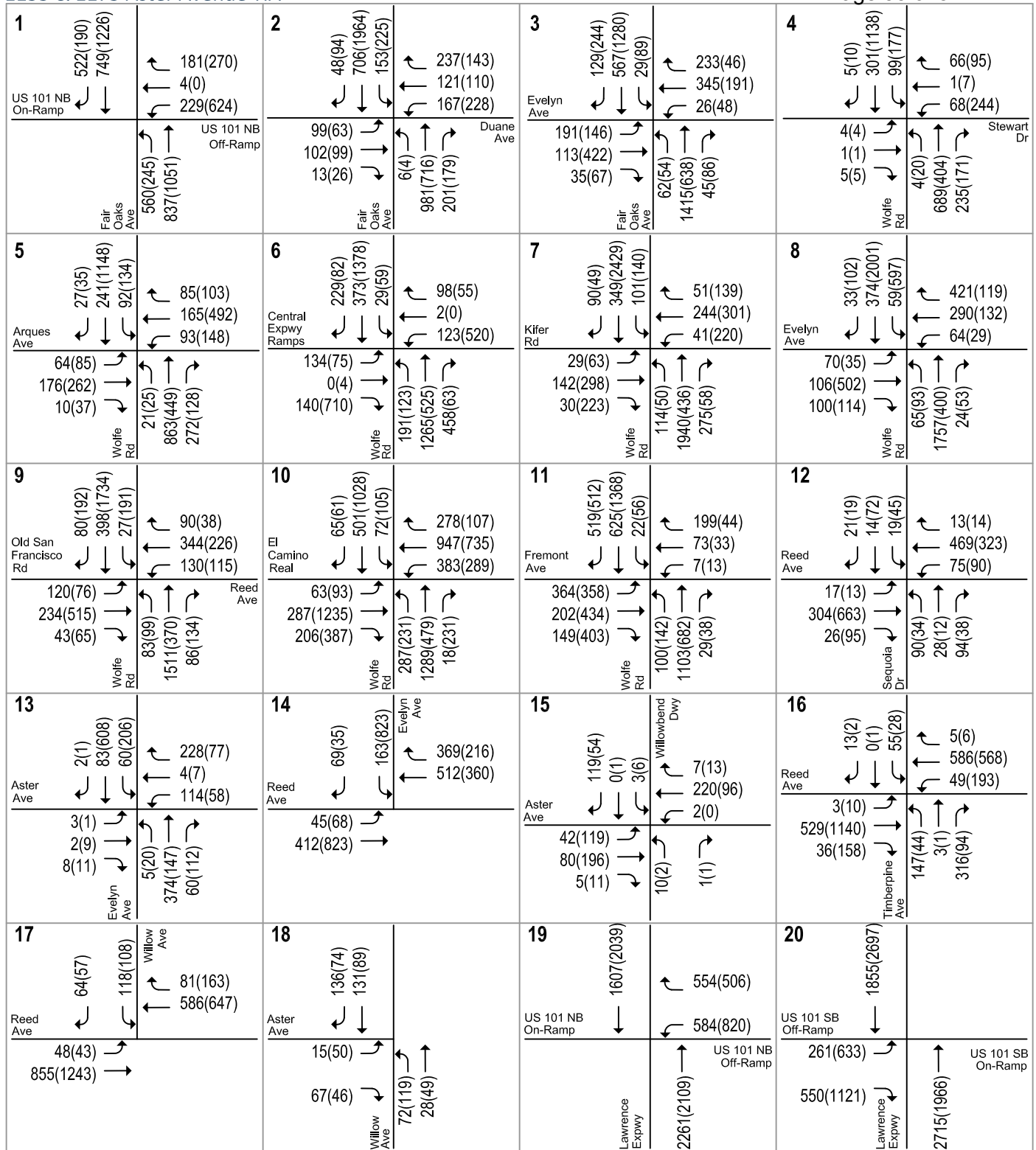


Figure 11
Net Project Trip Assignment

1155 & 1175 Aster Avenue TIA

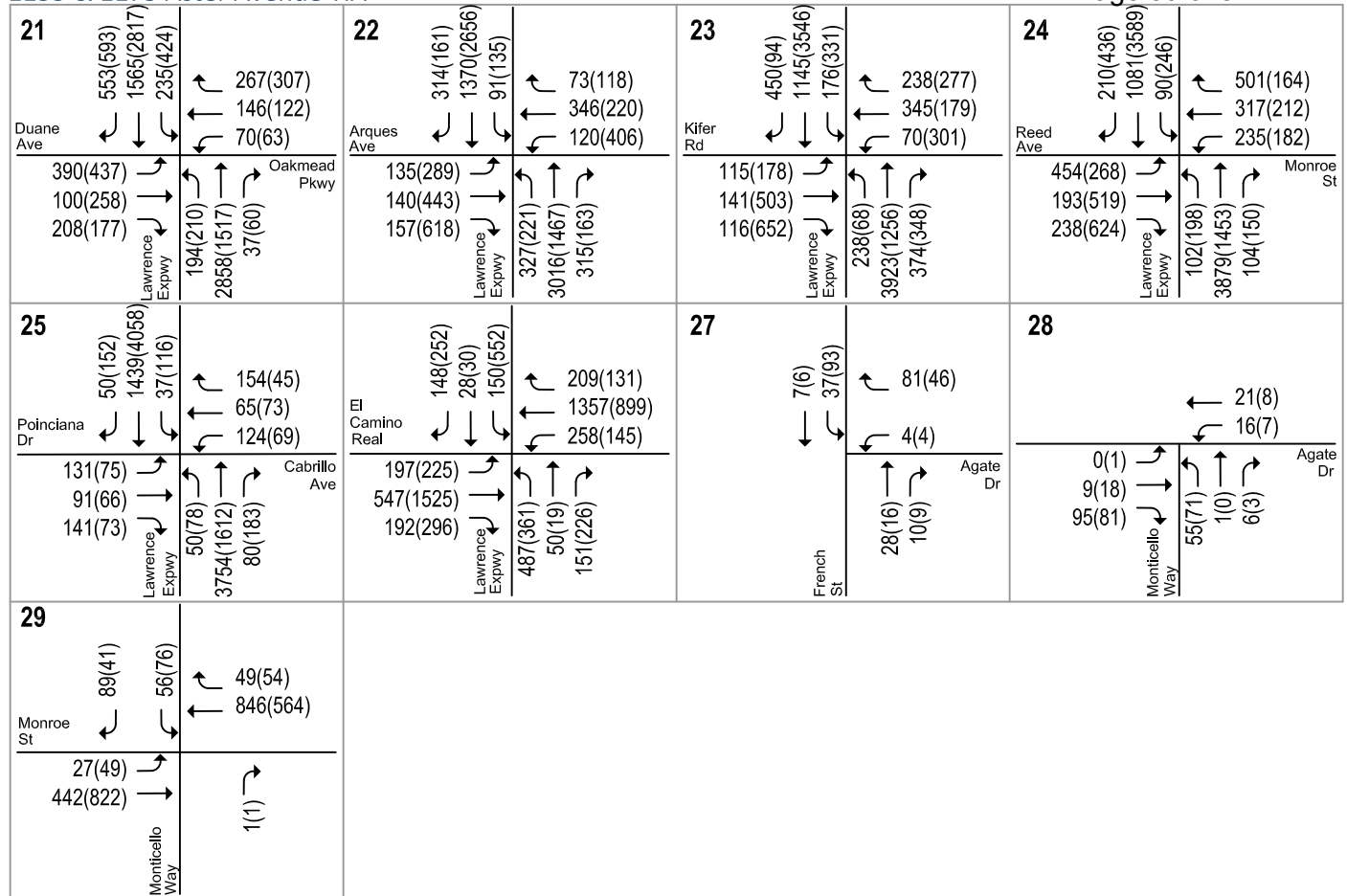


LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 12
Existing Plus Project Traffic Volumes

1155 & 1175 Aster Avenue TIA

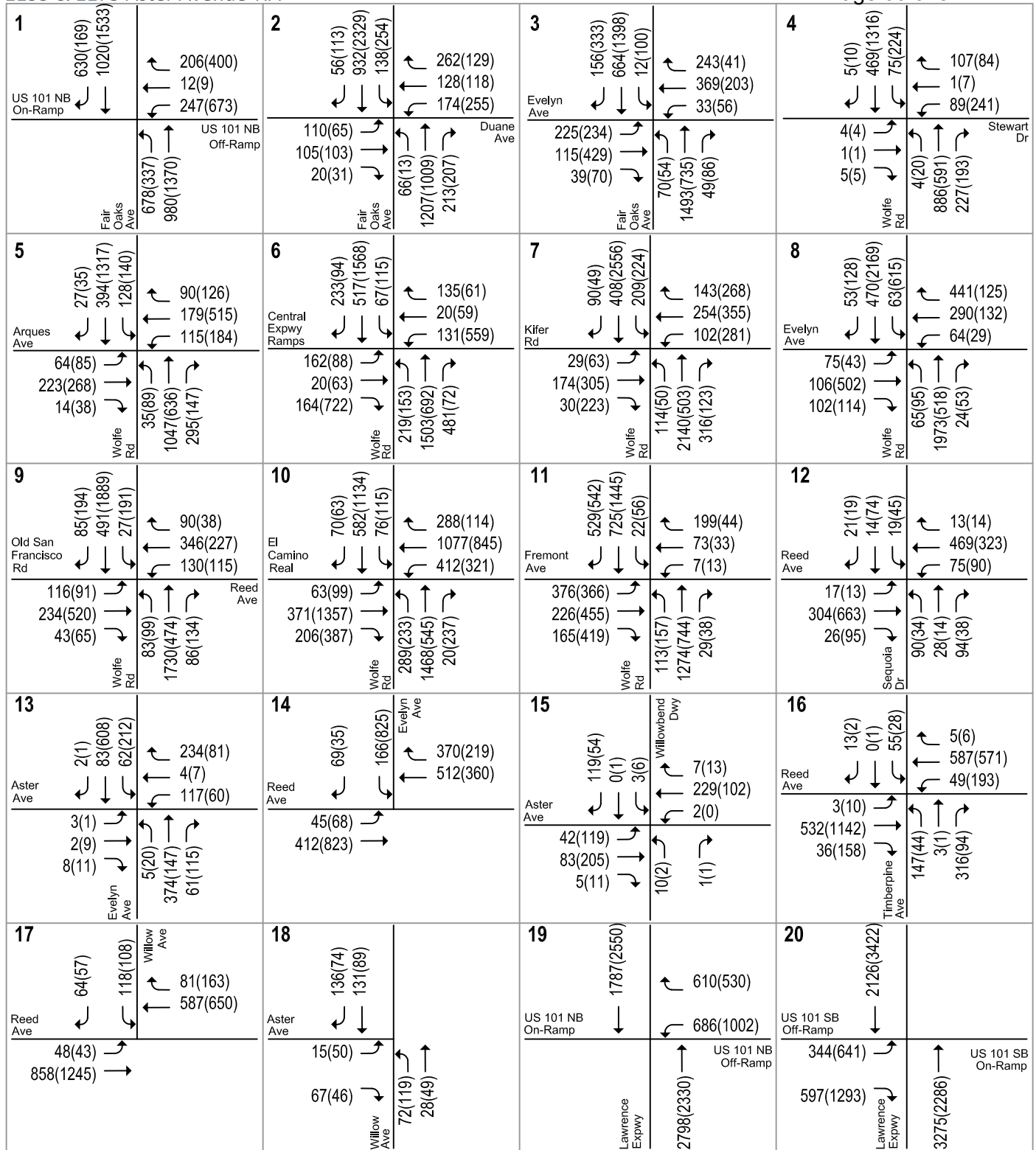


LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 12
Existing Plus Project Traffic Volumes

1155 & 1175 Aster Avenue TIA

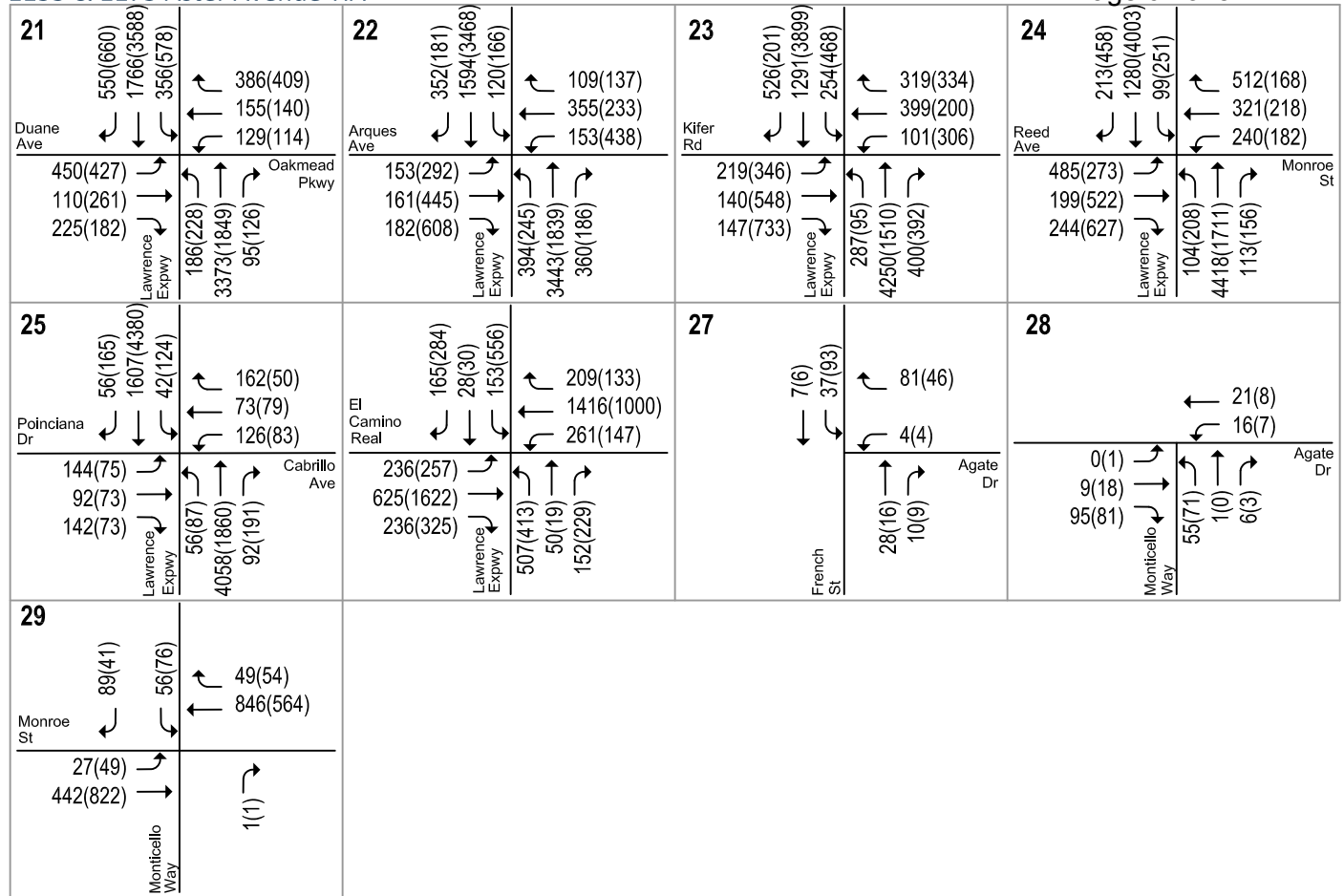


LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 13
Background Plus Project Traffic Volumes

1155 & 1175 Aster Avenue TIA



LEGEND

XX(XX) = AM(PM) Peak-Hour Traffic Volumes

Figure 13
Background Plus Project Traffic Volumes

Existing Plus Project Intersection Level of Service

The results of the intersection level of service analysis under existing plus project conditions are summarized in Table 12 for the signalized study intersections and Table 13 for the unsignalized study intersections. The results of the analysis show that the project would not create a significant impact at any of the signalized study intersections.

The unsignalized intersection of Willow Avenue and Reed Avenue has an intersection level of service threshold of LOS D. Under existing conditions, the LOS would be an acceptable LOS D during the AM peak hour and an unacceptable LOS F during the PM peak hour. The addition of proposed project traffic would deteriorate the intersection to LOS E during the AM peak hour and a worse LOS F during the PM peak hour. For the PM peak hour, the proposed project traffic would cause an increase in critical delay of 33 seconds and an increase in critical v/c ratio of 0.215. Based on City of Sunnyvale significant impact criteria, the project would generate a significant intersection impact at this intersection during both the AM and PM peak hours.

Mitigation strategies are discussed in the follow section.

Table 12
Existing Plus Project Level of Service Summary - Signalized Intersections

ID #	Intersection	Control	LOS Standard	Peak Hour	Existing		Existing Plus Project			
					Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Change in Crit. Delay (sec)	Change in Crit. v/c
1	Fair Oaks Avenue & US 101 NB Ramps	Signal	E	AM PM	29.7 31.3	C C	34.9 32.0	C- C	8.9 0.8	0.016 0.015
2	Fair Oaks Avenue & Duane Avenue	Signal	D	AM PM	36.1 35.7	D+ D+	36.1 35.7	D+ D+	-0.1 -0.1	0.001 0.007
3	Fair Oaks Avenue & Evelyn Avenue	Signal	D	AM PM	46.5 39.5	D D	46.7 39.6	D D	0.2 0.0	0.003 0.002
4	Wolfe Road & Stewart Drive	Signal	D	AM PM	14.5 27.8	B C	14.2 27.6	B C	-0.2 -0.6	0.002 0.006
5	Wolfe Road & Arques Avenue	Signal	D	AM PM	49.4 43.9	D D	49.6 43.5	D D	-0.2 -0.2	0.001 0.010
6	Wolfe Road & Central Expressway Ramps	Signal	E	AM PM	37.4 84.4	D+ F	38.8 85.5	D+ F	5.7 1.5	0.014 0.018
7	Wolfe Road & Kifer Road	Signal	D	AM PM	26.2 36.8	C D+	26.0 37.2	C D+	-0.4 -0.7	0.003 0.007
8	Wolfe Road & Evelyn Avenue	Signal	D	AM PM	34.3 35.8	C- D+	35.9 32.8	D+ C-	2.5 31.1	0.040 -0.154
9	Wolfe Road & Old San Francisco Road/Reed Avenue	Signal	D	AM PM	38.5 41.2	D+ D	39.4 42.0	D D	0.4 0.9	0.010 0.018
10	Wolfe Road & El Camino Real*	Signal	E	AM PM	61.1 43.0	E D	61.0 43.0	E D	0.0 0.1	0.000 0.001
11	Wolfe Road & Fremont Avenue	Signal	D	AM PM	39.7 49.5	D D	39.7 49.4	D D	-0.1 0.1	0.002 0.000
12	Sequoia Drive & Reed Avenue	Signal	D	AM PM	14.2 13.5	B B	14.6 13.5	B B	0.7 0.0	0.037 0.013
13	Evelyn Avenue & Aster Avenue	Signal	D	AM PM	14.1 13.3	B B	15.5 14.7	B B	1.5 3.5	0.093 -0.116
14	Evelyn Avenue & Reed Avenue	Signal	D	AM PM	9.5 12.0	A B+	9.7 12.2	A B	0.1 0.4	0.023 0.024
16	Timberpine Avenue & Reed Avenue	Signal	D	AM PM	20.3 17.6	C+ B	20.2 17.7	C+ B	0.0 -0.1	0.004 0.004
19	Lawrence Expressway & US 101 NB Ramps (County)	Signal	E	AM PM	10.0 13.8	B+ B	10.0 13.8	B+ B	0.0 0.2	0.003 0.006
20	Lawrence Expressway & US 101 SB Ramps (County)	Signal	E	AM PM	6.6 71.5	A E	6.5 70.9	A E	0.0 -1.3	0.003 0.006
21	Lawrence Expressway & Oakmead Parkway/Duane Avenue (County)	Signal	E	AM PM	44.0 53.5	D D-	44.5 53.9	D D-	0.9 0.7	0.006 0.006
22	Lawrence Expressway & Arques Avenue* (County)	Signal	E	AM PM	48.2 68.1	D E	48.6 68.2	D E	0.7 0.3	0.006 0.007
23	Lawrence Expressway & Kifer Road (County)	Signal	E	AM PM	54.4 101.6	D- F	56.8 102.0	E+ F	3.7 -1.0	0.007 0.004
24	Lawrence Expressway & Monroe Street/Reed Avenue* (County)	Signal	E	AM PM	114.8 74.1	F E	116.3 74.0	F E	2.8 3.4	0.016 0.131
25	Lawrence Expressway & Cabrillo Avenue (County)	Signal	E	AM PM	52.1 48.6	D- D	52.0 48.9	D- D	0.2 -0.2	0.001 0.004
26	Lawrence Expressway & El Camino Real Ramps* (SC)	Signal	E	AM PM	34.5 29.9	C- C	34.7 29.9	C- C	0.2 0.1	0.002 0.002
29	Monticello Way & Monroe Street (SC)	Signal	D	AM PM	7.8 5.6	A A	7.7 5.5	A A	-0.1 0.0	0.005 0.002

Notes

* = CMP, SC = Santa Clara, County = County of Santa Clara

Level of service for signal controlled intersection is based on the average intersection delay.

">120" indicates the intersection experiences lengthy delay that is beyond the reasonable calculation range of the HCM 2000 methodology.

BOLD indicates substandard level of service.

Table 13
Existing Plus Project Level of Service Summary - Unsignalized Intersections

Existing Plus Project													
ID #	Intersection	Control	LOS Standard	Peak Hour	Existing				Existing Plus Project				
					Count Date	Avg. Delay (sec)	LOS	Signal Warrant Met ¹	Avg. Delay (sec)	LOS	Change in Crit. Delay (sec)	Change in Crit. v/c	Signal Warrant Met ¹
15	Willowbend Driveway & Aster Avenue	Side Street Stop	D	AM	05/15/18	10.2	B	-	11.1	B	0.9	0.003	-
				PM	05/15/18	10.7	B	-	11.9	B	1.2	0.001	-
17	Willow Avenue & Reed Avenue	Side Street Stop	D	AM	05/15/18	26.2	D	No	43.5	E	17.3	0.282	Yes
				PM	05/15/18	52.6	F	Yes	85.6	F	33.0	0.215	Yes
18	Willow Avenue & Aster Avenue	Side Street Stop	D	AM	05/15/18	9.1	A	-	10.1	B	1.0	0.045	-
				PM	05/15/18	9.6	A	-	11.1	B	1.5	0.044	-
27	French Street & Agate Drive (SC)	All Way Yield	D	AM	05/15/18	5.0	A	-	4.7	A	-	-	-
				PM	05/15/18	7.0	A	-	6.7	A	-	-	-
28	Monticello Way & Agate Drive (SC)	All Way Stop	D	AM	05/15/18	7.2	A	-	7.2	A	-	-	-
				PM	05/15/18	7.2	A	-	7.3	A	-	-	-

Notes

SC = Santa Clara

Level of service for side street stop controlled intersections is based on the delay experienced by the worst movement. Level of service for all way yield and all way stop controlled intersections is based on the average intersection delay.

BOLD indicates substandard level of service.

BOLD and boxed indicates a significant impact.

¹ The CAMUTCD peak-hour signal warrant is checked only if the intersection is operating at an unacceptable level of service.

Existing Plus Project Potential Intersection Mitigation Strategies

Mitigation options were studied for the impacted unsignalized intersection at Willow Avenue and Reed Avenue. It should be noted that the peak-hour signal warrant analysis concluded that a traffic signal is warranted during both the AM and PM peak hours. However, given that the intersection is located within close proximity (less than 500 feet) to a traffic signal in both directions on Reed Avenue (signal at Timberpine Avenue to the west, and Lawrence Expressway to the east), a traffic signal at this intersection could potentially disrupt the traffic flow on Reed Avenue. Further studies should be conducted if the City wants to pursue a traffic signal at the intersection of Willow Avenue and Reed Avenue.

The turning movement that would operate poorly at the Willow Avenue and Reed Avenue intersection is the southbound to eastbound left turn. The project impact could be mitigated by disallowing that left turn movement. Mitigation would require installing a sign restricting left-turns from southbound Willow Avenue onto Reed Avenue during the AM (7-9 AM) and PM (4-6 PM) peak periods. With the proposed left-turn restriction during the peak hours, the intersection at Willow Avenue and Reed Avenue would operate at acceptable levels of service. It is assumed that vehicles on southbound Willow Avenue heading to eastbound Reed Avenue would instead turn right onto westbound Reed Avenue first and then perform a legal U-turn on Reed Avenue west of Willow Avenue. The added westbound U-turns on Reed Avenue would not deteriorate roadway operations, thus the proposed mitigation would not create secondary impacts at other locations. With the proposed mitigation, the project impact at the intersection of Willow Avenue and Reed Avenue would be *less than significant* (see Table 14). The project applicant will be responsible for the cost of the proposed mitigation.

Table 14
Mitigated Existing Plus Project Level of Service Summary

ID #	Intersection	Control	LOS Standard	Peak Hour	Existing		Existing Plus Project		Mitigated Existing Plus Project	
					Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
17	Willow Avenue & Reed Avenue	Side Street Stop	D	AM	26.2	D	43.5	E	11.8	B
				PM	52.6	F	85.6	F	12.0	B
Notes										
Level of service for side street stop intersections is based on the delay experiences by the worst movement.										
BOLD indicates substandard level of service.										
BOLD and boxed indicates a significant impact.										

Background Plus Project Intersection Level of Service and Mitigation Strategy

The results of the intersection level of service analysis under background plus project conditions are summarized in Table 15 for the signalized study intersections and Table 16 for the unsignalized study intersections.

The unsignalized intersection of Willow Avenue and Reed Avenue has an intersection level of service threshold of LOS D. Under background conditions, the LOS for the southbound to eastbound left turn would be an acceptable LOS D during the AM peak hour and an unacceptable LOS F during the PM peak hour. The addition of proposed project traffic would deteriorate the intersection to LOS E during the AM peak hour and a worse LOS F during the PM peak hour. For the PM peak hour, the proposed project traffic would cause an increase in critical delay of 33.7 seconds and an increase in critical v/c ratio of 0.217. Based on City of Sunnyvale impact criteria, the project would generate a significant intersection impact at this intersection during both the AM and PM peak hours under background plus project conditions.

The mitigation strategy at the intersection at Willow Avenue and Reed Avenue under background plus project conditions would be the same as under existing plus project conditions. With the proposed mitigation strategy, the project impact at the unsignalized intersection at Willow Avenue and Reed Avenue under background plus project conditions would be *less than significant* (see Table 17).

Table 15
Background Plus Project Level of Service Summary - Signalized Intersections

ID #	Intersection	Control	LOS Standard	Peak Hour	Background		Background Plus Project			
					Avg. Delay	LOS	Avg. Delay (sec)	LOS	Change in Crit. Delay (sec)	Change in Crit. v/c
1	Fair Oaks Avenue & US 101 NB Ramps	Signal	E	AM	47.2	D	50.9	D	6.1	0.016
				PM	48.8	D	50.6	D	2.1	0.015
2	Fair Oaks Avenue & Duane Avenue	Signal	D	AM	37.4	D+	37.7	D+	0.0	0.001
				PM	39.5	D	39.7	D	0.4	0.007
3	Fair Oaks Avenue & Evelyn Avenue	Signal	D	AM	51.7	D-	51.9	D-	0.3	0.002
				PM	49.9	D	49.9	D	0.0	0.002
4	Wolfe Road & Stewart Drive	Signal	D	AM	13.7	B	13.5	B	-0.2	0.002
				PM	26.8	C	26.7	C	-0.3	0.005
5	Wolfe Road & Arques Avenue	Signal	D	AM	52.0	D-	52.2	D-	-0.1	0.001
				PM	44.5	D	44.2	D	-0.2	0.009
6	Wolfe Road & Central Expressway Ramps	Signal	E	AM	59.3	E+	63.7	E	11.6	0.014
				PM	110.7	F	112.0	F	1.8	0.019
7	Wolfe Road & Kifer Road	Signal	D	AM	36.7	D+	36.6	D+	0.0	0.012
				PM	46.5	D	46.5	D	-1.2	0.007
8	Wolfe Road & Evelyn Avenue	Signal	D	AM	34.4	C-	36.2	D+	2.8	0.040
				PM	34.0	C-	32.3	C-	31.1	-0.164
9	Wolfe Road & Old San Francisco Road/Reed Avenue	Signal	D	AM	37.4	D+	38.3	D+	0.4	0.009
				PM	41.5	D	42.3	D	0.9	0.018
10	Wolfe Road & El Camino Real*	Signal	E	AM	63.3	E	63.3	E	0.0	0.000
				PM	43.9	D	43.9	D	0.0	0.001
11	Wolfe Road & Fremont Avenue	Signal	D	AM	39.9	D	39.9	D	0.0	0.003
				PM	50.8	D	50.7	D	0.0	0.001
12	Sequoia Drive & Reed Avenue	Signal	D	AM	14.2	B	14.6	B	0.7	0.037
				PM	13.5	B	13.5	B	0.0	0.013
13	Evelyn Avenue & Aster Avenue	Signal	D	AM	14.2	B	15.7	B	1.6	0.094
				PM	13.6	B	14.8	B	3.9	-0.096
14	Evelyn Avenue & Reed Avenue	Signal	D	AM	9.5	A	9.7	A	0.1	0.024
				PM	12.0	B	12.2	B	0.3	0.025
16	Timberpine Avenue & Reed Avenue	Signal	D	AM	20.3	C+	20.2	C+	0.0	0.004
				PM	17.6	B	17.7	B	-0.1	0.004
19	Lawrence Expressway & US 101 NB Ramps (County)	Signal	E	AM	10.6	B+	10.6	B+	0.0	0.003
				PM	15.1	B	15.4	B	0.5	0.007
20	Lawrence Expressway & US 101 SB Ramps (County)	Signal	E	AM	7.3	A	7.3	A	-0.1	0.004
				PM	88.9	F	88.2	F	-1.3	0.006
21	Lawrence Expressway & Oakmead Parkway/Duane Avenue (County)	Signal	E	AM	67.4	E	69.4	E	3.6	0.006
				PM	85.2	F	87.4	F	4.5	0.006
22	Lawrence Expressway & Arques Avenue* (County)	Signal	E	AM	59.7	E+	61.1	E	2.5	0.006
				PM	84.3	F	86.4	F	3.6	0.007
23	Lawrence Expressway & Kifer Road (County)	Signal	E	AM	80.8	F	83.4	F	3.9	0.008
				PM	>120	F	>120	F	-1.0	0.004
24	Lawrence Expressway & Monroe Street/Reed Avenue* (County)	Signal	E	AM	>120	F	>120	F	2.8	0.015
				PM	83.8	F	87.1	F	5.6	0.008
25	Lawrence Expressway & Cabrillo Avenue (County)	Signal	E	AM	66.2	E	66.2	E	0.2	0.000
				PM	60.7	E	61.3	E	1.1	0.002
26	Lawrence Expressway & El Camino Real Ramps* (SC)	Signal	E	AM	35.1	D+	35.3	D+	0.2	0.002
				PM	30.9	C	31.0	C	0.1	0.002
29	Monticello Way & Monroe Street (SC)	Signal	D	AM	7.8	A	7.7	A	-0.1	0.005
				PM	5.6	A	5.5	A	0.0	0.002

Notes

* = CMP, SC = Santa Clara, County = County of Santa Clara

Level of service for signal controlled intersection is based on the average intersection delay.

">120" indicates the intersection experiences lengthy delay that is beyond the reasonable calculation range

BOLD indicates substandard level of service.

Table 16
Background Plus Project Level of Service Summary - Unsignalized Intersections

ID #	Intersection	Control	LOS Standard	Peak Hour	Background			Background Plus Project				
					Avg. Delay (sec)	LOS	Signal Warrant Met ¹	Avg. Delay (sec)	LOS	Change in Crit. Delay (sec)	Change in Crit. v/c	Signal Warrant Met ¹
15	Willowbend Driveway & Aster Avenue	Side Street Stop	D	AM	10.3	B	0	11.3	B	1.0	0.003	-
				PM	10.8	B	0	12.3	B	1.5	0.001	-
17	Willow Avenue & Reed Avenue	Side Street Stop	D	AM	26.3	D	No	47.6	E	21.3	0.318	Yes
				PM	53.2	F	Yes	96.5	F	43.3	0.258	Yes
18	Willow Avenue & Aster Avenue	Side Street Stop	D	AM	9.1	A	0	10.1	B	1.0	0.051	-
				PM	9.6	A	0	11.2	B	1.6	0.057	-
27	French Street & Agate Drive (SC)	Side Street Yield	D	AM	9.3	A	0	9.4	A	-	-	-
				PM	9.2	A	0	9.3	A	-	-	-
28	Monticello Way & Agate Drive (SC)	Side Street Stop	D	AM	7.2	A	0	7.2	A	-	-	-
				PM	7.2	A	0	7.3	A	-	-	-

Notes
SC = Santa Clara
Level of service for side street stop and side street yield controlled intersections is based on the delay experiences by
BOLD indicates substandard level of service.
BOLD and boxed indicates a significant impact.

¹ The CAMUTCD peak-hour signal warrant is checked only if the intersection is operating at an unacceptable level of service.

Table 17
Mitigated Background Plus Project Level of Service Summary

ID #	Intersection	Control	LOS Standard	Peak Hour	Background		Background Plus Project		Mitigated Background Plus	
					Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
17	Willow Avenue & Reed Avenue	Side Street Stop	D	AM	26.3	D	43.8	E	11.8	B
				PM	53.2	F	86.9	F	12.0	B

Notes
Level of service for side street stop intersections is based on the delay experiences by the worst movement.
BOLD indicates substandard level of service.
BOLD and boxed indicates a significant impact.

Project Conditions Freeway Analysis

The results of the CMP freeway analysis show that the project generated freeway traffic would not exceed 1%, thus the project freeway impacts would be *less than significant* (see Table 18).

Table 18
Project Conditions Freeway Analysis Summary

Freeway	Dir.	Segment	Peak Hour	Existing Conditions - Mixed Flow Lanes ¹					LOS ²	Project Conditions	
				Avg. Speed (mph)	# of Lanes	Capacity	Density (pc/mi/ln)	Volume		Project Trips	% Capacity
US 101	NB	Great America Parkway On-Ramp to Lawrence Expressway Off-Ramp	AM	16	3	6,900	74.0	3,477	F	3	0.04%
			PM	62	3	6,900	25.6	4,803	C	21	0.30%
US 101	NB	Fair Oaks Avenue On-Ramp to Mathilda Avenue Off-Ramp	AM	26	3	6,900	61.1	4,710	F	27	0.39%
			PM	61	3	6,900	27.4	5,058	D	17	0.25%
US 101	SB	Mathilda Avenue On-Ramp to Fair Oaks Avenue Off-Ramp	AM	62	3	6,900	26.3	4,893	D	5	0.07%
			PM	25	3	6,900	61.5	4,674	F	32	0.46%
US 101	SB	Lawrence Expressway On-Ramp to Bowers Avenue Off-Ramp	AM	58	3	6,900	31.8	5,577	D	18	0.26%
			PM	7	3	6,900	89.9	1,845	F	12	0.17%

Notes:
Dir. = direction, NB = northbound, SB = southbound, mph = miles per hour, pc/mi/ln = passenger cars per mile per lane
¹ Existing freeway conditions information is published in the Santa Clara Valley Transportation Authority (VTA) 2017 CMP Monitoring and Conformance Report.
² The Santa Clara VTA report references the Freeway LOS criteria presented in the *Traffic Level of Service Analysis Guidelines (June 2003)* published by Santa Clara VTA.
BOLD indicates substandard level of service.

Project Conditions Ramp Analysis

Freeway ramp volumes under project conditions were estimated by adding project trips to the existing volumes obtained from Caltrans. The peak hour ramp volumes under existing plus project conditions are shown in Table 19.

The ramp analysis shows that the selected ramps would continue to have sufficient capacity to serve the projected traffic volumes under project conditions.

Table 19
Project Conditions Freeway Ramp Analysis

Interchange	Ramp	Type	Peak Hour	Existing Conditions			Project Conditions		
				Capacity ¹	Peak Volume ²	v/c	Project Trips	Peak Volume	v/c
US101/Fair Oaks Avenue	NB On-Ramp from Fair Oaks Avenue	Diagonal	AM	1,800	1,061	0.59	27	1,088	0.60
			PM	1,800	416	0.23	17	433	0.24
	SB Off-Ramp to SB Fair Oaks Avenue	Diagonal	AM	2,000	363	0.18	5	368	0.18
			PM	2,000	893	0.45	32	925	0.46
US 101/Lawrence Expressway	NB Off-Ramp to Lawrence Expressway	Diagonal	AM	3,800	1,136	0.30	3	1,139	0.30
			PM	3,800	1,309	0.34	21	1,330	0.35
	SB On-Ramp from NB Lawrence Expressway	Diagonal	AM	1,800	709	0.39	18	727	0.40
			PM	1,800	262	0.15	12	274	0.15

Notes:
NB=northbound, SB=southbound, v/c = volume-to-capacity ratio
¹ Ramp capacities were obtained from the Highway Capacity Manual, 2000 (pg 25-4), and considered the free-flow speed, the number of lanes on the ramp, and ramp metering.
² Peak-hour volumes are obtained from Caltrans.
³ As a conservative approach, if an on-ramp has meter equipment present, the ramp is analyzed assuming it is metered.

Potential Project Effects at Lawrence and Central

The project is expected to add traffic to the Lawrence Expressway and Central Expressway square loop ramps. The project is expected to add six trips during the AM peak hour and seven trips during the PM peak hour to the westbound Central Expressway to southbound Lawrence Expressway off-ramp. In addition, the project is expected to add nine AM peak hour trips and four PM peak hour trips to the northbound Lawrence Expressway to eastbound Central Expressway on-ramp. This equates to a range of approximately one vehicle every six to fifteen minutes. As discussed in Chapter 2, the Lawrence Expressway and Central Expressway square loop ramps do not have any existing significant operational issues. The proposed project would add minimal traffic to the Lawrence Expressway and Central Expressway square loop ramps and is not expected to considerably affect the ramp operations.

5. Other Transportation Issues

This chapter presents an analysis of other transportation issues associated with the project, including:

- operation analysis – vehicle queuing and storage at selected intersections
- potential impacts to transit services and pedestrian and bicycle facilities,
- site access and circulation, and
- parking.

Unlike the level of service impact methodology, which is adopted by the City Council, the analyses in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community. Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

Queuing Analysis

The analysis of intersection level of service was supplemented with a queuing analysis for selected movements at the study intersections. Vehicle queues were estimated using a Poisson probability distribution. The operations analysis is based on vehicle queuing for high-demand left-turn movements at intersections where 10 or more project trips per lane were added. This analysis provides a basis for determining whether the addition of project trips would exacerbate peak hour queues and delays, as well as estimating future storage requirements at intersections. For signalized intersections, the estimated queue length was compared to the length of the existing turn pockets. For unsignalized intersections, the estimated queue lengths were compared to the storage space available between the limit line and the upstream intersection.

The queueing analysis is based on vehicle queuing for the twelve movements listed below.

- Northbound left turn at Fair Oaks Avenue and US 101 northbound ramps
- Northbound left turn at Wolfe Road and Central Expressway ramps
- Southbound left turn at Wolfe Road and Evelyn Avenue
- Westbound left turn at Wolfe Road and Old San Francisco Road/Reed Avenue
- Southbound and westbound left turns at Evelyn Avenue and Aster Avenue
- Eastbound left turn at Evelyn Avenue and Reed Avenue
- Southbound left turn at Timberpine Avenue and Reed Avenue
- Southbound left turn at Willow Avenue and Reed Avenue
- Northbound left turn at Willow Avenue and Aster Avenue
- Northbound and eastbound left turns at Lawrence Expressway and Reed Avenue

The queuing results for the background plus project scenario were compared to the background scenario to determine whether the project would cause extensive queuing issues (see Table 20). Under background plus project conditions, left-turn traffic is expected to increase the 95th percentile queue by at least one vehicle for four locations that would operate over capacity under background conditions, thus, creating operational deficiencies. The proposed project would create operational deficiencies at the four locations listed below during at least one peak hour.

- Northbound left turn at Fair Oaks Avenue and US 101 northbound ramps
- Northbound left turn at Wolfe Road and Central Expressway ramps
- Southbound left turn at Wolfe Road and Evelyn Avenue
- Northbound left turn and eastbound left-turn at Lawrence Expressway and Reed Avenue/Monroe Street

Below is a detailed discussion of the above identified locations under background plus project conditions.

Fair Oaks Avenue and US 101 Northbound Ramps

The project is expected to add 23 vehicles during the AM peak hour and 14 vehicles during the PM peak hour onto the northbound left-turn lane under background plus project conditions and would lengthen the 95th percentile queues. Since the 95th percentile queue under background plus project conditions is longer during the AM peak hour (575 feet compared to 350 feet during the PM peak hour), the following discussion is focused on the AM peak hour.

This left-turn movement has one turn lane with a total queue storage space of approximately 260 feet. Under background conditions during the AM peak hour, the 95th percentile queue length would be 550 feet, with the back-of-queue extending out of the turn pocket. Under background plus project conditions, the proposed project would add 23 southbound left-turn vehicles during the AM peak hour, and the 95th percentile queue length would be extended by 25 feet to 575 feet.

There is no room to further extend this left-turn lane. There is no feasible improvement for the identified queuing deficiency.

Wolfe Road and Central Expressway Ramps

The left-turn movement has one turn lane with a total queue storage space of approximately 300 feet. Under background conditions during the AM peak hour, the 95th percentile queue length would be 350 feet, with the back-of-queue extending out of the turn pocket. Under background plus project conditions, the proposed project would add 15 northbound left-turn vehicles during the AM peak hour. The 95th percentile queue length would be extended by 25 feet to 375 feet.

The existing median could be narrowed to extend the northbound left-turn lane to accommodate the background plus project 95th percentile queues. However, narrowing the median would require the removal of several trees.

Wolfe Road and Evelyn Avenue

The project is expected to add 62 vehicles during the PM peak hour to the southbound left-turn movement under background plus project conditions and would lengthen the 95th percentile queue. Under background conditions during the PM peak hour, the 95th percentile queue length would be 450 feet per lane, with the back-of-queue extending out of the turn pocket. Under background plus project conditions, the proposed project would add 62 southbound left-turn vehicles during the PM peak hour. The 95th percentile queue length would be extended by 50 feet per lane to 500 feet per lane.

This left-turn movement has two turn lanes with a total queue storage space of approximately 200 feet of storage per lane. There is no room to further extend these left-turn lanes. There is no feasible improvement for the identified queuing deficiency.

Lawrence Expressway and Monroe Street/Reed Avenue

The project is expected to add 26 vehicles during the PM peak hour to the northbound left-turn movement under background plus project conditions and would lengthen the 95th percentile queue. Under background conditions during the PM peak hour, the 95th percentile queue length would be 375 feet per lane, with the back-of-queue extending out of the turn pocket. Under background plus project conditions, the proposed project would add 26 northbound left-turn vehicles during the PM peak hour. The 95th percentile queue length would be extended by 50 feet to 425 feet.

The project is expected to add 46 vehicles (or 23 vehicles per lane) during the AM peak hour to the eastbound left-turn movement under background plus project conditions and would lengthen the 95th percentile queue. Under background conditions during the AM peak hour, the 95th percentile queue length would be 400 feet per lane, with the back-of-queue extending out of the turn pocket. Under background plus project conditions, the addition of project trips would extend the 95th percentile queue by 50 feet per lane to 450 feet per lane.

The northbound left-turn movement has a total queue storage space of approximately 300 feet. The eastbound left-turn movement has a total queue storage space of approximately 305 feet per lane. There is no room to further extend either left-turn pockets. However, the Sunnyvale Traffic Impact Fee (TIF) identifies an interchange at this location. At the time of this report, the interchange design has not been finalized. It is assumed that the final interchange design would provide adequate queuing space for the left-turn movements. As part of the project, the applicant will be required to pay the Sunnyvale Traffic Impact Fee (TIF), which would constitute the project's fair-share contribution toward the cost of the intersection improvements at Lawrence Expressway and Monroe Street/Reed Avenue.

Table 20
Queuing Analysis Summary

Movement: Peak Hour:	Fair Oaks Avenue and US 101 NB Ramps		Wolfe Road and Central Expressway Ramps		Wolfe Road and Evelyn Avenue		Wolfe Road and Old San Francisco Road	
	NBL	NBL	NBL	NBL	SBL	SBL	WBL	WBL
	AM	PM	AM	PM	AM	PM	AM	PM
Existing								
Cycle/Delay ¹ (sec)	85	95	160	160	160	160	160	160
Volume (vphpl)	537	231	176	114	23	268	100	102
Avg. Queue (veh/ln.)	13	6	8	5	1	12	4	5
Avg. Queue ² (ft./ln)	325	150	200	125	25	300	100	125
95th%. Queue (veh/ln.)	19	10	13	9	3	18	8	8
95th%. Queue ² (ft./ln)	475	250	325	225	75	450	200	200
Storage (ft./ ln.)	260	260	300	300	200	200	300	300
Adequate (Y/N)	N	Y	N	Y	Y	N	Y	Y
Background								
Cycle/Delay ¹ (sec)	85	95	160	160	160	160	160	160
Volume (vphpl)	655	323	204	144	25	277	100	102
Avg. Queue (veh/ln.)	15	9	9	6	1	12	4	5
Avg. Queue ² (ft./ln)	375	225	225	150	25	300	100	125
95th%. Queue (veh/ln.)	22	14	14	11	3	18	8	8
95th%. Queue ² (ft./ln)	550	350	350	275	75	450	200	200
Storage (ft./ ln.)	260	260	300	300	200	200	300	300
Adequate (Y/N)	N	N	N	Y	Y	N	Y	Y
Background Plus Project								
Cycle/Delay ¹ (sec)	85	95	160	160	160	160	160	160
Volume (vphpl)	678	337	219	153	32	308	130	115
Avg. Queue (veh/ln.)	16	9	10	7	1	14	6	5
Avg. Queue ² (ft./ln)	400	225	250	175	25	350	150	125
95th%. Queue (veh/ln.)	23	14	15	11	4	20	10	9
95th%. Queue ² (ft./ln)	575	350	375	275	100	500	250	225
Storage (ft./ ln.)	260	260	300	300	200	200	300	300
Adequate (Y/N)	N	N	N	Y	Y	N	Y	Y
Project Related								
Operational Deficiency?	Yes	No	Yes	No	No	Yes	No	No
Notes:								
¹ Vehicle queue calculations based on cycle length for signalized intersections.								
² Assumes 25 feet per vehicle queued.								

Table 20
Queuing Analysis Summary (Continued)

Movement: Peak Hour:	Evelyn Avenue and Aster Avenue				Evelyn Avenue and Reed Avenue		Timberpine Avenue and Reed Avenue	
	SBL AM	SBL PM	WBL AM	WBL PM	EBL AM	EBL PM	SBL AM	SBL PM
Existing								
Cycle/Delay ¹ (sec)	45	50	45	50	38	46	70	85
Volume (vphpl)	27	128	80	49	30	38	25	7
Avg. Queue (veh./ln.)	0	2	1	1	0	0	0	0
Avg. Queue ² (ft./ln)	0	50	25	25	0	0	0	0
95th%. Queue (veh./ln.)	1	4	3	2	1	2	2	1
95th%. Queue ² (ft./ln)	25	100	75	50	25	50	50	25
Storage (ft./ ln.)	150	150	300	300	150	150	300	300
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y
Background								
Cycle/Delay ¹ (sec)	45	50	45	50	38	46	70	85
Volume (vphpl)	29	134	83	51	30	38	25	7
Avg. Queue (veh./ln.)	0	2	1	1	0	0	0	0
Avg. Queue ² (ft./ln)	0	50	25	25	0	0	0	0
95th%. Queue (veh./ln.)	2	4	3	2	1	2	2	1
95th%. Queue ² (ft./ln)	50	100	75	50	25	50	50	25
Storage (ft./ ln.)	150	150	300	300	150	150	300	300
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y
Background Plus Project								
Cycle/Delay ¹ (sec)	45	50	45	50	38	46	70	85
Volume (vphpl)	62	212	121	67	45	68	68	31
Avg. Queue (veh./ln.)	1	3	2	1	0	1	1	1
Avg. Queue ² (ft./ln)	25	75	50	25	0	25	25	25
95th%. Queue (veh./ln.)	2	6	4	3	2	3	3	2
95th%. Queue ² (ft./ln)	50	150	100	75	50	75	75	50
Storage (ft./ ln.)	150	150	300	300	150	150	300	300
Adequate (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y
Project Related								
Operational Deficiency?	No	No	No	No	No	No	No	No
Notes:								
¹ Vehicle queue calculations based on cycle length for signalized intersections.								
² Assumes 25 feet per vehicle queued.								

Table 20
Queuing Analysis Summary (Continued)

Movement: Peak Hour:	Willow Avenue and Reed Avenue		Willow Avenue and Aster Avenue		Lawrence Expressway and Monroe Street/Reed Avenue			
	SBL AM	SBL PM	NBL AM	NBL PM	NBL AM	NBL PM	EBL AM	EBL PM
Existing								
Cycle/Delay ¹ (sec)	26.2	52.6	7.5	7.4	173	190	173	190
Volume (vphpl)	113	128	38	38	99	172	204	121
Avg. Queue (veh/ln.)	1	2	0	0	5	9	10	6
Avg. Queue ² (ft./ln)	25	50	0	0	125	225	250	150
95th%. Queue (veh/ln.)	3	4	1	1	9	14	15	11
95th%. Queue ² (ft./ln)	75	100	25	25	225	350	375	275
Storage (ft./ ln.)	350	350	350	350	330	330	305	305
Adequate (Y/N)	Y	Y	Y	Y	Y	N	N	Y
Background								
Cycle/Delay ¹ (sec)	26.3	53.2	7.5	7.4	173	190	173	190
Volume (vphpl)	113	128	38	38	101	182	220	123
Avg. Queue (veh/ln.)	1	2	0	0	5	10	11	6
Avg. Queue ² (ft./ln)	25	50	0	0	125	250	275	150
95th%. Queue (veh/ln.)	3	4	1	1	9	15	16	11
95th%. Queue ² (ft./ln)	75	100	25	25	225	375	400	275
Storage (ft./ ln.)	350	350	350	350	330	330	305	305
Adequate (Y/N)	Y	Y	Y	Y	Y	N	N	Y
Background Plus Project								
Cycle/Delay ¹ (sec)	43.8	86.9	7.9	7.8	173	190	173	190
Volume (vphpl)	182	165	72	119	104	208	243	137
Avg. Queue (veh/ln.)	2	4	0	0	5	11	12	7
Avg. Queue ² (ft./ln)	50	100	0	0	125	275	300	175
95th%. Queue (veh/ln.)	5	8	1	1	9	17	18	12
95th%. Queue ² (ft./ln)	125	200	25	25	225	425	450	300
Storage (ft./ ln.)	350	350	350	350	330	330	305	305
Adequate (Y/N)	Y	Y	Y	Y	Y	N	N	Y
Project Related								
Operational Deficiency?	No	No	No	No	No	Yes	Yes	No
Notes:								
¹ Vehicle queue calculations based on cycle length for signalized intersections, and movement delay for unsignalized intersections.								
² Assumes 25 feet per vehicle queued.								

Potential Impacts to Transit Facilities

The project site is located adjacent to the Lawrence Caltrain Station. Under existing conditions, there is not a continuous pedestrian path between the project site and the Lawrence Caltrain Station. The proposed project includes frontage improvements along Willow Avenue and Aster Avenue to connect the sidewalk between the project site and the Lawrence Caltrain Station. Given the project site's proximity to the Caltrain station, it is expected that several future residents would utilize Caltrain. Several trains currently operate at or near capacity. Caltrain has plans to increase the number of trains serving the Lawrence Caltrain station. As part of the Caltrain electrification project, ten more commuter trains are expected to serve the Lawrence Caltrain station. These should provide sufficient capacity to serve the project.

There are also three bus routes plus shuttles that operate in the project vicinity. There probably would be residents of the project that would ride these buses. All routes have sufficient capacity to accommodate additional riders.

Transit Travel Time Impacts

Currently, VTA bus routes 32 and 328 and ACE bus route 822 travel within the project vicinity through some of the study intersections. To assess the transit travel time impacts, the bus route travel times in the study area under background plus project conditions were compared to background conditions. Bus route travel times are estimated using published schedules and adjusted based on delays experienced at study intersection movements. VTA does not have established criteria to determine impact to transit services. Therefore, this analysis is presented for information purposes only.

The results show that there would be minimal changes in transit delay in the study area under the project scenario. For the bus routes in the study area, the project would increase route delay by less than 20 seconds. The proposed project is located within and consistent with the recently-adopted Lawrence Station Area Plan (LSAP), and the cumulative transit related impacts are included in the *Lawrence Station Area-Wide Transportation Plan and Near-Term TIA* report dated for December 18, 2015, prepared by Hexagon Transportation Consultants, Inc. The project is expected to worsen left-turn queuing at three left-turn movements (identified in above section). None of the transit routes would turn left at these three left-turn movements. The results of the transit travel time comparison are summarized in Table 21.

Table 21
Transit Travel Time Delay Analysis

Route	Peak Hour	Existing		Background	Background + Project		
		Travel Time (min)	Delay in the Study Area (sec)	Delay in the Study Area (sec)	Delay in the Study Area (sec)	Change in Delay (sec)	% Change in Travel Time
<u>VTA 32</u>							
Eastbound	AM	60	259.9	259.2	259.5	0.3	0.01%
	PM	70	297.1	298.7	312.3	13.6	0.32%
Westbound	AM	70	230	233.2	236.3	3.1	0.07%
	PM	60	198.5	203.3	202.4	-0.9	-0.02%
<u>VTA 328¹</u>							
Northbound	AM	85	402.9	606.2	620.1	13.9	0.26%
Southbound	PM	80	385.6	562	582.9	20.9	0.42%
<u>ACE 822 (Gray Shuttle)²</u>							
Northbound	PM	35	323.4	368.2	369	0.8	0.04%
Southbound	AM	32	323	441.7	443.7	2.0	0.10%
Notes							
¹ VTA 328 operates with northbound services during the AM peak commute period and southbound services during the PM peak commute period.							
² VTA 328 operates with northbound services during the PM peak commute period and southbound services during the AM peak commute period.							

Potential Impacts to Pedestrian Facilities

The proposed project is expected to generate pedestrian walking trips between the project site and the nearby Lawrence Caltrain Station. As part of the proposed project, sidewalks will be added on the Willow Avenue and Aster Avenue project frontages. This improvement would create a continuous pedestrian path between the project site and the Lawrence Caltrain Station.

Outside of trips to and from the Caltrain station, the project is expected to generate minimal pedestrian traffic to the surrounding area. The closest school to the project site is the Santa Clara Christian School, which is located approximately 3,500 feet from the project site and is not considered within walking distance for school children.

The proposed project would install a crosswalk along the west leg of the Willow Avenue and Aster Avenue intersection. This crosswalk would create a continuous pedestrian route between the project site, Reed Avenue, and Lawrence Expressway. The project also proposes a mid-block crosswalk across Aster Avenue at the western end of the project site. This crosswalk could be used to provide pedestrian/bicycle connectivity to the proposed open space or the on-site bicycle/pedestrian trails. However, mid-block crosswalks should be installed only after an engineering study determining the feasibility of the crosswalk.

Recommendation

The project applicant shall coordinate with City staff to determine the need for a mid-block crosswalk across Aster Avenue at the western end of the project site upon project completion.

Potential Impacts to Bicycle Facilities

Within the immediate project vicinity, bike lanes are present on Aster Avenue, Evelyn Avenue, Wolfe Avenue and Reed Avenue (see Figure 4 in Chapter 2). The project site is located within a residential area, and nearby residential streets carry low traffic volumes and are conducive to bicyclists. Overall, the project site has good connectivity to existing bicycle facilities. The project is located within biking distance of three schools: the Santa Clara Christian School, Adrian Wilcox High School and Ponderosa Elementary School. There are no continuous bicycle facilities connecting the project site to these schools. However, the project proposes bicycle facility improvements along its project frontage. Aster Avenue along the project frontage currently has two five-foot bike lanes. The project proposes to restripe the roadway to widen the bike lanes to six feet and include a four-foot bike buffer, which is an improvement over existing conditions. Willow Avenue currently has no bike lanes along the project frontage. The project proposes to restripe the roadway to include two six-foot bike lanes. The proposed bicycle facility improvements would enhance the bicycle connectivity to the Lawrence Caltrain station.

Site Access and Circulation

The evaluation of site access and circulation is based on the plan set prepared by Studio T Square, dated January 10, 2019. Site access and circulation was reviewed in accordance with generally accepted traffic engineering standards.

Site Access

Vehicular access to the project site would be provided via three driveways. Two driveways would be located along Aster Avenue and one driveway would be located in the northeast corner of the project site along the Willow Avenue frontage. The two Aster Avenue driveways are shown to be 26 feet wide, measured at the throat, and would be full access. The western Aster Avenue driveway would provide direct access to the townhomes and the condominiums. The eastern Aster Avenue driveway would provide direct access to the condominiums, apartments, coffee shop, and two on-site loading zones. The Willow Avenue driveway is shown to be 26 feet wide, measured at the throat, and would be limited to right in/out movements only. The Willow Avenue driveway would provide direct access to the parking garage for the apartments and coffee shop. The eastern project driveway on Aster Avenue is not aligned with the existing driveways to the south. From a traffic operations perspective, it would be preferable if the driveway was aligned. However, because the driveways to the south carry low traffic volumes, it is not expected that the misalignment would cause any operational issues.

Site Distance at the Project Driveways

The project access points should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other roadway users travelling on adjacent roadways. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic and see oncoming pedestrians and bicyclists. Adequate corner sight distance (sight distance triangles) should be provided at all site access points in accordance with City standards.

The Aster Avenue driveways would allow all movements, thus the project traffic exiting these driveways would need to have adequate sight distance in both directions. The speed limit on Aster Avenue is 30 miles per hour. The Caltrans recommended stopping sight distance is 200 feet. Aster Avenue under project conditions would not have roadway curves or on-street parking that would block a driver's view of oncoming traffic 200 feet down the road. The project proposes to preserve some of the trees near the driveways. However, these trees are assumed to have slender trunks and high canopies, and it is anticipated that drivers would be able to see around the trees.

The Willow Avenue driveway would allow only right in/out movements, thus project traffic exiting this driveway would need to have adequate sight distance looking east. The speed limit on Willow Avenue is 25 miles per hour. The Caltrans recommended stopping sight distance is 150 feet. According to the site plan, there would be no tall vegetation or objects that could block a driver's view 150 feet down the road as they exit the project site.

Recommendation

The project applicant shall ensure that there would not be tall vegetation or objects that could block a driver's view 200 feet down the road as they exit the project driveways on Aster Avenue.

Site Driveway Operations

The traffic volumes along Aster Avenue and Willow Avenue are low and should allow the project traffic at the site driveways to experience minimal delays. The proposed project traffic making left-turns into and out of the Aster Avenue driveways may potentially need to wait for a gap in conflicting traffic, however, this is not expected to have an adverse effect on traffic operations. The delays that would be experienced at the Aster Avenue driveways were analyzed in TRAFFIX using the HCM 2000 methodology. The results showed that all inbound and outbound movements at the Aster Avenue driveways would operate with low levels of delay (generally less than ten seconds per vehicle) during the AM and PM peak hours. The Willow Avenue driveway would be limited to right in/out movements, and it is expected that the right-turn out vehicles would experience minimal delays during the AM and PM peak hours. It is estimated that vehicle queues turning into and out of all project driveways would not exceed one vehicle at a time. A two-way left-turn lane has the potential to improve safety by allowing left-turning vehicles to queue outside of the travel lanes while waiting for a sufficient gap in the opposing traffic to turn into their driveways.

Circulation

The drive aisles through the project site, including the parking garages, are shown to be at least 24 feet wide, which would be adequate for two-way vehicle travel. The project site would have two main north-south driveway aisles (one aligned at each of the Aster Avenue driveways) and one main east-west drive aisle (located along the northern project edge and aligned with the Willow Avenue driveway). Entrances to the podium garages for the condos would be adjacent to the eastern north/south drive aisle and the adjacent to the east/west drive aisle. The parking garage for the apartments and coffee shop would be accessible from the east/west drive aisle.

The parking spaces within the parking garages are shown to be 8 feet 6 inches by 18 feet long, which satisfies the City of Sunnyvale standard parking space requirements. The drive aisles are shown to be 24 feet wide which would be adequate to allow two-way traffic and to allow maneuvering in/out of parking spaces. There are dead-end drive aisles within the parking garages for the condos.

Recommendation

It is recommended that the project applicant ensure parking spaces next to the dead-end aisles are provided sufficient turn-around space.

Condominium Parking Garage

The parking garage for the condominiums would include parking stackers. The project applicant should ensure that all car lift spaces are adequately sized to accommodate all passenger car types. Passenger vehicles can have heights up to seven feet, so the lifts need to be able to accommodate this height. Individual two-level car lifts without a pit level would require both spaces to be assigned to the same unit.

Emergency Vehicles, Truck Access and Circulation

All driving aisles on the project site are shown to exceed the minimum 20-foot width requirement for emergency vehicle access and circulation and meet the City standards.

There are two designated shared-use loading zones/trash staging areas located along the northern edge of the project area accessible via the eastern north-south drive aisle. On garbage collection days, trash bins from the condominiums and apartments would be wheeled out to the trash staging areas. Garbage trucks would navigate through the north-south and east-west drive aisle for the townhomes to collect trash from the townhome units. Overall, the site shows adequate access and circulation for garbage and loading trucks.

Recommendation

To minimize potential conflict of use between loading trucks and trash staging at the two shared-use loading/trash staging areas, it is recommended that the trash bins for the condominiums and apartment be placed in the loading zone only on garbage collection day and that they be removed after the garbage has been collected.

Parking

The review of on-site parking is based on the plan set prepared by Studio T Square, dated January 10, 2019, and on the LSAP parking requirements.

Vehicle Parking

The proposed project vehicle parking supply and requirement are summarized in Table 22. The proposed project would provide 1,196 vehicle parking spaces. Based on LSAP parking requirements, the proposed project would be required to provide between 911 and 1,320 vehicle parking spaces. Thus, the project vehicle parking requirement would be satisfied.

Table 22
Proposed Project Vehicle Parking Supply and Requirement

Land Use	Rate	Vehicle Parking Spaces
<u>Proposed</u>		
Townhome Garages	-	280
Condominium Podium Garages	-	304
Apartment/Retail Garage	-	572
Surface Parking	-	40
<i>Total Proposed Vehicle Parking Supply</i>		1,196
<u>LSAP Parking Requirements</u>		
Residential ¹	1.0 - 2.0 per unit	908 - 1,314
Retail	2.0 - 4.0 per 1,000 s.f.	3 - 6
<i>Total Vehicle Parking Spaces Required</i>		911 - 1,320
<u>Notes</u>		
s.f. = square feet		
¹ Required parking varies by number of bedrooms.		
² Proposed parking supply and requirements is based on the plan set prepared by Studio T Square dated January 10, 2019.		

Accessible Parking

Accessible parking stalls shall be provided in accordance with the 2016 California Building Code (CBC) Table 11B-208.2. There are three parking garages located on-site, two for the condominium complexes and one for the apartment complex, each with 146, 158 and 567 parking spaces, respectively. The garages would be required to provide five (one van accessible), six (one van accessible) and 11 (two van accessible) accessible parking spaces, respectively. The project site plan proposes a total of 22 accessible spaces, but the number of spaces provided within the two condominium garages does not meet the CBC requirements. The site plan does not indicate the locations of the van accessible spaces.

Recommendation

Prior to final design, the project applicant shall ensure the adequate number of accessible parking spaces are located within the condominium garages. The project applicant shall also ensure the van accessible spaces are clearly indicated.

Bicycle Parking Requirements

The proposed project bicycle parking supply and requirement are summarized in Table 23. The proposed project would provide 151 long-term bicycle parking spaces and 82 short-term bicycle parking spaces. Based on LSAP parking requirements, the proposed project would be required to provide 45 short-term bicycle parking spaces and 151 long-term bicycle parking spaces. Note that it is assumed that the proposed project would only need to provide bicycle parking spaces for the multifamily units, i.e. the condominiums and apartments, because the proposed townhomes would operate like single family homes. The project site plan does not indicate the locations of the short-term bicycle parking spaces.

Table 23
Proposed Project Bicycle Parking Supply and Requirement

Land Use	Rate	Bicycle Parking	
		Short Term	Long Term
<u>Proposed</u>			
Condominiums	-	26	48
Apartments	-	56	103
<i>Total Proposed Bicycle Parking Supply</i>		82	151
<u>LSAP Parking Requirements</u>			
Residential ²	1.0 long term per 4 units		151
	1.0 short term per 15 units	41	
Retail ^{3,4}	1.0 long term per 30 employees		-
	1.0 short term per 25% of 6,000 s.f.	4	
<i>Total Bicycle Parking Spaces Required</i>		45	- 151
<u>Notes</u>			
s.f. = square feet			
¹ Proposed parking supply and requirements is a based on the plan set prepared by Studio T Square dated November 19, 2018.			
² According to the City's Municipal Code (Section 19.46.150), enclosed garages assigned to one unit is considered one secured bicycle parking space. Thus, since each townhome will have its own garage, long term bicycle spaces need to be provided for the condominiums and apartments.			
³ It is assumed that the coffee shop would have less than 30 employees, thus, no long term bicycle parking spaces would be required.			
⁴ The LSAP notes that the minimum number of short term bicycle spaces in any location should be 2 racks (4 bicycle capacity).			

6. Conclusions

This report presents the results of the transportation impact analysis (TIA) conducted for a residential project proposed on a 16.82-acre site located at 1155 and 1175 Aster Ave in Sunnyvale, California. The project proposes to demolish the existing industrial facilities on-site and construct a residential complex including 412 apartments, 189 condominiums, 140 townhomes, an approximately 2-acre park and a 1,500 square foot (s.f.) coffee shop. Access to the site would be provided via Aster Avenue and Willow Avenue.

This study was conducted for the purpose of identifying the potential near-term traffic impacts related to the proposed development. Because the project is consistent with the recently-adopted Lawrence Station Area Plan (LSAP), potential long-term traffic impacts have already been studied in the *Lawrence Station Area-Wide Transportation Plan and Near-Term TIA* dated December 18, 2015, prepared by Hexagon Transportation Consultants, Inc.

Intersection Level of Service Results

The intersection level of service analysis concluded that based on City of Sunnyvale intersection impact criteria, the project would generate a significant intersection impact at the unsignalized study intersection at Willow Avenue and Reed Avenue during both the AM and PM peak hours.

Mitigation Strategy

Mitigation would require installing a sign restricting left-turns from southbound Willow Avenue onto Reed Avenue during the AM (7-9 AM) and PM (4-6 PM) peak periods. With the proposed left-turn restriction during the peak hours, the intersection at Willow Avenue and Reed Avenue would operate at acceptable levels of service. It is assumed that vehicles on southbound Willow Avenue heading to eastbound Reed Avenue would instead turn right onto westbound Reed Avenue first and then perform a legal U-turn on Reed Avenue west of Willow Avenue. The added westbound U-turns on Reed Avenue would not deteriorate roadways operations, thus the proposed mitigation would not create secondary impacts at other locations. With the proposed mitigation, the project impact at the intersection of Willow Avenue and Reed Avenue would be *less than significant*. The project applicant will be responsible for the cost of the proposed mitigation.

Freeway Impacts

The results of the CMP freeway analysis show that the freeway segments currently operating at acceptable levels of service would continue to operate at acceptable levels of service under project

conditions. For freeway segments currently operating at unacceptable LOS F, the project generated freeway traffic would not exceed 1%, thus the project freeway impacts would be less than significant.

Freeway Ramp Impacts

The results of the ramp analysis show that the study freeway ramps currently have sufficient capacity to service the existing traffic volumes and the ramps would continue to have sufficient capacity to serve the project traffic volumes under project conditions.

Other Transportation Issues

Hexagon conducted a site plan review, queuing analysis, pedestrian, bicycle and transit facility analysis and parking analysis for the proposed project. Our recommendations are listed below.

Recommendations

- The project proposes a mid-block crosswalk across Aster Avenue at the western end of the project site. Mid-block crosswalks should be installed only after an engineering study determining the feasibility of the crosswalk. The project applicant shall coordinate with City staff to determine the need for a mid-block crosswalk across Aster Avenue at the western end of the project site upon project completion.
- The project applicant shall ensure that there would not be tall vegetation or objects that could block a driver's view 200 feet down the road as they exit the project driveways on Aster Avenue.
- The site plan shows multiple dead-end aisles inside the parking garages. The project applicant shall ensure that parking spaces next to the dead-end aisles are provided sufficient turn-around spaces.
- To minimize potential conflict of use between loading trucks and trash staging at the two shared-use loading/trash staging areas, it is recommended that the trash bins for the condominiums and apartment be placed in the loading zone only on garbage collection day and that they be removed after the garbage has been collected.
- The project applicant shall ensure the adequate number of accessible parking spaces are located within the condominium garages. The project applicant shall also ensure the van accessible spaces are clearly indicated.

ATTACHMENT 9 PLACEHOLDER

Please review RTC 18-0259 (LSAP Housing Study Preferred Alternative) by navigating to <https://sunnyvaleca.legistar.com/Calendar.aspx> and choosing the May 14, 2018 Planning Commission meeting.

Plan 2018-2513 File#

for 1155-1175 Aster Ave

Addendum/Consideration

The water use of the industrial that has been in place for 60 yrs! and it is minimal!! (on Aster by RR)

With this outrageous pricing !!?? residential plan for > 100 units!...

Where is the water to come from?? It's not here in Calif!! It's not here at all. We cannot build homes that cannot be supported naturally from rainfall. Modify PLAN!

Stop this OVERBUILDING!
Just because of space, does not equal the resource (ie water) to overbuild or to sustain it!

MODIFY/SIMPLIFY THE PLAN!

LESS
LESS
LESS

SCALE 1" = 1' 11"

For more stamps and collectibles, visit usps.com/stamps

RECONSIDER &

AMEND
AMEND

SAVE HISTORIC Items

OF SUNNYVALE Structures

before CHANGES ?!!!!



City of Sunnyvale

Agenda Item 3

19-0173

Agenda Date: 2/11/2019

REPORT TO PLANNING COMMISSION

SUBJECT

Proposed Project: Related applications on a 0.29-acre site:

DESIGN REVIEW: to allow demolition of the existing home and construct a new two-story single-family home resulting in 5,667 square feet (5,173 square feet living area and 494 square feet garage) and 47.6% floor area ratio (FAR). Project includes a new pool and spa.

Location: 1019 Edmonds Court (APN: 320-12-008)

File #: 2018-7655

Zoning: Low Density Residential (R-1)

Applicant / Owner: Bekom Design, Inc. (applicant) / Alon Matas and Hila Matas-Magen (owner)

Environmental Review: A Class 3 Categorical Exemption relieves this project from California Environmental Quality Act (CEQA) provisions. Class 3(a) Categorical Exemption includes construction of one single-family residence in a residential zoning district.

Project Planner: Kelly Cha, (408) 730-7408, kcha@sunnyvale.ca.gov

REPORT IN BRIEF

General Plan: Low Density Residential (RLO)

Existing Site Conditions: One-Story Single-Family Home

Surrounding Land Uses

North: One-Story Single-Family Home

South: One-Story Single-Family Home

East: One-Story Single-Family Home

West: One-Story Single-Family Home

Issues: Neighborhood Compatibility, Compliance with Single Family Home Design Techniques

Staff Recommendation: Approve the Design Review with the Conditions of Approval in Attachment 4.

BACKGROUND

Description of Proposed Project: The project site is 0.29 acres in size and is currently developed with a single-story single-family home.

The applicant requests to demolish the existing single-story house and construct a new two-story single-family home resulting in 5,996 square feet and 47.6% floor area ratio (FAR). The project includes a new 379-square foot accessory dwelling unit (ADU) incorporated into the second floor.

The proposed project requires Planning Commission review because the proposed gross floor area exceeds 3,600 square feet and the proposed FAR exceeds 45%. See Attachment 1 for a map of the vicinity and mailing area for notices and Attachment 2 for the Project Data Table of the proposed project.

Previous Actions on the Site: Two building permits were issued back in 1971 and in 2011 for minor changes to the existing single-story house. There are no previous Planning applications or active neighborhood preservation complaints on this property.

ENVIRONMENTAL REVIEW

A Class 3 Categorical Exemption relieves this project from California Environmental Quality Act (CEQA) provisions. Class 3(a) Categorical Exemption includes construction of one single-family residence in a residential zoning district.

DISCUSSION

Architecture and Site Layout: The proposed project is a two-story single-family home, which is similar to the ranch homes in the immediate area. The applicant has incorporated a more contemporary aesthetic while maintaining the lines and scale of homes in the vicinity.

The proposed project includes earth-toned stucco throughout with elements of stacked stone to add texture. Dark-colored wood fascia helps visually break up the elevation and the height of the proposed home. The mass and bulk of the home has been minimized with plate height and architectural design to avoid being obtrusive in the predominantly single-story neighborhood.

The project site is a pie-shaped lot in a cul-de-sac. The proposed project generally follows the shape of the lot for the first floor. The second story is angled with increased setbacks that minimize its impact on adjacent properties. The main entrance is setback farther than the garage entrance which is the prevalent pattern on the cul-de-sac lots in this immediate neighborhood because they have narrower front yard.

Accessory Dwelling Unit: The proposed project includes a 379 s.f. accessory dwelling unit (ADU) on its second floor. The ADU will be accessed from exterior stairs in the rear. The entrance to the ADU is directed towards the second-floor balcony, which faces the backyard and pool area. The proposed ADU complies with the requirements and regulations set forth in SMC Section 19.68.040.

Floor Area and Floor Area Ratio: A single-family home proposing a gross floor area greater than 3,600 square feet or a floor area ratio greater than 45% requires Planning Commission Review. The proposed project has a gross floor area of 5,996 square feet, on a 12,605 s.f. lot resulting in 47.6% FAR. It would be the largest house in the immediate vicinity. The next largest home in the neighborhood would be 3,335 square feet at 1026 Earlington Court. The existing gross floor area in the neighborhood ranges from 2,069 square feet to 3,335 square feet, with an average of 2,834 square feet.

Although the proposed project exceeds 3,600 square feet, it is on the largest lot in the area. Most of the lots in the same cul-de-sac are over 12,000 s.f. As well as minimizing plate heights, the proposed architectural style, larger setbacks on the second floor, a well-articulated building façade and a combination of high quality materials help in minimizing the visual impact of the large home.

The proposed second floor is approximately 1,279 square feet, including a 379 s.f. ADU. The second floor is approximately 29% of the first floor, which complies with the Single-Family Home Design Technique Policy on second-to-first floor ratio (35% recommended maximum). Other than windows

required by Building Code for egress/ingress purposes, all windows are facing towards the front or rear of the house to reduce the privacy concerns from neighboring properties on both sides. A well-articulated building façade with accented fascia board, along with the 8-foot second floor plate height, reduces the visual impact of the ADU from the street.

Height: Most of the homes in the immediate neighborhood are single-story with an approximate height of 17 feet to 19 feet. The total height of the proposed two-story project (measured from top of curb to top of ridge) is 26'-3". The applicant proposes plate heights for the first and second-story to be 9 feet and 8 feet to be more compatible with the immediate neighborhood and to alleviate the impact from the second floor.

Development Standards: The proposed project complies with the applicable development standards as set forth in the Sunnyvale Municipal Code (SMC). The Project Data Table for the proposed project can be found in Attachment 2.

Solar Access: SMC Section 19.56.020 states that no permit may be issued for any construction that would interfere with solar access by shading more than 10% of the roof of any structure on a nearby property. The solar analyses for the proposed project illustrates that the proposed project does not affect solar access of the adjacent properties (See Sheets A-0.6 and A-0.7 of Attachment 5).

Landscaping Plan: The proposed project includes a landscaping plan, which includes 9 new trees on the site. The applicant requests to remove all 13 trees, of which one is considered protected. Per City policy on protected tree replacements, the applicant is required to provide one 48-inch box tree, two 36-inch box trees, or four 24-inch box trees in replacement of for the protected tree. The applicant agreed to provide the required size and number of replacement trees (Condition PS-4) as part of the proposed landscaping plan. Also, as conditioned, the landscaping and irrigation plans will comply with the City's Water Efficient Landscaping Ordinance set forth in SMC Chapter 19.37.

Applicable Design Guidelines: The proposed project is consistent with the adopted Single-Family Home Design Techniques. The recommended Findings can be found in Attachment 3.

FISCAL IMPACT

No fiscal impacts other than normal fees and taxes are expected.

PUBLIC CONTACT

As of the date of staff report preparation, staff has received 2 comments from the public. A member of the public visited the One-Stop Permit Center and provided written comments concerning the privacy of the neighbor immediately behind the project site at 1018 Earlington Court. The comment included concerns related to a window in the proposed ADU and the balcony on the second floor, and suggested a line of trees be planted along the rear property line. Another comment letter was sent by e-mail from the proposed project's immediate neighbor. The main concern was the blocked view from the front bedroom of their home by the proposed garage and fence location. Both comments can be found in Attachment 7.

Notice of Public Hearing:

- Published in the *Sun* newspaper
- Posted on the site

- 48 notices mailed to property owners and residents within 300 feet of the project site

Staff Report:

- Posted on the City's website
- Provided at the Reference Section of the City's Public Library

Agenda:

- Posted on the City's website
- Posted on the City's official notice bulletin board

ALTERNATIVES

1. Approve the Design Review with the Conditions of Approval in Attachment 4.
2. Approve the Design Review with modified conditions.
3. Deny the Design Review and provide direction to staff and the applicant where changes should be made.

STAFF RECOMMENDATION

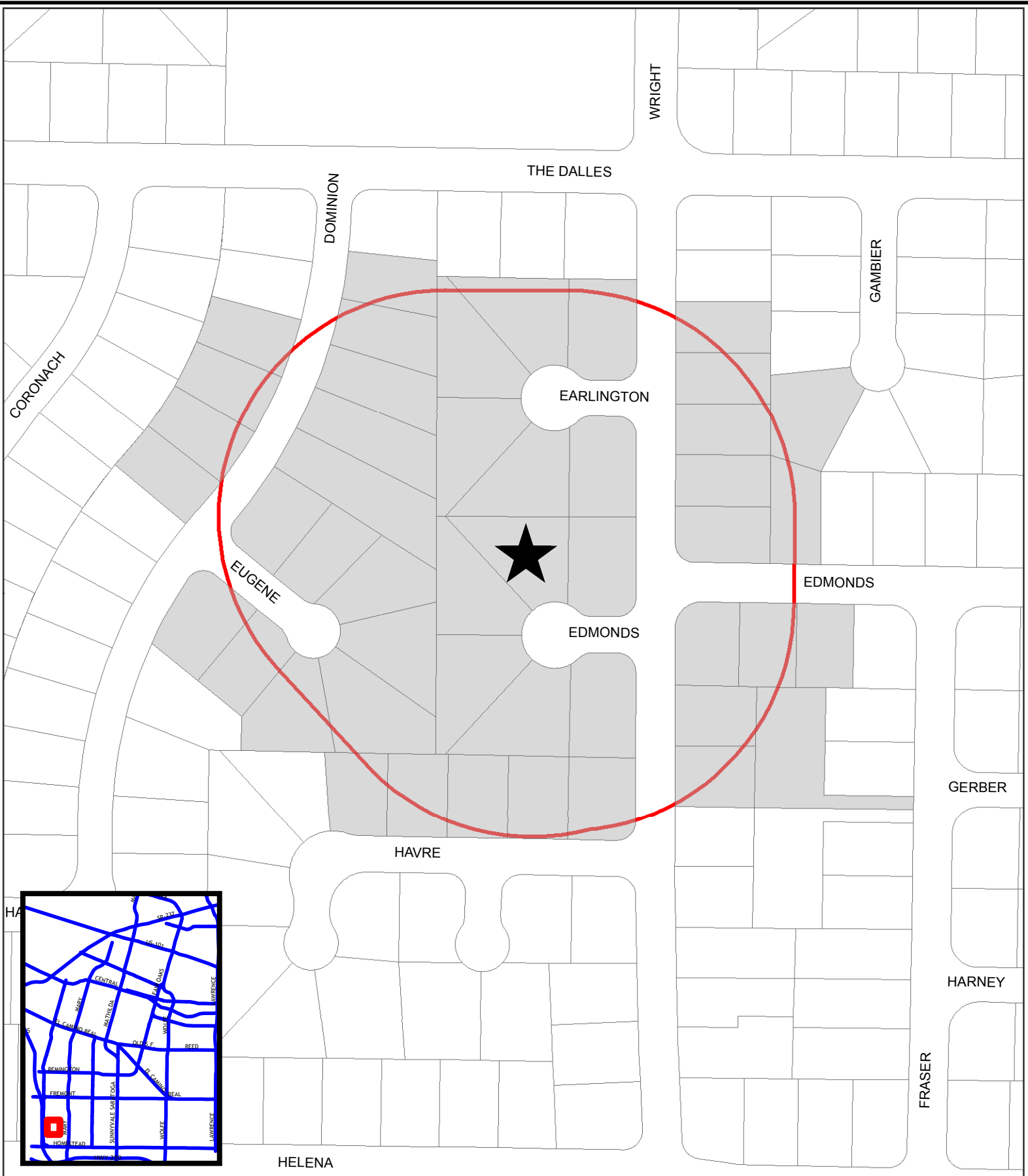
Recommend Alternative 1: Approve the Design Review in accordance with the Findings in Attachment 3 and Conditions of Approval in Attachment 4.

Prepared by: Kelly Cha, Associate Planner

Approved by: Gerri Caruso, Principal Planner

ATTACHMENTS

1. Vicinity and Public Notice Mailing Map
2. Project Data Table
3. Recommended Findings
4. Recommended Conditions of Approval
5. Site and Architectural Plans
6. Arborist Report
7. Neighborhood Comparison Table
8. Public Comments



2018-7655
 1019 Edmonds Court (APN: 320-12-008)
 DESIGN REVIEW
 300-ft Area

0 55 110 220 Feet



PROJECT DATA TABLE

	EXISTING	PROPOSED	REQUIRED/ AS PERMITTED
General Plan	Low Density Residential	Same	-
Zoning District	R-1	Same	-
Lot Size	12,605 s.f.	Same	-
Gross Floor Area	2,375 s.f.	5,996.2 s.f.	3,600 s.f. ¹
Lot Coverage	18.9%	39.9%	40% max.
Floor Area Ratio (FAR)	18.9%	47.6%	45% ¹
Building Height	17'-0"	26'-3"	30' max.
No. of Stories	One	Two	Two max.
Setbacks			
Front			
1st Floor	20'-0"	20'-0"	20' min.
2nd Floor	n/a	28'-4"	25' min.
Left Side			
1st Floor	12'-3"	6'-0"	6' min.
2nd Floor	n/a	9'-0"	9' min.
Right Side			
1st Floor	12'-6"	9'-4"	6' min.
2nd Floor	n/a	32'-6"	9' min.
Combined Side			
1st Floor	24'-9"	15'-4"	15' min.
2nd Floor	n/a	41'-6"	21' min.
Rear			
1st Floor	28'-2"	20'-0"	20' min.
2nd Floor	n/a	45'-6"	20' min.
Parking			
Total Spaces	4	4	4 min.
Covered Spaces	2	2	2 min.

¹ Threshold for Planning Commission Review

RECOMMENDED FINDINGS

Design Review

The proposed project is desirable in that the project's design and architecture conforms with the policies and principles of the Single Family Home Design Techniques.

Basic Design Principle	Comments
<i>2.2.1 Reinforce prevailing neighborhood home orientation and entry patterns</i>	The proposed project has oriented its front entry towards the street with additional setbacks for the garage entrance, which is consistent with the immediate neighboring properties. The architectural style respects the ranch-style character of the immediate neighborhood. Finding met.
<i>2.2.2 Respect the scale, bulk and character of homes in the adjacent neighborhood.</i>	The proposed project will be the only two-story home in the cul-de-sac, and largest home in terms of floor area when it is built. However, the proposed project minimizes the floor plate height for both floors, oriented the house to minimize privacy issues and limited the new second story to less than 35% of the proposed first floor. Although the architecture has a modern feeling, it resonates with the ranch-style architecture of other homes in the cul-de-sac and immediate vicinity. Finding met.
<i>2.2.3 Design homes to respect their immediate neighbors</i>	The proposed project complies with the code requirements related to height and setback and is respectful of the surrounding neighborhood. The proposed project respects the privacy of adjacent neighbors by providing a minimal number of windows that are facing immediately adjacent neighbors. The proposed project minimized the second story floor area to less than 35% of the first floor to minimize the impact to their immediate neighbors. Finding met.
<i>2.2.4 Minimize the visual impacts of parking.</i>	The proposed project meets the minimum required parking of two covered and two uncovered parking spaces with a two-car garage that has an increased setback and is well-integrated into the architecture of the new home. The proposed location of the garage is consistent with the pattern common in the neighborhood. Finding met.
<i>2.2.5 Respect the predominant materials and character of front yard landscaping.</i>	The proposed project plans for landscaping improvements that include new planting, new

Basic Design Principle	Comments
	trees, and decorative paving in the front yard that will improve the streetscape. Finding met.
<i>2.2.6 Use high quality materials and craftsmanship</i>	The applicant proposes to utilize high quality materials (stucco, stacked stones, and asphalt shingle roof) that will complement the architectural style and that are found within the neighborhood. Finding met.
<i>2.2.7 Preserve mature landscaping</i>	The proposed project proposes to remove all 8 trees and landscaping, including one protected tree. However, the proposed project plans to landscape the entire site except for the driveway and walkway and the landscaping plan includes planting 9 trees on the site, and will comply with the number and size of replacement trees per City policy as conditioned. Finding met.

RECOMMENDED
CONDITIONS OF APPROVAL AND
STANDARD DEVELOPMENT REQUIREMENTS
FEBRUARY 11, 2019

Planning Application 2018-7655

1019 Edmonds Court

Demolish an existing home and construct a new two-story, single-family home resulting in 5,996 square feet (5,502 square feet living area and 494 square feet garage) and 47.6% floor area ratio (FAR).

The following Conditions of Approval [COA] and Standard Development Requirements [SDR] apply to the project referenced above. The COAs are specific conditions applicable to the proposed project. The SDRs are items which are codified or adopted by resolution and have been included for ease of reference, they may not be appealed or changed. The COAs and SDRs are grouped under specific headings that relate to the timing of required compliance. Additional language within a condition may further define the timing of required compliance. Applicable mitigation measures are noted with "Mitigation Measure" and placed in the applicable phase of the project.

In addition to complying with all applicable City, County, State and Federal Statutes, Codes, Ordinances, Resolutions and Regulations, Permittee expressly accepts and agrees to comply with the following Conditions of Approval and Standard Development Requirements of this Permit:

GC: THE FOLLOWING GENERAL CONDITIONS AND STANDARD DEVELOPMENT REQUIREMENTS SHALL APPLY TO THE APPROVED PROJECT.

GC-1. CONFORMANCE WITH APPROVED PLANNING APPLICATION:

All building permit drawings and subsequent construction and operation shall substantially conform with the approved planning application, including: drawings/plans, materials samples, building colors, and other items submitted as part of the approved application. Any proposed amendments to the approved plans or Conditions of Approval are subject to review and approval by the City. The Director of Community Development shall determine whether revisions are considered major or minor. Minor changes are subject to review and approval by the Director of Community Development. Major changes are subject to review at a public hearing. [COA] [PLANNING]

GC-2. ENTITLEMENTS—EXERCISE AND EXPIRATION:

The approved entitlements shall be null and void two years from the date of approval by the final review authority if the approval is not

exercised, unless a written request for an extension is received prior to the expiration date and is approved by the Director of Community Development. [SDR] (PLANNING)

GC-3. ENTITLEMENTS—DISCONTINUANCE AND EXPIRATION:

The entitlements shall expire if discontinued for a period of one year or more. [SDR] (PLANNING)

GC-4. INDEMNITY:

The applicant/developer shall defend, indemnify, and hold harmless the City, or any of its boards, commissions, agents, officers, and employees (collectively, "City") from any claim, action, or proceeding against the City to attack, set aside, void, or annul, the approval of the project when such claim, action, or proceeding is brought within the time period provided for in applicable state and/or local statutes. The City shall promptly notify the developer of any such claim, action or proceeding. The City shall have the option of coordinating the defense. Nothing contained in this condition shall prohibit the City from participating in a defense of any claim, action, or proceeding if the City bears its own attorney's fees and costs, and the City defends the action in good faith. [COA] [OFFICE OF THE CITY ATTORNEY]

GC-5. NOTICE OF FEES PROTEST:

As required by California Government Code Section 66020, the project applicant is hereby notified that the 90-day period has begun as of the date of the approval of this application, in which the applicant may protest any fees, dedications, reservations, or other exactions imposed by the city as part of the approval or as a condition of approval of this development. The fees, dedications, reservations, or other exactions are described in the approved plans, conditions of approval, and/or adopted city impact fee schedule. [SDR] [PLANNING / OCA]

<p>PS: THE FOLLOWING CONDITIONS SHALL BE MET PRIOR TO SUBMITTAL OF BUILDING PERMIT, AND/OR GRADING PERMIT.</p>

PS-1. EXTERIOR MATERIALS REVIEW:

Final exterior building materials and color scheme are subject to review and approval by the Planning Commission prior to submittal of a building permit. [COA] [PLANNING]

PS-2. OWNER-OCCUPANCY DEED RESTRICTION:

Prior to submittal of Building Permit, a Conformed Copy of a deed restriction stating that either the accessory dwelling unit or the primary

dwelling unit shall be owner-occupied from the date of recordation. The dwelling unit not owner-occupied may be rented. [COA] [PLANNING]

PS-3. TRAFFIC IMPACT FEE:

A Transportation Impact Fee shall be required to be paid prior to building permit issuance. [COA] [PLANNING]

PS-4. REPLACEMENT TREES:

Prior to submittal of Building Permit, a revised landscaping plan shall be submitted. The revised landscaping plan shall include sizes and locations of the required replacement trees, along with other trees and landscaping elements proposed on the project site. For one protected tree removal, the applicant is required to plant (a) one 48-inch box tree, (b) two 36-inch box trees, or (c) four 24-inch box trees.

BP: THE FOLLOWING CONDITIONS SHALL BE ADDRESSED ON THE CONSTRUCTION PLANS SUBMITTED FOR ANY DEMOLITION PERMIT, BUILDING PERMIT, GRADING PERMIT, AND/OR ENCROACHMENT PERMIT AND SHALL BE MET PRIOR TO THE ISSUANCE OF SAID PERMIT(S).

BP-1. CONDITIONS OF APPROVAL:

Final plans shall include all Conditions of Approval included as part of the approved application starting on sheet 2 of the plans. [COA] [PLANNING]

BP-2. RESPONSE TO CONDITIONS OF APPROVAL:

A written response indicating how each condition has or will be addressed shall accompany the building permit set of plans. [COA] [PLANNING]

BP-3. NOTICE OF CONDITIONS OF APPROVAL:

A Notice of Conditions of Approval shall be filed in the official records of the County of Santa Clara and provide proof of such recordation to the City prior to issuance of any City permit, allowed use of the property, or Final Map, as applicable. The Notice of Conditions of Approval shall be prepared by the Planning Division and shall include a description of the subject property, the Planning Application number, attached conditions of approval and any accompanying subdivision or parcel map, including book and page and recorded document number, if any, and be signed and notarized by each property owner of record.

For purposes of determining the record owner of the property, the applicant shall provide the City with evidence in the form of a report from a title insurance company indicating that the record owner(s) are the person(s) who have signed the Notice of Conditions of Approval. [COA] [PLANNING]

BP-4. BLUEPRINT FOR A CLEAN BAY:

The building permit plans shall include a "Blueprint for a Clean Bay" on one full sized sheet of the plans. [SDR] [PLANNING]

BP-5. TREE PROTECTION PLAN:

Prior to issuance of a Demolition Permit, a Grading Permit or a Building Permit, whichever occurs first, obtain approval of a tree protection plan from the Director of Community Development. Two copies are required to be submitted for review. The tree protection plan shall include measures noted in Title 19 of the Sunnyvale Municipal Code and at a minimum:

- a) An inventory shall be taken of all existing trees on the plan including the valuation of all 'protected trees' by a certified arborist, using the latest version of the "Guide for Plant Appraisal" published by the International Society of Arboriculture (ISA).
- b) All existing (non-orchard) trees on the plans, showing size and varieties, and clearly specify which are to be retained.
- c) Provide fencing around the drip line of the trees that are to be saved and ensure that no construction debris or equipment is stored within the fenced area during the course of demolition and construction.
- d) The tree protection plan shall be installed prior to issuance of any Building or Grading Permits, subject to the on-site inspection and approval by the City Arborist and shall be maintained in place during the duration of construction and shall be added to any subsequent building permit plans. [COA] [PLANNING/CITY ARBORIST]

BP-6. BEST MANAGEMENT PRACTICES - STORMWATER:

The project shall comply with the following source control measures as outlined in the BMP Guidance Manual and SMC 12.60.220. Best management practices shall be identified on the building permit set of plans and shall be subject to review and approval by the Director of Public Works:

- a) Storm drain stenciling. The stencil is available from the City's Environmental Division Public Outreach Program, which may be reached by calling (408) 730-7738.

-
- b) Landscaping that minimizes irrigation and runoff, promotes surface infiltration where possible, minimizes the use of pesticides and fertilizers, and incorporates appropriate sustainable landscaping practices and programs such as Bay-Friendly Landscaping.
 - c) Appropriate covers, drains, and storage precautions for outdoor material storage areas, loading docks, repair/maintenance bays, and fueling areas.
 - d) Covered trash, food waste, and compactor enclosures.
 - e) Plumbing of the following discharges to the sanitary sewer, subject to the local sanitary sewer agency's authority and standards:
 - i) Discharges from indoor floor mat/equipment/hood filter wash racks or covered outdoor wash racks for restaurants.
 - ii) Dumpster drips from covered trash and food compactor enclosures.
 - iii) Discharges from outdoor covered wash areas for vehicles, equipment, and accessories.
 - iv) Swimming pool water, spa/hot tub, water feature and fountain discharges if discharge to onsite vegetated areas is not a feasible option.
 - v) Fire sprinkler test water, if discharge to onsite vegetated areas is not a feasible option. [SDR] [PLANNING]

BP-7. CONSTRUCTION MATERIAL AND STAGING:

All construction related materials, equipment, and construction workers' parking need to be managed on-site and not located in the public right-of-way or public easements. [COA] [PUBLIC WORKS]

PF: THE FOLLOWING CONDITIONS SHALL BE ADDRESSED ON THE CONSTRUCTION PLANS AND/OR SHALL BE MET PRIOR TO RELEASE OF UTILITIES OR ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

PF-1. LANDSCAPING AND IRRIGATION:

All landscaping and irrigation as contained in the approved building permit plan shall be installed prior to occupancy. [COA] [PLANNING]

DC: THE FOLLOWING CONDITIONS SHALL BE COMPLIED WITH AT ALL TIMES DURING THE CONSTRUCTION PHASE OF THE PROJECT.

DC-1. BLUEPRINT FOR A CLEAN BAY:

The project shall be in compliance with stormwater best management practices for general construction activity until the project is completed and either final occupancy has been granted. [SDR] [PLANNING]

DC-2. TREE PROTECTION:

All tree protection shall be maintained, as indicated in the tree protection plan, until construction has been completed and the installation of landscaping has begun. [COA] [PLANNING]

DC-3. CLIMATE ACTION PLAN – OFF ROAD EQUIPMENT REQUIREMENT:

OR 2.1: Idling times will be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations [CCR]), or less. Clear signage will be provided at all access points to remind construction workers of idling restrictions.

OR 2.2: Construction equipment must be maintained per manufacturer's specifications.

OR 2.3: Planning and Building staff will work with project applicants to limit GHG emissions from construction equipment by selecting one of the following measures, at a minimum, as appropriate to the construction project:

- a) Substitute electrified or hybrid equipment for diesel- and gasoline-powered equipment where practical.
- b) Use alternatively fueled construction equipment on-site, where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane, or biodiesel.
- c) Avoid the use of on-site generators by connecting to grid electricity or utilizing solar-powered equipment.
- d) Limit heavy-duty equipment idling time to a period of 3 minutes or less, exceeding CARB regulation minimum requirements of 5 minutes. [COA] [PLANNING]

DC-4. DUST CONTROL:

At all times, the Bay Area Air Quality Management District's CEQA Guidelines and "Basic Construction Mitigation Measures Recommended for All Proposed Projects", shall be implemented. [COA] [PLANNING]

PROJECT ADDRESS: 1019 EDMONDS CT SUNNYVALE, CA 94087
APN: 320-120-08

BUILDING OCCUPANCY GROUP: R-3/U
TYPE OF CONSTRUCTION: VB
NUMBER OF DWELLING UNITS: 1
STORIES : 2
COVERED PARKING SPACES: 2
UNCOVERED PARKING SPACES: 2
LOT SIZE: 12,605 SQ.FT

MAX FAR ALLOWED:
12,605 SQ.FT. X 45% = 5,672.25 SQ.FT.

PROPOSED FLOOR AREA (SEE SHEET A-0.5):

LIVING FLOOR AREA
FIRST FLOOR: 3890.71 SQ. FT.
SECOND FLOOR: 900.66 SQ. FT.
SECOND FLOOR ADU: 378.72 SQ. FT.
LIVING FLOOR AREA TOTAL: 5,170.10 SQ. FT.
GARAGE: 494.16 SQ. FT.

TOTAL PROPOSED FLOOR AREA 5,996.2 SQ.FT. (47.57%)

MAX LOT COVERAGE ALLOWED:
12,605 SQ.FT. X 45% = 5,672.25 SQ.FT.

PROPOSED LOT COVERAGE (SEE SHEET A-0.5):
FIRST FLOOR FOOTPRINT 4384.88 SQ. FT.
COVERED PORCH 28.65 SQ. FT.
POOL EQUIPMENT 103.68 SQ. FT.
SHED 107.74 SQ. FT.
COVERED PATIO 331.94 SQ. FT.
EXTERIOR STAIRS 84.42
TOTAL PROPOSED LOT COVERAGE 5,041.31 (39.99%)

SCOPE OF WORK:

- (E) SINGLE FAMILY HOUSE TO BE DEMOLISHED
- (N) TWO STORY SINGLE FAMILY HOUSE WITH (N) POOL
- SECOND FLOOR ADU WITH EXTERIOR STAIRS
- AUTOMATIC SPRINKLERS: FIRE SPRINKLERS REQUIRED NFPA 13D AND STATE AND LOCAL REQUIREMENTS, SEE CRC 2016 SEC R313.2

DEFERED ITEM:

- POOL AND SPA BUILDING PERMIT SHALL BE SUBMITTED SEPERATELY
- FIRE SPRINKLER SYSTEM SHALL BE SUBMITTED AND APPROVED UNDER A SEPERATE PERMIT
- GLASS RAILING SYSTEMS
- ROOF AND FLOOR TRUSSES

NOTE: DEFERRED SUBMITTAL ITEMS AND RELATED SHOP DRAWINGS, SHALL BE APPROVED BY ENGINEER OF RECORD AND BUILDING DEPARTMENT PRIOR TO ORDERING

APPLICABLE CODES:

- ALL WORK DESCRIBED HEREIN SHALL COMPLY WITH THE LATEST BUILDING CONSTRUCTION CODES AS ADOPTED OR AMENDED BY THE STATE OF CALIFORNIA AND THE CITY OF SUNNYVALE.
 - CALIFORNIA RESIDENTIAL CODE 2016 (CRC)
 - CALIFORNIA BUILDING CODE 2016 (CBC)
 - CALIFORNIA MECHANICAL CODE 2016 (CMC)
 - CALIFORNIA PLUMBING CODE 2016 (CPC)
 - CALIFORNIA ELECTRICAL CODE 2016 (CEC)
 - TITLE 24 ENERGY REGULATIONS 2016
 - CALIFORNIA FIRE CODE 2016 (CFC)
 - CALIFORNIA GREEN BUILDING CODE 2016
 - SUNNYVALE MUNICIPAL CODE (SMC)
 - TITLE 19 CALIFORNIA CODE OF REGULATIONS
 - SUNNYVALE FIRE PREVENTION PROCEDURES/ REQUIREMENTS
- An approved automatic fire sprinkler system required, designed and installed in accordance with NFPA 13D is required throughout each structure.

1 PROJECT INFORMATION.



2 PARCEL AND VICINITY MAPS

SHEET INDEX

#	Sheet Number	Sheet Name
1	A-0.00	COVER SHEET
2	TS-1	TOPOGRAPHIC SURVEY
3	A-0.1	NOTES
4	A-0.3	SITE PLAN
5	A-0.4	NEIGHBORHOOD COMPATIBILITY PHOTOS
6	A-0.5	SQUARE FOOTAGE DIAGRAMS
7	A-0.6	SOLAR ACCESS AND SHADOW ANALYSIS
8	A-0.7	SOLAR ACCESS AND SHADOW ANALYSIS
9	A-0.8	LANDSCAPE PLAN
10	A-0.9	DEMOLITION PLAN
11	A-0.10	CAL GREEN
12	A-0.11	ARBORIST REPORT
13	A-0.12	ARBORIST REPORT
14	A-1.0	PROPOSED FIRST FLOOR PLAN
15	A-1.1	PROPOSED SECOND FLOOR PLAN
16	A-2.0	PROPOSED ROOF PLAN
17	A-3.0	PROPOSED ELEVATIONS
18	A-3.1	PROPOSED ELEVATIONS
19	A-3.2	PROPOSED ELEVATIONS
20	A-3.3	PROPOSED ELEVATIONS
21	A-3.4	PROPOSED ELEVATIONS
22	A-4.0	BUILDING SECTIONS
23	A-4.1	BUILDING SECTIONS

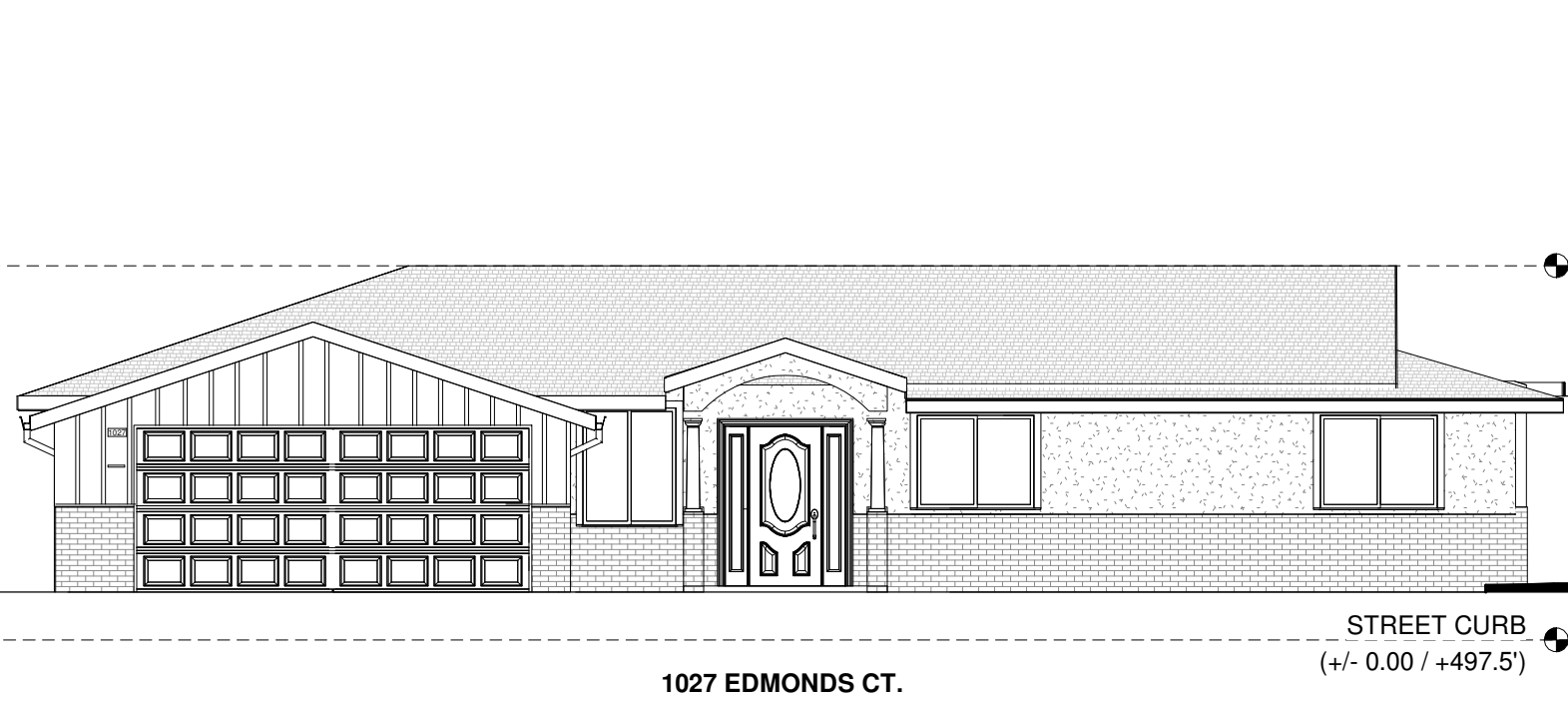


3 VIEW FROM STREET
NOT TO SCALE

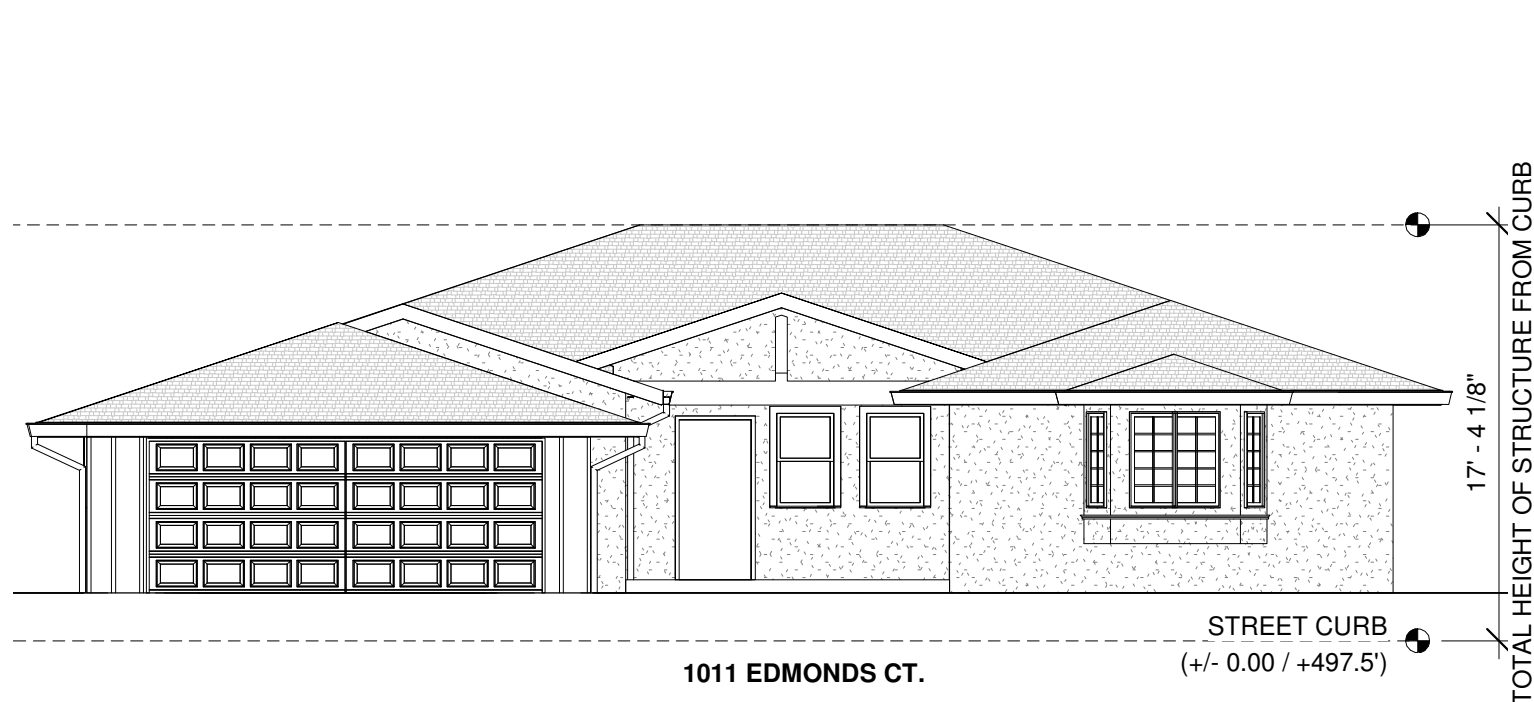
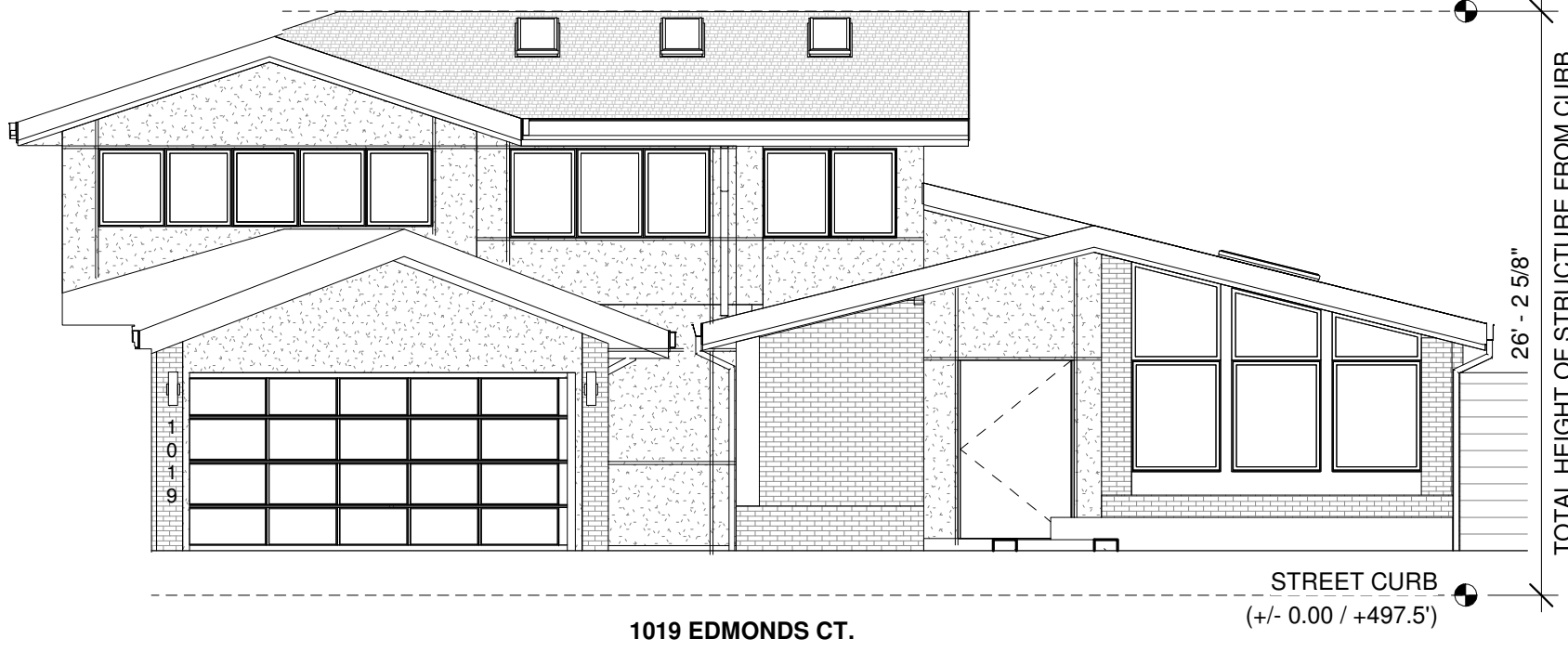
PROJECT TEAM

DESIGNER:
BEKOM DESIGN, INC.
19969 STEVENS CREEK BOULEVARD
CUPERTINO, CA 95014
EMAIL: INFO@BEKOMDESIGN.COM
PH: (408) 203- 4686

TITLE 24/ CALGREEN / SUSTAINABILITY
CONSULTANT:
José Rivero - Sustainability Engineer
Beyond Efficiency Inc.
710 Channing Way, Berkeley, CA 94710
Phone: 415.964.2286
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4 STREET FACADE
1/8" = 1'-0"



1019 EDMONDS CT
SUNNYVALE, CA 94087
MATAS RESIDENCE

BEKOM
DESIGN

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ISSUANCES

No.	Description	Date
1	PLANNING SUBMITTAL	07.25.2018
1	PLANNING PLAN CHECK COMMENTS 1	11.16.2018
2	REVISION 1	11.16.2018
3	PLANNING PLAN CHECK COMMENTS 2	12.19.2018

Checked By: Checker

COVER SHEET

Drawing Scale: As indicated

Job No. -

A-0.00

1019 EDMONDS CT
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617



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ISSUANCES		
No.	Description	Date
1	PLANNING SUBMITTAL	07.25.2018
1	PLANNING PLAN CHECK COMMENTS 1	11.16.2018
2	REVISION 1	11.16.2018
3	PLANNING PLAN CHECK COMMENTS 2	12.19.2018

Checked By: Checker

NOTES

Drawing Scale: 1/4" = 1'-0"

Job No. -

A-0.1

GENERAL NOTES:

- ALL WORK DESCRIBED HEREIN SHALL COMPLY WITH THE LATEST BUILDING CONSTRUCTION CODES AS ADOPTED OR AMENDED BY THE STATE OF CALIFORNIA AND THE CITY OF SUNNYVALE - 2016 CRC, CBC, CMC, CPC, CEC AND 2016 ENERGY REGULATIONS.
- EXISTING CONDITIONS SHALL BE FIELD VERIFIED BY THE CONTRACTOR FOR COMPATIBILITY WITH THE NEW CONSTRUCTION SHOWN HEREIN.
- ALL NOTES AND DIMENSIONS SHALL BE FIELD VERIFIED BY THE GENERAL CONTRACTOR PRIOR TO CONSTRUCTION.
- DRAWINGS ARE NOT TO BE SCALED FOR DIMENSIONS. WRITTEN DIMENSIONS SHALL BE PREPARED.
- IN CASE OF DISCREPANCIES BETWEEN THE DRAWINGS AND THE FIELD CONDITIONS, THE DESIGNER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH CONSTRUCTION.
- THE GENERAL CONTRACTOR / OWNER SHALL BE RESPONSIBLE FOR ALL WORK REQUIRED TO COMPLETE THE CONSTRUCTION OF THE PROJECT.
- WORKMANSHIP AND MATERIALS SHALL CONFORM WITH THE CURRENT UNIFORM BUILDING CODE.

SITE NOTES:

- EXISTING GRADE ELEVATION SHALL BE MAINTAINED.
- PROVIDE A 2% MIN SLOPE AWAY FROM BUILDING AT ALL LANDINGS.
- ALL NEW SEWER LINES TO HAVE ATMOSPHERIC AND LISTED ACCESSIBLE BACKFLOW PREVENTION WATER VALVES INSTALLED, AND SHALL HAVE AN ATMOSPHERIC RELIEF VALVE INSTALLED UPSTREAM OF THE BACKFLOW VALVE AND A CLEANOUT DOWNSTREAM OF THE BACKFLOW VALVE OUTSIDE THE BUILDING IN CLOSE PROXIMITY TO THE FOUNDATION.
- STATE ARCHITECT CERTIFIED EARTHQUAKE - ACTUATED GAS SHUT OFF VALVES AT ALL NEW GAS UTILITY METERS.

CONSTRUCTION NOTES

- ALL DIMENSIONS SHALL BE FINISHED FACE OF WALLS, FLOORS AND CEILINGS, UNLESS OTHERWISE NOTED.
- BEDROOMS THAT DO NOT HAVE EGRESS DOORS, SHALL HAVE ONE WINDOW THAT MEETS EGRESS REQUIREMENTS:
 - MIN. 20" CLEAR WIDTH, MIN. 24" CLEAR HEIGHT WHEN OPEN;
 - MIN. 5.7 SQ. FT. OF CLEAR OPEN AREA / 5 SQ. FT. FOR GRADE LEVEL ROOMS.
 - MAX. HEIGHT OF 44" FROM FINISHED FLOOR TO BOTTOM OF CLEAR OPENING.
- GLAZING INSTALLED SHALL BE TEMPERED WHEN INSTALLED IN THE FOLLOWING LOCATIONS:
 - ADJACENT TO AND WITHIN 24" OF A DOOR.
 - SHOWERTUB ENCLOSURES, WHERE THE BOTTOM EXPOSED EDGE OF THE GLAZING IS < 60" ABOVE THE FINISHED FLOOR.
 - GLAZING IN A WALL ENCLOSING A STAIRWAY LANDING OR WITHIN 5' OF THE BOTTOM AND TOP OF THE STAIRWAY, WHERE THE BOTTOM EDGE OF THE GLAZING IS <60" ABOVE THE FLOOR.
 - FINISHED FLOOR ANY GLAZING MEETING ALL THE FOLLOWING CONDITIONS:
 - EXPPOSED AREA OF AN INDIVIDUAL PANE IS > 9 SQ. FT.
 - EXPPOSED BOTTOM EDGE IS < 18" ABOVE FINISHED FLOOR.
 - EXPPOSED TOP EDGE IS > 36" ABOVE FINISHED FLOOR.
 - WITH IN A 36" HORIZONTAL DISTANCE OF A WALKING SURFACE.
- NEW 110V SMOKE DETECTORS WITH BATTERY BACKUP, WHICH ARE AUDIBLE IN ALL SLEEPING AREAS, SHALL BE INSTALLED IN THE FOLLOWING LOCATION: BEDROOMS, HALLWAYS LEADING TO BEDROOMS, ABOVE TOPS OF STAIRS, ANY AREA WHERE CEILING HEIGHT IS OVER 24" ABOVE A HALLWAY CEILING LEADING TO BEDROOMS AND MIN. ONE ON EVERY LEVEL.
- CARBON MONOXIDE DETECTORS SHALL BE INSTALLED AS PER CODE REQUIREMENTS.
- NEW TOILETS SHALL BE 1.28 GALLON PER FLUSH.
- NEW TOILETS SHALL KEEP THE FOLLOWING CLEARANCE: MIN 15" CLEAR FROM CENTER OF TOILET TO ADJACENT WALL OR ANY OTHER BUILT OBSTACLE. 24" CLEARANCE SHALL BE KEPT IN FRONT OF THE TOILET.
- PROVIDE MIN. 22"x30" ATTIC ACCESS, SEE PLAN FOR LOCATION. ATTIC ACCESS TO HAVE A PULL DOWN CEILING PANEL WITH FOLDING LADDER. UNIT SHALL BE SELF CONTAINED WITH ITS OWN FRAME AND REQUIRE NO HEADROOM OR ATTIC CLEARANCE, WHERE OCCURS.
- PROVIDE 18"x24" CRAWL SPACE ACCESS, CRC SEC. R408.4 , WHERE OCCURS.
- PROVIDE AND INSTALL 1/2" GYPSUM BOARD AT COMMON WALLS AND 5/8" TYPE 'X' GYPSUM BOARD AT CEILING SEPARATING THE GARAGE AND THE LIVING SPACE. AT WALLS THE INSTALLATION SHALL BE FROM THE FOUNDATION TO THE UNDERSIDE OF THE ROOF. SEAL JOINTS WITH FIRE TAPE, 2010 CRC SEC. R302.
- DOOR SEPARATING THE GARAGE AND THE LIVING SPACE SHALL HAVE A 20 MINUTE FIRE PROTECTION RATING BE SELF CLOSING AND LATCHING, TIGHT FITTING SOLID, WOOD DOOR 1-3/8" THICKNESS (FIRE DOOR) SEE CRC SEC. R302.1.
- PROVIDE A MINIMUM 36" DEEP LANDING OUTSIDE ALL EXTERIOR DOORS. THE TOP OF THE EXTERIOR LANDING SHALL NOT BE MORE THAN 7 3/4" LOWER THAN THE EXTERIOR LANDING FOR IN-SWINGING DOORS, AND NOT MORE THAN 1 1/2" LOWER FOR OUT SWINGING DOORS CRC SEC. 311.3.1.
- GUARDRAILS SHALL BE 42" HIGH ABOVE FINISHED FLOOR. GUARDRAIL CONNECTION SHALL BE CAPABLE OF RESISTING A CONCENTRATED LOAD OF 200 POUNDS APPLIED AT ANY POINT ALONG THE TOP RAILING AND 25 PSF HORIZONTAL LOAD PERPENDICULAR TO THE BALUSTERS.
- WATER HEATERS SHALL BE MOUNTED ON A PLATFORM OR WALL MINIMUM 18" ABOVE FINISHED FLOOR, MEASURED TO THE FLAME.
- TYPICAL INSULATION:(A) R-30 FOR ATTIC/ CEILING/ ROOF; (B) R-15 FOR EXTERIOR WALLS;(C) R-19 FOR FLOORS OVER UNHEATED SPACES; (D) R-8 FOR HEATING AND COOLING DUCTS.
- STRUCTURAL WELDING: STRUCTURAL WELDING WILL BE COMPLETED AND INSPECTED IN AN APPROVED FABRICATION SHOP.
- UNDER FLOOR DUCTS, IF ANY, SHALL HAVE CLEARANCES TO EARTH AND NOT PASS THROUGH MINIMUM REQUIRED CRAWL SPACE ACCESS POINTS.
- FINISHED ROOFING MATERIAL SHALL BE INSTALLED AND COMPLETED PRIOR TO FRAME INSPECTION.
- Fireblocking shall be provided to cut off all concealed draft openings (both vertical and horizontal) in the following locations as per 2016 CRC R302.11:
 - In concealed spaces of stud walls and partitions, including furred spaces and parallel rows of studs or staggered studs, as follows:
 - Vertically at the ceiling and floor levels.
 - Horizontally at intervals not exceeding 10 feet (3048 mm).
 - At all interconnections between concealed vertical and horizontal spaces such as occur at soffits, drop ceilings and cove ceilings.
 - At openings around vents, pipes, ducts, cables and wires at ceiling and floor level, with an approved material to resist the free passage of flame and products of combustion. The material filling this annular space shall not be required to meet the ASTM E 136 requirements.
- The geotechnical aspects of the construction, including the basement excavation, pier drilling, grade beam void form installation, retaining wall backfill, preparation of subgrade and baserock compaction beneath flatwork, and installation of surface drainage should be performed in accordance with the geotechnical report prepared by Romig Engineers. Romig Engineers should be provided at least 48 hours advance notification of any geotechnical aspects of the construction and should be present to observe the grading, foundation, and drainage installation phases of the project.

FIRE DEPARTMENT NOTES:

- CONTRACTOR TO CONTACT CITY OF PALO ALTO UTILITIES (WGW) AND SUBMIT UTILITY APPLICATION INCLUDING THE FIRE SPRINKLERS DEMAND. (ALLOW 35 GPM FOR FIRE SPRINKLER DEMAND). WATER METER SIZE SHALL BE DETERMINED BY WGW PRIOR TO FIRE DEPARTMENT APPROVAL OF PROJECT. PLEASE CONTACT PAFO AT 650-329-2194 FOR ASSISTANCE WITH DETERMINING THE FIRE SPRINKLER DEMAND.
- WATER LINE FROM THE WATER METER TO HOUSE SHALL BE A MIN. 2 INCH.
- PROVIDE APPROVED SMOKE DETECTORS AND CARBON MONOXIDE DETECTORE THROUGHOUT EACH STRUCTURE. SMOKE DETECTORS AND CARBON MONOXIDE DETECTORS SHALL BE INNER CONNECTED.
- SMOKE DETECTORS SHALL BE DUAL SENSORS - IONIZATION/PHOTO ELECTRIC. IF SMOKE DETECTOR IS LOCATED WITHIN 20 FEET OF KITCHEN OR FIREPLACE, PHOTO ELECTRIC SMOKE DETECTOR SHALL BE INSTALLED.
- A DUAL SENSOR SMOKE ALARM SHALL BE INSTALLED IN EVERY ROOM. A DUAL SENSOR SMOKE ALARM SHALL BE INSTALLED OUTSIDE SLEEPING AREAS.
- A CARBON MONOXIDE DETECTOR SHALL BE INSTALLED OUTSIDE SLEEPING AREAS.
- REMISE IDENTIFICATION: BUILDING ADDRESS NUMBERS SHALL BE LOCATED ON FRONT / STREET FACING EXTERIOR WALL. NUMBERS SHALL BE METAL, CONTRASTING AGAINST HOUSE COLOR AND SHALL BE MINIMUM 4" HIGH WITH A MIN. STROKE WIDTH OF .5" CFC SECTION 505.1.
- Basements and sleeping rooms below the fourth story above grade plane shall have at least one exterior emergency escape and rescue opening (escape window) in accordance with CFC Section 1030.1. (CFC 1030)
- Landscaping and location of sleeping rooms relative to property lines shall be located so as to provide approved ladder access to each sleeping room. Approved ladder access consists of a maximum 70 degree climbing angle, at least 3 feet of clear space behind the base of the ladder to allow access and approved concrete or gravel ladder pads having a minimum dimension of 3' x 6' and positioned so that the 6' length is perpendicular to the structure.

CAL GREEN NOTES:

- SITE AND CONSTRUCTION MANAGEMEN REQUIREMENTS:**
 - 4.106.1 In order to manage storm water drainage during construction, one or more of the following shall be implemented:
 - Retention basins of sufficient size shall be utilized to retain storm water on the site.
 - Where storm water is conveyed to a public drainage system, collection point, gutter or similar disposal method, water shall be filtered by use of a barrier system, wattle or other method approved by the enforcing agency.
 - Compliance with a lawfully enacted storm water management ordinance.
 - A4.106.2.3 Topsoil shall be protected or saved for reuse as specified in this section. The construction area shall be identified and delineated by fencing or flagging to limit construction activity to the construction area. Heavy equipment or vehicle traffic and material storage outside the construction area shall be limited to the areas that are planned to be paved.
 - 4.106.3Construction plans shall indicate how the site grading or drainage system will manage all surface water flows to keep water from entering buildings. Examples are: swales, water collection and disposal systems, french drains, water retention gardens, other water measures which keep surface water away from buildings and aid in groundwater recharge.
 - A4.103.1 A site which complies with at least one of the following characteristics is selected: 1. An infill site is selected. 2. A greyfield site is selected. 3. An EPA-recognized and remediated site is selected.
- LANDSCAPE REQUIREMENT:**
 - A4.106.3 Post-construction landscape design shall accomplish one or more of the following: 1) Areas disrupted during construction are restored to be consistent with native vegetation species and patterns. 2) Limit turf areas to no more than 10% of total landscaped area. 3) Utilize at least 75% native CA or drought tolerant plant and tree species appropriate for the climate zone region. 4) Hydrozone irrigation techniques are incorporated into the landscape design.
 - A4.304.3 When landscaping is provided by the builder, a water budget shall be developed for landscape irrigation use that conforms to the local water efficient landscape ordinance or to the CA Department of Water Resources Model Water Efficient Landscape Ordinance where no local ordinance is applicable.
 - A4.304.4 When landscape is provided by the builder, a water efficient landscape irrigation system shall be installed that reduces potable water use. The potable water use reduction shall be calculated beyond the initial requirements for plant installation and establishment. Calculations for the reduction shall be based on the water budget developed pursuant to Section A4.304.3. Landscape does not exceed 60% ETo times the landscape area. Methods used to comply may include but are not limited to: plant coefficient, irrigation efficiency, captured rainwater, recycled water, graywater.
 - A4.304.6 For new water service connections, landscaped irrigated areas more than 1,000 sq ft shall be provided with separate submeters for outdoor potable water use.
 - A4.305.5 Newly constructed residential buildings with a landscape of any size shall install a three-way diverter valve in the drain-line of all laundry fixtures to assist in the future installation of a "Laundry-to-Landscape" irrigation system.
 - A4.106.10 Outdoor lighting systems comply with all of the following: 1) The minimum requirements in the CA Energy Code for Lighting Zone 1-4. 2) BUG ratings as defined in IES TM-15-11. 3) Allowable BUG ratings are not exceeding those shown in Table A4.106.10 or comply with a local ordinance pursuant to Section 101.7 of this code, whichever is more stringent.
- A dedicated solar zone shall be located on the roof or overhang of the building and have a total area no less than 500 square feet. Install conduit extending from the rooftop and terminating at the electrical panel.
 - Conduit shall penetrate the roof.
 - Electrical panel to be solar ready.
- IRRIGATION:** All irrigation system controllers for landscaping shall comply with the following (Calgreen Section 4.304.1):
 - Controllers shall be weather or soils moisture-based controllers that automatically adjust irrigation in response to changes in plants' needs as weather conditions change.
 - Weather-based controllers without integral rain sensors or communication systems that account for local rainfall, shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s). Soil moisture-based controllers are not required to have rain sensor input.
 - A4.304.1 Spray irrigation limited to lawns only. No lawns on slopes >10%. No overhead sprinklers installed where lawn is <8' wide. Low-volume irrigation systems are: drip, bubbler, drip emitters, soaker hose, and stream-rotator spray heads.
- All annular spaces around pipes, electric cables, conduits or other openings in plates at exterior walls shall be protected against the passage of rodents by closing such openings with cement mortar, concrete masonry or a similar method acceptable to the enforcing agency per Calgreen Section 4.406.1.
- Contractor shall provide a copy of the operation and maintenance manual to the building occupant or owner addressing the following items (1 through 10 in Calgreen Section 4.410.1.) also, a copy of the Operation and maintenance manual shall be placed at the building at final inspection:
 - Directions to the owner or occupant that the manual shall remain with the building throughout the life cycle of the structure.
 - Operation and maintenance instructions for the following:
 - Equipment and appliances, including water-saving devices and systems, HVAC systems, water-heating systems and other major appliances and equipment.
 - Roof and yard drainage, including gutters and downspouts.
 - Space conditioning systems, including condensers and air filters.
 - Landscape irrigation systems.
 - Water reuse systems.
 - Information from local utility, water and waste recovery providers on methods to further reduce resource consumption, including recycle programs and locations.
 - Public transportation and/or carpool options available in the area.
 - Educational material on the positive impacts of an interior relative humidity between 30-60 percent and what methods an occupant may use to maintain the relative humidity level in that range.
 - Information about water-conserving landscape and irrigation design and controllers which conserve water.
 - Instructions for maintaining gutters and downspouts and the importance of diverting water at least 5 feet away from the foundation.
 - Information on required routine maintenance measures, including, but not limited to, caulking, painting, grading around the building, etc.
 - Information about state solar energy and incentive programs available.
 - A copy of all special inspection verifications required by the enforcing agency or this code.
- Contractor shall install Pollutant Control as followed (CalGreen Section 4.504):
 - Cover duct openings and other related air distribution component openings during construction (Cal Green 4.504.1)
 - Aerosol paints and coatings shall be compliant with product weighted MIR limits for HOC and other toxic compounds (Cal Green 4.504.2.3)
 - Verification of compliance shall be provided by contractor.
 - Carpet and carpet systems shall be compliant with VOC limits (Cal Green 4.504.3)
 - Minimum 80 % of floor area receiving resilient flooring shall comply with (Cal Green4.504.4)
- Contractor shall install Interior Moisture Control as followed (Cal Green Section 4.505):
 - Install capillary break and vapor retarder at slab on grade foundations (2013 Cal Green 4.505.2). see structural drawings and details
 - contractor shall check moisture content of building materials used in wall and floor framing before enclosure and dand have results verified by inspector. (Cal Green sec. 4.505.3)
- Contractor to verify each bathroom shall be mechanically vented, and controlled by humidity control; except for fans functioning as a component of a whole house ventilation system (Calgreen Section 4.506).

- PLUMBING FIXTURES SHALL COMPLY WITH THE FOLLOWING:**
 - 4.303.1.1 All toilets are 1.28 gpl or dual-flush.
 - 4.303.1.3.1 Showerheads have max flow rate of 2.0 gpm at 80 psi. Showerheads shall be certified to the performance criteria of the U.S.EPA WaterSense specs.
 - 4.303.1.2.3 When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 2.0 gpm at 80 psi, or the shower shall be designed to allow only one shower outlet to be in operation at a time.
 - 4.303.1.4.2 Max flow rate for all lavvy faucets is 1.5 gpm at 60 psi. Minimum flow rate shall not be less than 0.8 gpm at 20 psi.
 - 4.303.2 Plumbing fixtures shall comply with CA Plumbing Code, Environmental Comfort (Calgreen Section 4.507);
 - Contractor shall provide Insulated louvers/covers (min R-4.2) which close when the fan is off for the whole house exhaust fans (4.507.1). Duct systems are sized, designed, and equipment is selected per Section 4.507.2.
 - HVAC system installers must be trained and certified and special inspectors employed by the enforcing agency must be qualified.
- APPLIANCES:** A4.303.3 Install at least one qualified Energy Star appliance: 1) Dishwasher no more than 4.25 gallons of water per cycle. 2) Clothes washer - water factor of 6 gallons of water per drum capacity or less.
- WASTE MANAGEMENT:**
 - 16.14/4.408.1 Nonhazardous construction and demolition debris generated at the site is diverted to recycle or salvage facilities. Eighty percent (80%) construction waste reduction is required for all residential projects.
 - 4.408.2 Everything done with Green Halo
 - 4.408.03 Utilize a waste management company, approved by the enforcing agency, which can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with Section 4.408.1.
 - 4.410.1 Operation and Maintenance Manual shall be prepared.
 - A4.405.3 The Recycled Content Value shall not be less than 15% of the total material cost of the project.
 - A4.403.2 Tier 2 = 25%. Materials used to reduce cement are: fly ash, slag, silica fume, rice hull ash.
- FRAMING:** A4.404.3 Use premanufactured building systems whenever possible. One or more of the following: 1) Composite floor joist or premanufactured floor framing system. 2) Composite roof rafters or premanufactured roof framing system. 3) Panelized framing - SIPs, ICF, etc.
- FINISHES:**
 - A4.405.1 Use prefinished building materials that do not require additional painting or staining when possible. Use one or more of the following: 1) Exterior trim not requiring paint or stain. 2) Windows not requiring paint or stain. 3) Siding or exterior wall coverings that do not require paint or stain.
 - A4.405.4 Use one or more of the following materials manufactured from rapidly renewable sources: 1) Insulation. 2) Bamboo or cork. 3) Engineered products. 4) Agricultural based products.
- ENVIRONMENTAL QUALITY:**
 - 4.503.1 Fireplace must be direct-vent, sealed-combustion.
 - 4.504.1 At the time of rough installation, during storage on the construction site and until final startup of the heating, cooling, and ventilation equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheetmetal, etc. to reduce the amount of water, dust and debris, which may enter the system.
 - 4.504.2 Finish materials shall comply with this section.
 - 5.504.2.1 Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with Table 4.504.1 and/or Table 4.504.2.
 - 4.504.2.2 All paints and coatings shall comply with Table 4.504.3.
 - 4.505.3 Wall and floor framing shall not be enclosed when the framing members exceed 19% moisture content. Moisture readings shall be taken 2-4 feet from the grade stamped end of each piece to be verified. At least 3 random moisture readings shall be performed on wall and floor framing.
 - 4.506.1 Each bathroom shall be mechanically ventilated and shall comply with the following: 1) Fans shall be EnergyStar compliant and be ducted to terminate outside the building. 2) Unless functioning as a component of a whole house vent system, fans must be controlled by a humidity control. Humidity controls shall be capable of adjustment between a relative humidity range of 50-80%. A humidity control may utilize manual or automatic means of adjustment. A humidity control may be a separate component to the exhaust fan and is not required to be integral (built-in).
 - 4.507.2 Heating and air-conditioning systems shall be sized, designed, and have their equipment selected using the following ACCA Manuals J, D, and S. HVAC system installers must be trained and certified and special inspectors employed by the enforcing agency must be qualified.
 - A4.506.1 Return air filters with values greater than MERV 13 shall be installed on HVAC systems. Pressure drop across the filter shall not exceed 0.1 inches water column.
 - Contractor shall provide Insulated louvers/covers (min R-4.2) which close when the fan is off for the whole house exhaust fans (4.507.1).





1003 EDMONDS CT.



1004 EDMONDS CT.



1020 EDMONDS CT.



1027 EDMONDS CT.



1001 EARLINGTON CT.



1002 EARLINGTON CT.



1017 EARLINGTON CT.



1520 WRIGHT AVENUE



1532 WRIGHT AVENUE



1536 WRIGHT AVENUE



1538 WRIGHT AVENUE



1049 EUGENE CT



1043 EUGENE CT



1037 EUGENE CT



1038 EUGENE CT



1044 EUGENE CT

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No.	Description	Date
1	PLANNING SUBMITTAL	07.25.2018
1	PLANNING PLAN CHECK COMMENTS 1	11.16.2018
2	REVISION 1	11.16.2018
3	PLANNING PLAN CHECK COMMENTS 2	12.19.2018

Checked By: _____ Checker: _____

**NEIGHBORHOOD
 COMPATIBILITY
 PHOTOS**

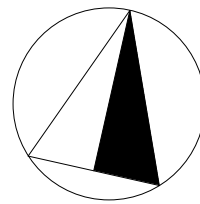
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A-0.4

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Checked By: Checker

SQUARE
FOOTAGE
DIAGRAMS

Drawing Scale: NOT TO SCALE

Job No. -

A-0.5

PROPOSED FLOOR AREA - MAXIMUM ALLOWED 45% X 12,605 = 5,672.25 SQ. FT.

PROPOSED FIRST FLOOR AREA					
A	15.73	X	38.75		609.54
B	16.40	x	35.16		576.62
C	8.42	x	3.59		30.23
D	9.34	x	35.60		332.50
E	14.42	X	4.00		57.68
F	6.96	X	23.56		163.98
G	6.96	X	12.05	2	41.93
H	13.60	X	23.56	2	160.21
I	8.69	X	5.02	2	21.81
J	8.69	X	4.63		40.23
K	13.29	X	14.20		188.72
L	17.10	X	16.40		280.44
M	7.44	x	8.40		62.50
N	9.38	x	7.40		69.41
O	10.38	x	7.40		76.81
P	12.71	X	15.42		195.99
Q	11.60	X	4.38		50.81
R	10.71	X	9.79		104.85
S	23.42	X	13.42		314.30
T	21.42	X	11.38		243.76
U	23.42	X	11.46		268.39

TOTAL HABITABLE FIRST FLOOR AREA 3890.71

V (GARAGE) 23.42 X 21.10 494.16

TOTAL FIRST FLOOR AREA 4384.88

PROPOSED SECOND FLOOR AREA

i	8.44	X	10.71		90.39
ii	4.22	X	11.42		48.19
iii	14.71	X	1.69		24.86
iv	20.81	X	9.71		202.07
v	3.56	X	3.71		13.21

TOTAL ADU AREA 378.72

AA	8.42	X	3.16		26.61
BB	20.06	X	21.72		435.70
CC	18.60	X	17.94		333.68
DD	6.60	X	8.22		54.25
EE	6.10	X	4.18		25.50
FF	3.56	X	7.00		24.92

TOTAL SECOND FLOOR AREA 1279.38

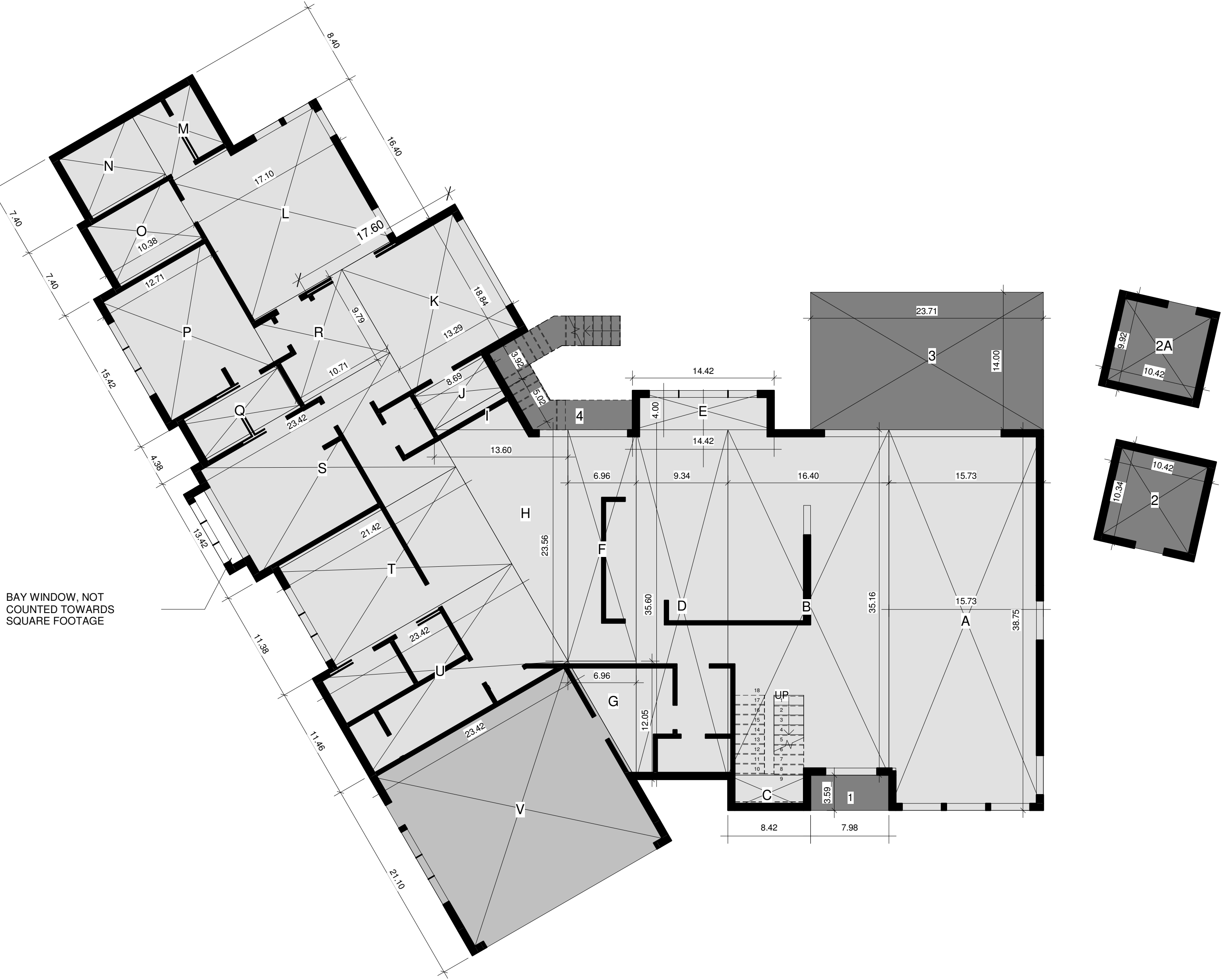
TOTAL HABITABLE AREA 5170.10

3 (COVERED PATIO) 23.71 X 14.00 331.94

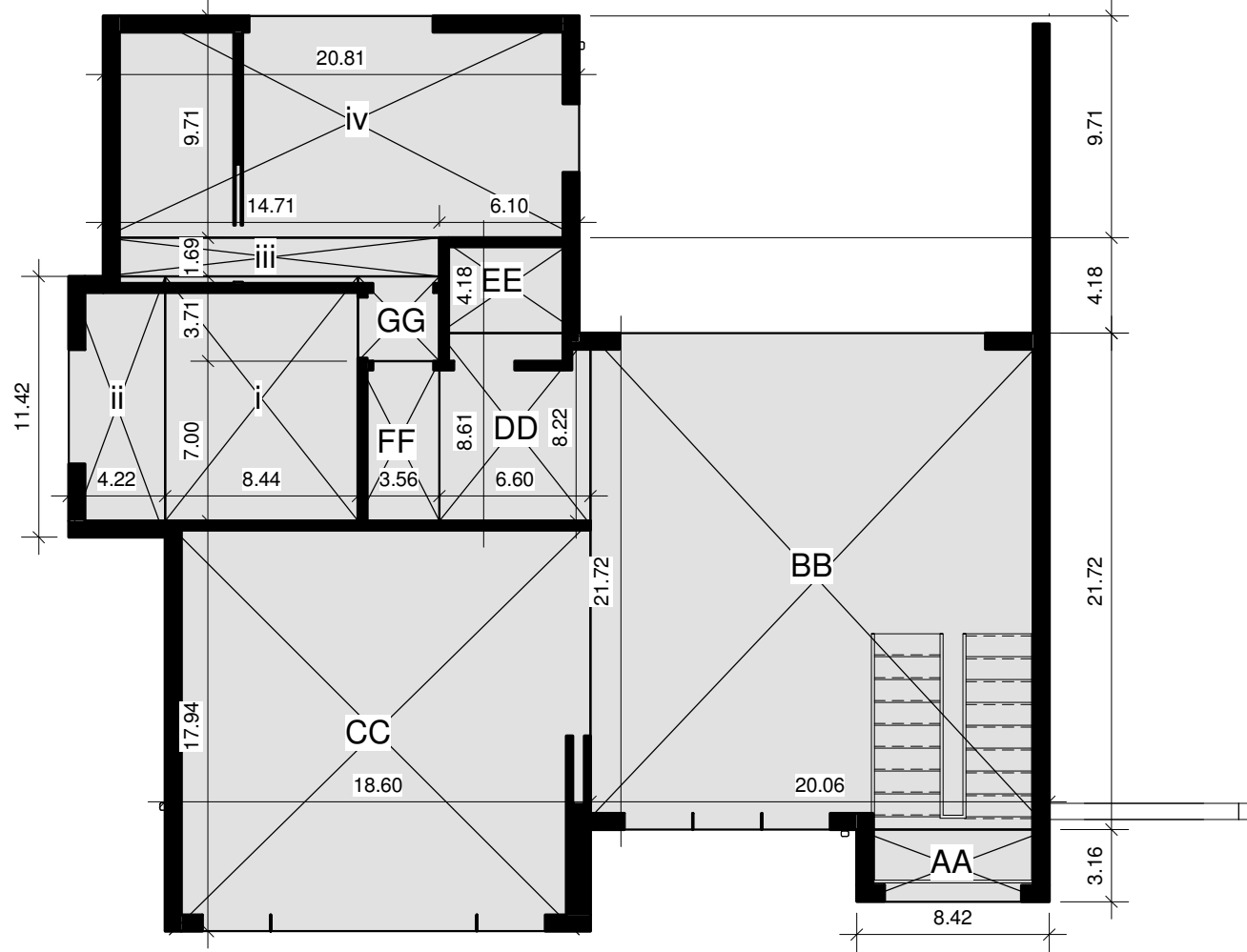
TOTAL FLOOR AREA 5996.20 47.57%

PROPOSED LOT COVERAGE - MAXIMUM ALLOWED 45% X 12,605 = 5,672.25 SQ. FT. (CAL GREEN OVER 80 PTS)

PROPOSED LOT COVERAGE					
1	7.98	X	3.59		28.65
2	10.42	X	10.34		107.74
2A	10.42	X	9.95		103.68
3 (COVERED PATIO)	23.71	X	14.00		331.94
4					84.42
TOTAL LOT COVERAGE					5041.31 39.99%

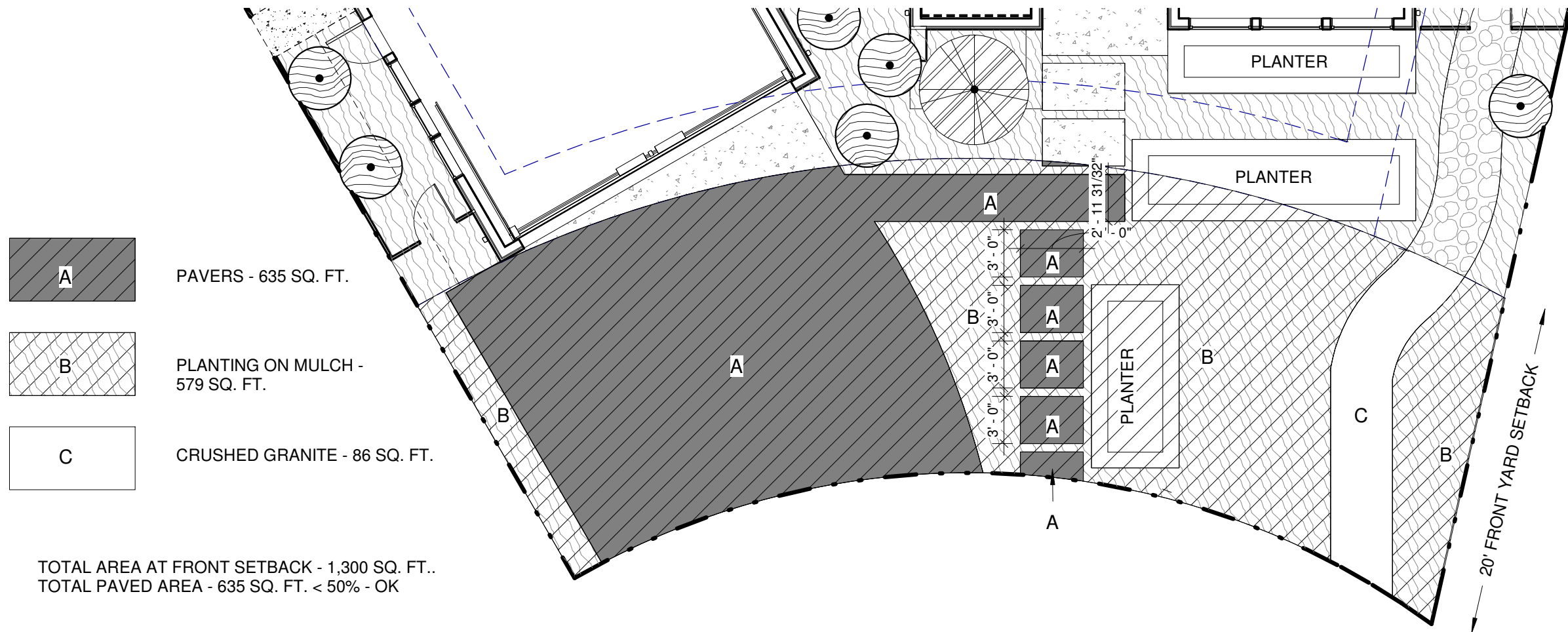


1 FIRST FLOOR AREA DIAGRAM
1/8" = 1'-0"

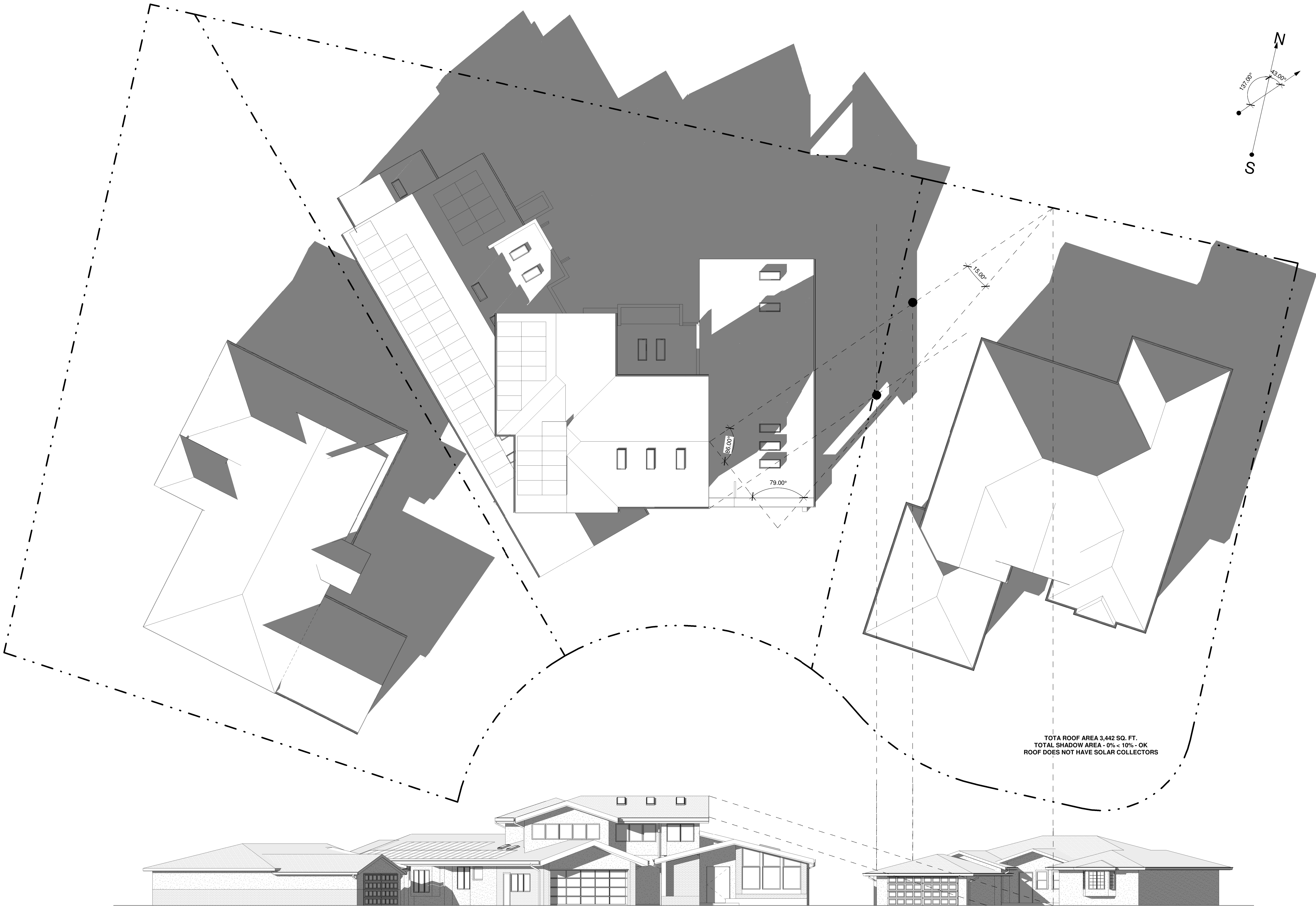


2 SECOND FLOOR AREA DIAGRAM
1/8" = 1'-0"

3 FLOOR AREA AND LOR COVERAGE AREA CALCULATIONS
NOT TO SCALE

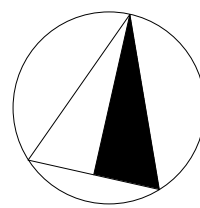


4 FRONT YARD LANDSCAPED AREA DIAGRAM
1/8" = 1'-0"



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Fig 7



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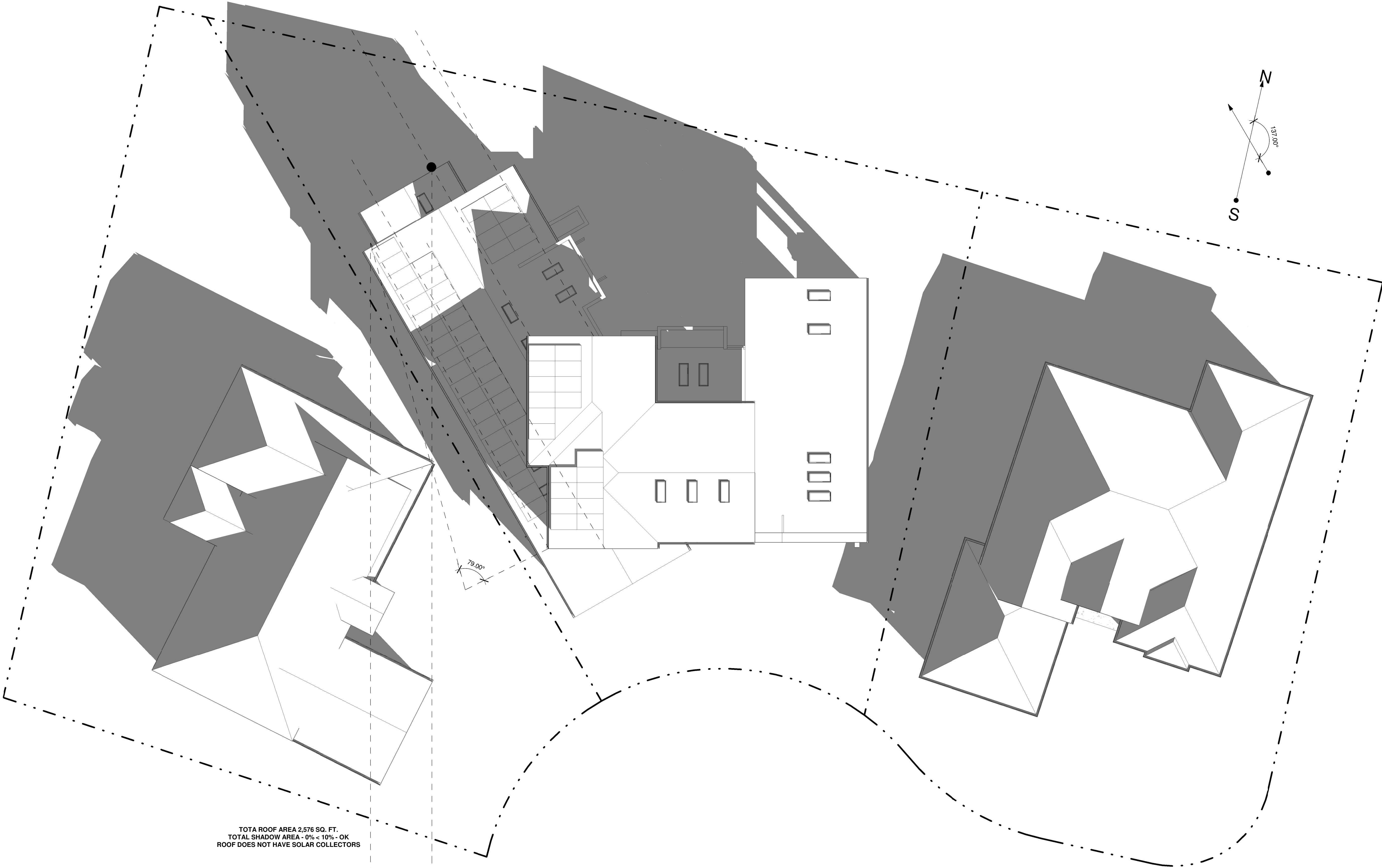
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SOLAR ACCESS
AND SHADOW
ANALYSIS

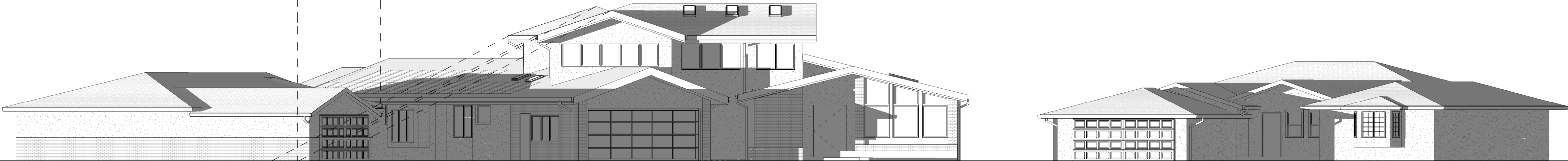
Drawing Scale: 1" = 10'-0"

Job No. _____

A-0.7



TOTA ROOF AREA 2,576 SQ. FT.
TOTAL SHADOW AREA - 0% < 10% - OK
ROOF DOES NOT HAVE SOLAR COLLECTORS



WATER-EFFICIENT LANDSCAPING CHECKLIST
This form is required for all landscaping projects requiring review and approval by the Planning Division. For more details on landscaping, irrigation and usable open space requirements, see SMC 19.37.

PROJECT INFORMATION	
Site Address: 1019 Edmonds Court	Landscaped area means a portion of a site planted with vegetation intended for screening or ornamental use. Landscaped areas may include decorative rock or stone, provided that such materials are recycled and do not comprise more than thirty percent of the area. For purposes of calculation, landscaped areas as the term is used in this title, automobile parking areas, storage areas, vehicle way and specifically permitted driveway uses shall not be considered as landscaping.
APR 32012008	Zoning: R1
Planning Project #:	
Total Project Landscaped Area (sq. ft.): 5,468 SQ. FT.	
Check all that apply to the project: <input checked="" type="checkbox"/> Single-Family/Duplex <input type="checkbox"/> Multifamily <input type="checkbox"/> Nonresidential	
% Native, low water or no water use plants installed: 92.7%	

APPLICANT INFORMATION
*Note: The landscaping and irrigation plans shall be prepared by, and bear the signature of, a certified professional, unless the total landscaped area is less than 2,500 square feet.

Name: Revital Kaufman Meron / BEKOM DESIGN	Certified Professional Name (if different from applicant):
Phone: 408 2034686	Email: rkmeron@bekomdesign.com
License or Certification #:	

CERTIFICATION
I am aware of available informational resources regarding native and water-wise plants, irrigation efficiency, and other aspects of water-efficient landscaping. I certify that the information provided on this checklist is correct, and that the landscaping project meets the specified requirements of Chapter 19.37 of the Sunnyvale Municipal Code.

APPLICANT SIGNATURE	DATE
<i>[Signature]</i>	07.25.2018

REQUIREMENT	PROJECT COMPLIANCE (Applicant to complete)	STAFF REVIEW
Water Efficiency Design	Landscaping design and plant selection is based on one of two options: <input type="checkbox"/> Option 1: No turf/lawn or high water use plants; at least 80% of plants installed are native, low water or no water use plants. <input checked="" type="checkbox"/> Option 2: Completed Water Budget Calculation Worksheets included.	<input type="checkbox"/>
Plant Material	Variety - Landscaping includes trees, shrubs, vines, flower, ground covers or a combination. Size - Proposed plants are sized and spaced to achieve immediate effect in accordance w/ horticultural industry practices.	<input type="checkbox"/>

Page 1 of 2

REQUIREMENT	PROJECT COMPLIANCE (Applicant to complete)	STAFF REVIEW
Trees	One (1) tree per 1,000 sq. ft. of required landscaped area (per SMC 19.37.040) in addition to required parking lot shading trees. "Protected trees" (SMC 19.94.030) proposed for removal will be replaced per City's Tree Replacement Policy.	<input type="checkbox"/>
Turf/Lawn (Option 2 - Water Budget Calc. Only)	Turf is tall fescue or similar. Turf is planted on slope < 10% if slope is adjacent to hardscape. No turf in areas less than 10 ft. wide adjacent to impervious area.	<input type="checkbox"/>
Hydrozones	Plants with similar water needs are grouped together. Areas that mix plants with different water needs are captured in the water budget calculations, except that high water use plants are not mixed with low water use plants. Water features not using recycled water and any pools/spas are included in the high water use hydrozone.	<input type="checkbox"/>
Soil Management	Mulch will cover all exposed soil areas at a min. depth of 3 inches. Soils will be amended for selected plants and compacted soils will be transformed into a friable condition. Compost will be incorporated at a minimum 4 cubic yards per 1,000 sq. ft. to a depth of 6 inches. Grading is designed to minimize soil erosion, runoff and water waste.	<input type="checkbox"/>
Water Features	Uses recirculating water system; uses recycled water if available.	<input type="checkbox"/>
Pools/Spas (Option 2 - Water Budget Calc. Only)	Included in high water use hydrozone and will include a cover.	<input type="checkbox"/>
Irrigation System Design	All landscaped areas will have a permanent irrigation system (required for all projects except for single-family and duplex). Designed and will be maintained to meet or exceed 81% irrigation efficiency for drip systems and 75% efficiency for overhead spray. Drip irrigation (non-spray) used for trees, shrubs, mulched areas, areas with slope >10% and areas less than 10 ft. wide. If used, overhead spray irrigation is used for clustered shrubs and turf areas at least 10 ft. wide, and devices meet ANSI Landscape Irrigation Sprinkler and Emitter Standards. Valves and control circuits are separated based on water needs of a hydrozone and master and manual shut-off valves are incorporated. Irrigation controllers utilizing evapotranspiration or soil moisture sensor data and capable of dual or multiple programming are used. Sensors that suspend irrigation during unfavorable weather conditions or if the soil is still moist are incorporated. Pressure regulators are incorporated if the water pressure does not meet the recommended pressure of the devices. Flow sensors installed for any landscaped areas 5,000 sq. ft. or larger. Irrigation controllers and backflow devices are screened from public view.	<input type="checkbox"/>

One-Stop Permit Center - City Hall - 456 W. Olive Avenue - (408) 730-7444
Planners and Building Division staff are available 8:00 a.m. to 12:30 p.m. and 1:00 to 5:00 p.m.
www.SunnyvalePlanning.com / www.SunnyvaleBuilding.com

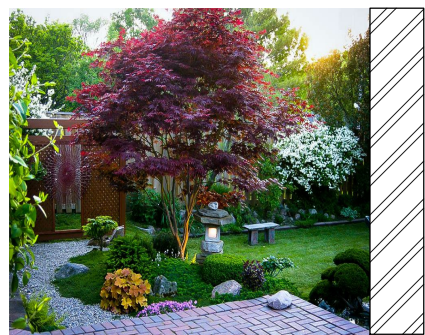
REV 01/16

3 WATER EFFICIENT LANDSCAPING CHECKLIST

PLANT/TREE INDEX

NOTE: REFER TO COLOR ON SIDE OF IMAGE FOR LOCATION OF PLANTING

TREES



JAPANESE MAPLE "BLOODGOOD"
SEMI-DROUGHT RESISTANT ONCE ESTABLISHED, WATER WEEKLY



POMEGRANATE TREE
DROUGHT RESISTANT



FIG TREE
DROUGHT RESISTANT



OLIVE TREE
DROUGHT RESISTANT



PERSIMMON TREE
DROUGHT RESISTANT

PLANTS



ALPHONSE KARR- BAMBUZA MULIPLEX
DROUGHT RESISTANT ONCE ESTABLISHED



RED FOUNTAIN GRASS "RUBRUM"
DROUGHT RESISTANT



DEER GRASS
DROUGHT RESISTANT



MEXICAN FEATHER GRASS
DROUGHT RESISTANT



DWARF FOUNTAIN GRASS
DROUGHT RESISTANT



BAMBOO MUHLY
DROUGHT RESISTANT ONCE ESTABLISHED



NEW ZELAND FLAX "SUNDOWNER"
DROUGHT RESISTANT



NEW ZELAND FLAX "DUSKY CHIEF"
DROUGHT RESISTANT

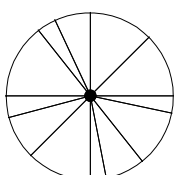


HAIRY AWN MUHLY
DROUGHT RESISTANT

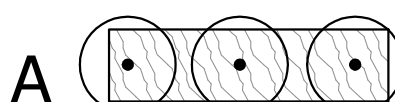


CANYON PRINCE WILD RYE
DROUGHT RESISTANT

LEGEND



PROPOSED TREE (SEE TREE INDEX FOR DESIGNATION)



MULCH WITH PLANTING ON DRIP IRRIGATION

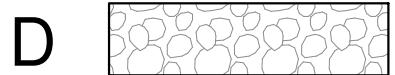
A1 - 1,657 SQ. FT.
A2 - 1,584 SQ. FT.



NO MOW GRASS - 1,829 SQ. FT.



VEGETABLE GARDEN ON DRIP IRRIGATION- 142 SQ. FT.



CRUSHED GRANITE - 256 SQ. FT.

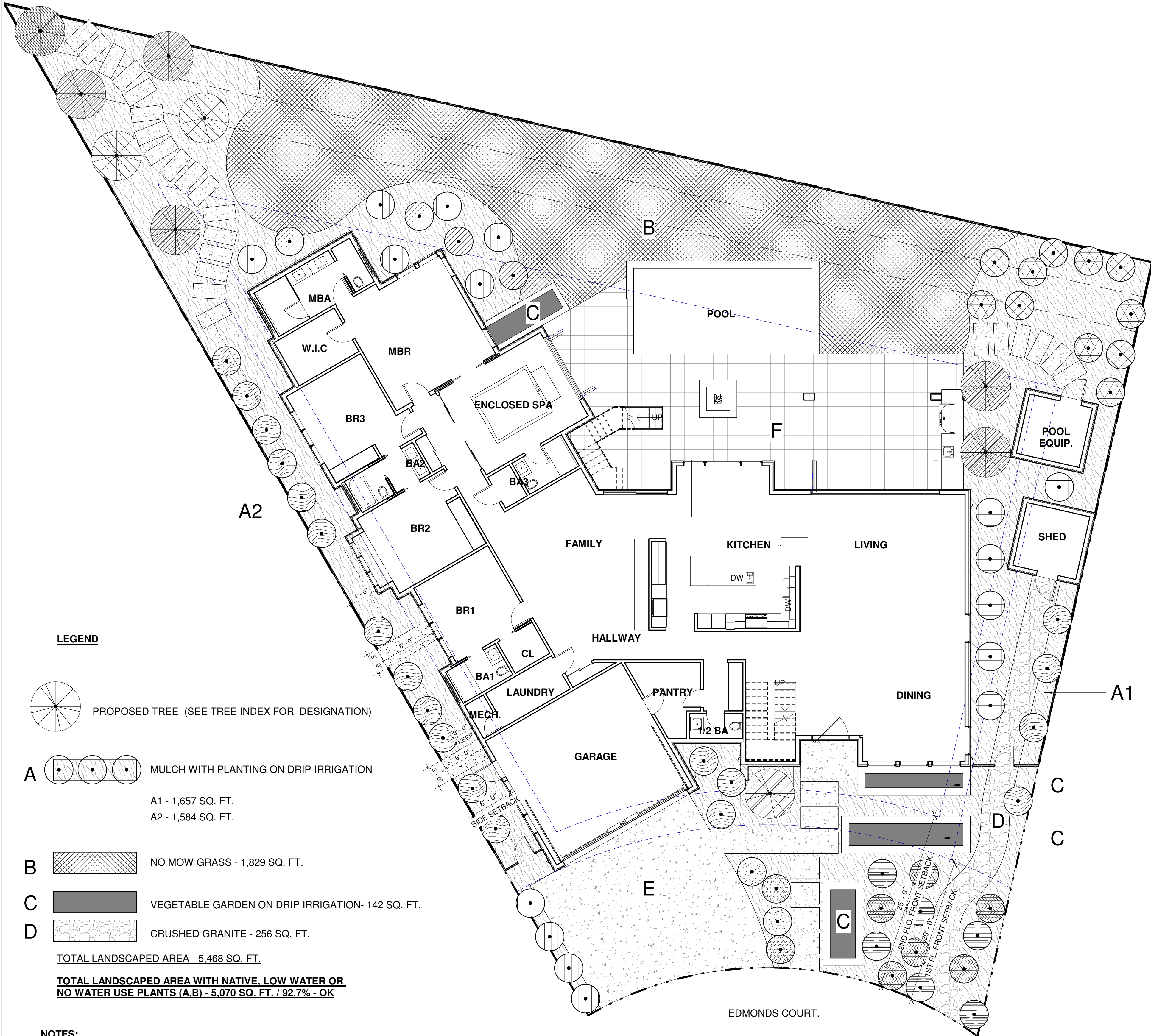
TOTAL LANDSCAPED AREA - 5,468 SQ. FT.

TOTAL LANDSCAPED AREA WITH NATIVE, LOW WATER OR NO WATER USE PLANTS (A,B) - 5,070 SQ. FT. / 92.7% - OK

NOTES:

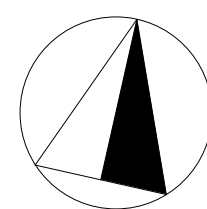
- Landscaping and location of sleeping rooms relative to property lines shall be located so as to provide approved ladder access to each sleeping room. Approved ladder access consists of a maximum 70 degree climbing angle, at least 3 feet of clear space behind the base of the ladder to allow access and approved concrete or gravel ladder pads having a minimum dimension of 3' x 6' and positioned so that the 6' length is perpendicular to the structure.
- Soils will be amended for selected plants and compacted soils will be transformed into a friable condition
- Compost will be incorporated at a minimum 4 cubic yards per 1,000 sq. ft. to a depth of 6 inches

1 LANDSCAPE PLAN
1/8" = 1'-0"



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[Signature]



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LANDSCAPE PLAN

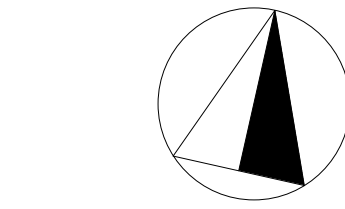
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A-0.8



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Checked By: Checker

Draft GreenPoint Rated New Home Single Family Checklist Version 6.0Draft GreenPoint Rated New Home Single Family Checklist Version 6.0

Draft: GreenPoint Rated New Home Single Family Checklist Version 6.0

ARBORIST REPORT-
Tree Resource Analysis, Construction Impacts & Protection
Plan for:

1019 Edmonds Court/ APN: 320-12-008
Sunnyvale, CA
November 10, 2018

Prepared for:
Mr. Alan Matas
1019 Edmonds Court
Sunnyvale, CA 94087



Table of Contents

SUMMARY1
Background.....1
Assignment.....1
Limits of the Assignment.....2
Purpose and use of the report.....2
Resources.....2
OBSERVATIONS3
DISCUSSION.....4
Species List.....4
Tree Evaluation and Recording Methods.....4
Condition Rating.....5
Suitability for Preservation.....5
Impact Level.....5
Tree Protection Zone.....6
Critical Root Zone.....6
Construction Impacts to Subject Trees.....7
Replacement Trees.....7
CONCLUSION /
RECOMMENDATIONS.....8

Attachments: Appendix A - F

Appendix A – Tree Assessment Chart

Appendix B – Criteria for Tree Assessment Chart

Appendix C - Tree Location Map Sheet

Appendix D – Bibliography

Appendix E - Tree Protection Guidelines & Restrictions

- Protecting Trees During Construction
- Project Arborist Duties & Inspection Schedule
- Tree Protection Fencing
- Tree Protection Signs
- Monitoring
- Root Pruning
- Tree Work Standards & Qualifications
- City of Sunnyvale Protected Trees

Appendix F - Assumptions & Limiting Conditions

Tree Inventory & Impact Assessment
Parcel Improvements

1019 Edmonds Court
Page 1

SUMMARY

- An existing home will be demolished, and a new single-family home will be constructed.
- Thirteen trees including one "protected" tree, were inventoried.
- The thirteen trees are comprised of ten species. Most of the trees are in fair to good condition.
- There is one "protected" tree on the property.
- The "protected" tree is in fair condition, will suffer significant construction impacts and its removal is recommended.
- Nine "not protected" trees are in fair to good condition, will suffer significant construction impacts and their removal is recommended.
- Three "not protected" trees are in fair to good condition, will suffer low construction impacts but are not compatible with new landscape plan and their removal is recommended.
- Replacement trees will be required if the "protected" tree is approved for removal.
- A landscape planting plan which includes replacement trees will be submitted with plan set

Background

Plans will be submitted to the City of Sunnyvale Planning Department, to subdivide an existing duplex into two separate condominiums. Mr. Alan Matas has requested my services, to assess the condition of twelve trees on the applicant's property, and the construction impacts that may affect them. Further, to provide a report with my findings and recommendations to meet City of Sunnyvale planning requirements.

Tree Inventory & Impact Assessment
Parcel Improvements

1019 Edmonds Court
Page 2

Assignment

Provide an arborist report that includes an assessment of the trees within the project area. The assessment is to include the species, size (trunk diameter, height and canopy spread), condition (health and structure), and suitability for preservation ratings.

To complete this assignment, the following services were performed:

- Tree Resource Evaluation:** Inventory, evaluate and assign suitability for preservation ratings for subject trees.
- Plan Review: Reviewed provided plans including:** Site Plan, by BEKOM Design dated 7/25/2018.
- Construction Impact Assessment:** Combine tree resource data with anticipated construction impacts, to provide recommendations for removal or retention of trees.
- Mapping:** Tree canopies were plotted onto: Site Plan, by BEKOM Design dated 7/25/2018, and a Tree Location Map sheet was developed.

Limits of the Assignment

The information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection on November 10, 2018.

The inspection is limited to visual examination of accessible items without climbing, dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in questions may not arise in the future.

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the developer, their agents, and the City of Sunnyvale as a reference for existing tree conditions and to help satisfy the City of Sunnyvale planning requirements.

Resources

All information within this report is based on site plans as of the date of this report. Resources are as follows:

- Site Plan, by BEKOM Design dated 7/25/2018
- Site Visit, Tree Inventory & Condition Evaluation at, 1019 Edmonds Court, Sunnyvale, 11/10/2018.
- City of Sunnyvale Municipal Code – Chapter 19.94 *Tree Preservation* (applicable sections).

Tree Inventory & Impact Assessment
Parcel Improvements

1019 Edmonds Court
Page 3

OBSERVATIONS

The project site contains a one-story single-family home on a level parcel. There are trees within the project limits in both the front and back yards. There is one "protected" tree on the property, a flowering cherry (*Prunus serrulata*) located in the front yard. The flowering cherry is in fair condition. The remaining trees on the property are "not protected" and include two mature persimmons and a saucer magnolia.



Image #1 – Tree T1 – flowering cherry, the only "protected" tree on the property.

Tree Inventory & Impact Assessment
Parcel Improvements

1019 Edmonds Court
Page 4

DISCUSSION

A total of 13 trees were inventoried. All thirteen trees are recommended for removal. Six trees, T2,3,4,5,6, and 7, are located within the footprint of the new home or new garage. Three trees, T1, T11 & T13, are located within the footprint of the new driveway, pool or pool equipment shed. One tree, T8 is located less than 3 feet from the new home foundation, will suffer significant root loss and cannot be effectively clearance pruned with significant structural damage. Three "not protected" trees T9, T10 & T12 will suffer moderate to low impacts, but are not compatible with the new landscape design and their removal is recommended.

"Protected" tree T1, a flowering cherry is within the footprint of the new driveway. No reasonable alteration of the proposed driveway footprint would allow for its retention.

TOTAL SUBJECT TREES: 13 Trees

Protected: 1		
1	Flowering Cherry	(<i>Prunus serrulata</i>)
Not Protected: 12		
2	Persimmon	(<i>Diospyros sp.</i>)
2	Citrus	(<i>Citrus sp.</i>)
2	Hollywood juniper	(<i>Juniperus chinensis 'Torulosa'</i>)
2	Plum	(<i>Prunus sp.</i>)
1	Mexican Fan Palm	(<i>Washingtonia robusta</i>)
1	Lemon Bottlebrush	(<i>Callistemon citrinus</i>)
1	Saucer Magnolia	(<i>Magnolia soulangiana</i>)
1	Japanese maple	(<i>Acer palmatum</i>)
1	Willow	(<i>Salix sp.</i>)

Tree Evaluation and Recording Methods

Site evaluations were made on 11/10/2018. *The inventory included all trees on the property within the project limits.* The health and structural condition of each tree was assessed and recorded. Based on the trees health and structural condition, each trees **suitability for preservation** was rated and recorded.

The recorded data is included in the *Tree Assessment Chart, Appendix A*, of this report. Tree numbers were plotted on the attached *Tree Protection Plan sheet, T1*. To correlate the data in the *Tree Assessment Chart to the tree's location on the site, refer to the Tree Location Map sheet - Appendix C*.

Tree Inventory & Impact Assessment
Parcel Improvements

1019 Edmonds Court
Page 5

Condition Rating

A trees condition is determined by an assessing both the **health** and **structure**, then combining the two factors to reach a *condition rating*. Tree condition is rated as poor, fair or good. The quantity of trees assigned for each category (good, fair or poor), is indicated below:

Tree Condition Rating	
• Good -	3
• Fair -	9
• Poor -	1

Suitability for Preservation

A trees suitability for preservation is determined based on its health, structure, age, species characteristics and longevity using a scale of good, fair or poor. The quantity of trees assigned to each category (good, fair or poor), is listed below.

Suitability Rating	
• Good -	3
• Fair -	9
• Poor -	1

Impact Level

Impact level rates the degree a tree may be impacted by construction activity and is primarily determined by how close the construction procedures occur to the tree. Construction impacts are rated as low, moderate, high. The quantity of trees assigned for each category (low, moderate, high), is indicated below:

Impact Rating	
• Low -	2
• Moderate -	1
• High -	10

Tree Inventory & Impact Assessment
Parcel Improvements

1019 Edmonds Court
Page 6

Tree Protection Zone

The tree protection zone (TPZ), is a defined area within which certain activities are prohibited or restricted to minimize potential injury to designated trees during construction.

The size of the optimal TPZ can be determined by a formula based on: 1) trunk diameter 2) species tolerance to construction impacts, and 3) tree age (Matheny, N. and Clark, J 1998). In some instances, tree drip line is used as the TPZ. Development constraints can also influence the final size of the tree protection zone.

Fencing is installed to delineate the (TPZ), and to protect tree roots, trunk, and scaffold branches from construction equipment. *The fenced protection area may be smaller than the optimal or designated TPZ area in some circumstances.* Tree protection may also involve the armoring of the tree trunk and/or scaffold limbs with barriers to prevent mechanical damage from construction equipment. *See Tree Protection Guidelines & Restrictions – Appendix E.*

Once the TPZ is delineated and fenced (prior to any site work, equipment and materials move in), construction activities are only to be permitted within the TPZ if allowed for and specified by the project arborist.

Where tree protection fencing cannot be used, or as an additional protection from heavy equipment, tree wrap may be used. Wooden slats at least one inch thick are to be bound securely, edge to edge, around the trunk. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the outside of the wooden slats. Major scaffold limbs may require protection as determined by the City arborist or Project arborist. Straw wattie may also be used as a trunk wrap and secured with orange plastic fencing.

Data has been entered in the *Tree Assessment Chart – Appendix A*, which indicates the optimal Tree Protection Zone for each tree.

Additional general tree protection guidelines are included in *Tree Protection Guidelines & Restrictions – Appendix G*.

Critical Root Zone

Critical Root Zone (CRZ) is the area of soil around the trunk of a tree where roots are located that provide critical stability, uptake of water and nutrients required for a tree's survival. The CRZ is the minimum distance from the trunk that trenching that requires root cutting should occur and can be calculated as three to the five times the trunk Diameter at Breast Height (DBH). For example, if a tree is one foot in trunk diameter than the CRZ is three to five feet from the trunk location. We will often average this as four times the trunk diameter or 1ft. DBH = 4ft. CRZ (Smiley, E.T., Fraedrich, B. and Hendrickson, N. 2007).

Tree Inventory & Impact Assessment
Parcel Improvements

1019 Edmonds Court
Page 7

Construction Impacts to Subject Trees

Demolition Elements Affecting Subject Trees

- Removal of existing home foundation

Construction Phases Affecting Subject Trees –

- Installation of new home, garage and foundation.
- Installation of new driveway, pool or pool equipment shed.
- Installation of new landscaping.
- Installation of new utilities.

Impacts to Subject Trees by Tree Number –

Demolition:

- Removal of existing foundation will impact trees T2,T3,T4,T5,T6,T7, & T8.

Construction Phases:

- Installation of new home, garage and foundation will impact trees T2,T3,T4,T5,T6 & T7
- Installation of new driveway will impact tree T1.
- Installation of new pool will impact tree T11.
- Installation of new pool equipment shed will impact tree T13.
- Installation of new landscaping will impact trees T9, T10 & T12.
- Installation of new utilities, *if installed*, could impact trees T1, T2, T3, & T4.

Tree Replacement

If "protected" trees are removed, replacement trees will be required.

The following is an excerpt from the City of Sunnyvale Municipal Code Section 19.94.110: *Requirements concerning protected trees during site development or modification.*

(c) Replanting Plans. When protected trees must be removed, replanting plans shall be submitted as part of the landscaping plan for the proposed project. The replanting plan shall be subject to the requirements of Section 19.94.110., but actual number and sizes of replacement trees shall be reviewed on a case by case basis

Tree Inventory & Impact Assessment
Parcel Improvements

1019 Edmonds Court
Page 8

CONCLUSION

- An existing home will be demolished, and a new single-family home will be constructed.
- Thirteen trees including one "protected" tree, were inventoried.
- The thirteen trees are comprised of ten species. Most of the trees are in fair to good condition.
- One "protected" tree is in fair condition, will suffer significant construction impacts and its removal is recommended.
- Nine "not protected" trees are in fair to good condition, will suffer significant construction impacts and their removal is recommended.
- Three "not protected" trees are in fair to good condition, will suffer low construction impacts but are not compatible with the new landscape plan and their removal is recommended.
- If removal is approved, replacement trees will be required for removal of "protected" tree T1.
- A landscape planting plan, which includes replacement trees will be submitted with plan set.
- The number and size of replacement trees shall be determined by the City of Sunnyvale.

RECOMMENDATIONS

- Obtain all necessary permits prior to removing or significantly altering any trees on site.
- If protected trees are removed, plant replacement trees. Size and number to be determined by the City of Sunnyvale.

Respectfully submitted,

Kurt Fouts

Kurt Fouts ISA Certified Arborist WE0681A



1019 Edmonds Court, Sunnyvale
Tree Assessment Chart - Appendix A

Suitability for Preservation Ratings:

Good: Trees in good health and structural condition with potential for longevity on the site.

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment

Retention or Removal Code:

R1: Retain Tree
R2: Remove Tree due to Construction Impact

I.M.: Impacts due to Mitigation with the Tree
I.C.M.: Impacts due to Condition

Protected Tree City of Sunnyvale -


Any tree 12 inches or greater in diameter measured at 4.5 feet above grade


Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T1	Flowering cherry (<i>Prunus serrulata</i>)	3"	Yes	15'x20'	Fair	Fair	Fair	15'	High (Root loss excavation)	R1	Within new driveway footprint.
T2	Citrus (<i>Citrus sp.</i>)	3", 3", 2"	No	6'x5'	Fair	Fair	Fair	6'	High (Root loss excavation)	R1	Within footprint of new garage.

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Page 1 of 3

11/10/2018

Tree Assessment Chart - Appendix A												
Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments	
T3	Citrus (<i>Citrus sp.</i>)	3", 3"	No	6'x6'	Poor	Poor	Poor	6'	High (Root loss excavation)	R1	Within footprint of new home.	
T4	Hollywood juniper (<i>Juniperus chinensis 'Torulosa'</i>)	6", 4", 4", 3", 1"	No	8'x10'	Fair	Fair	Fair	10'	High (Root loss excavation)	R1	Within footprint of new home.	
T5	Japanese maple (<i>Acer palmatum</i>)	5", 4"	No	10'x10'	Poor	Poor	Poor	6'	High (Root loss excavation)	R1	Within footprint of new home.	
T6	persimmon (<i>Diospyros sp.</i>)	9" (at 3.5' above grade)	No	17'x20'	Good	Good	Good	20'	High (Root loss excavation)	R1	Within footprint of new home. Scaffolds start at 4' above grade.	
T7	persimmon	12" (at 3.5' above grade)	No	17'x30'	Good	Good	Good	30'	High (Root loss excavation)	R1	Within footprint of new home. Scaffolds start at 4' above grade.	
T8	plum (<i>Prunus sp.</i>)	3", 1", 2"	No	12'x15'	Fair	Fair	Fair	15'	High (Root loss excavation, Canopy late clearance pruning)	R1	Less than 3' from new home foundation.	
 Kurt Poulsen Consulting 205 Montgomery Avenue Palo Alto, CA 94301 www.kurt-poulsen.com or kurt@kurt-poulsen.com								Page 2 of 3		11/10/2018		

Tree Assessment Chart - Appendix A													
Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments		
T9	Mexican fan palm (<i>Washingtonia robusta</i>)	5"	No	20'x2'	Fair	Good	Good	6'	Low (Root loss excavation)	Removes- Not compatible with new landscape plan	R1	7' from new home foundation. Not compatible with new landscape plan.	
T10	Hollywood juniper (<i>Juniperus chinensis 'Torulosa'</i>)	10"	No	20'x20'	Fair	Fair	Fair	10'	Moderate (Root loss excavation)	Removes- Not compatible with new landscape plan	R1	9' from new home foundation. Not compatible with new landscape plan.	
T11	Lemon bottlebrush (<i>Callistemon citrinus</i>)	8", 5", 4", 4"	No	12'x30'	Fair	Fair	Fair	10'	High (Root loss excavation)	R1	Within foot print of new pool.		
T12	Saucer magnolia (<i>Magnolia soulangiana</i>)	8", 7"	No	25'x20'	Fair	Fair	Fair	15'	Low (Root loss, new phoning excavation)	Removes- Not compatible with new landscape plan	R1	Not compatible with new landscape plan.	
T13	willow (<i>Salix sp.</i>)	12" (at 3.5' above grade)	Yes	25'x15'	Fair	Fair	Fair	10'	High (Root loss excavation)	R1			
 Kurt Poulsen Tree Management Services Phone: 950.965.1000 Email: kurt@kurtspoulsen.com												Page 3 of 3	11/10/2018

APPENDIX B – CRITERIA FOR TREE ASSESSMENT CHART

Following is an explanation of the data used in the tree evaluations. The data is incorporated in the *Tree Assessment Chart, Appendix A*.

Trunk Diameter and Number of Trunks:

Trunk diameter as measured at 4.5 feet above grade. The number of trunks refers to a single or multiple trunked tree. Multiple trunks are measured at 4.5 feet above grade.

Health Ratings:

Good: A healthy, vigorous tree, reasonably free of signs and symptoms of disease

Fair: Moderate vigor, moderate twig and small branch dieback, crown may be thinning and leaf color may be poor

Poor: Tree in severe decline, dieback of scaffold branches and/or trunk, most of foliage from epicormics

Structure Ratings:

Good: No significant structural defects. Growth habit and form typical of the species

Fair: Moderate structural defects that might be mitigated with regular care

Poor: Extensive structural defects that cannot be abated.

Suitability for Preservation Ratings:

Rating factors:

Tree Health: Healthy vigorous trees are more tolerant of construction impacts such as root loss, grading and soil compaction, then are less vigorous specimens.

Structural integrity: Preserved trees should be structurally sound and absent of defects or have defects that can be effectively reduced, especially near structures or high use areas.

Tree Age: Over mature trees have a reduced ability to tolerate construction impacts, generate new tissue and adjust to an altered environment. Young to maturing specimens are better able to respond to change.

Species response: There is a wide variation in the tolerance of individual tree species to construction impacts.

Rating Scale:

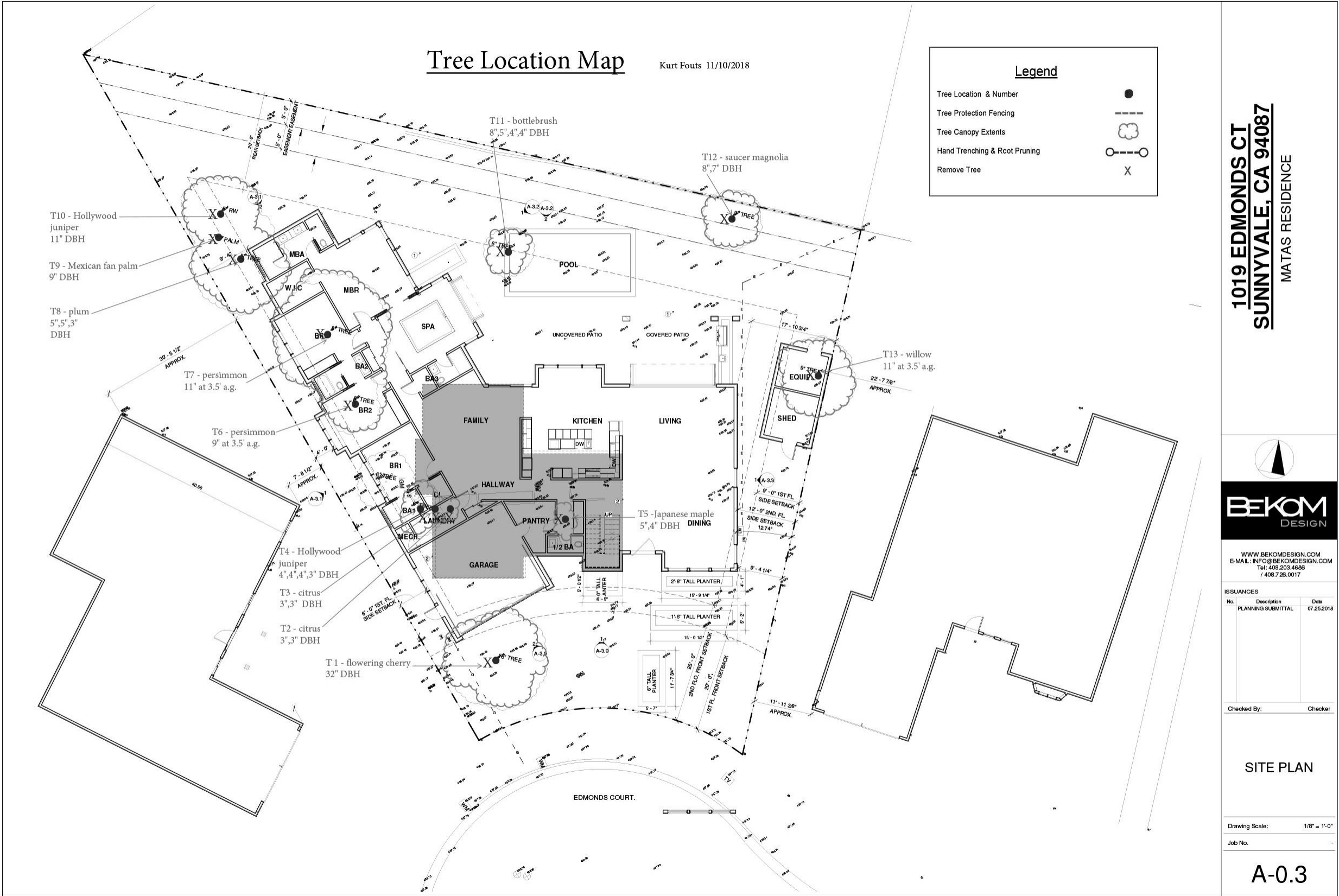
Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures.

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment. Trees can be expected to decline or fail regardless of construction impacts or management . The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

Construction Impacts:

Rating Scale:



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Matheny, N. and Clark, J. Evaluation of Hazard Trees in Urban Areas. Champaign, IL: Wadley Graphix Corp. c.1994

Smiley, E.T., Matheny, N., Lilly, S. Tree Risk Assessment – Best Management Practices. Champaign, ILL: International Society of Arboriculture c. 2011

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Appendix E - TREE PROTECTION GUIDELINES AND RESTRICTIONS

Protecting Trees During Construction:

- Before the start of site work, equipment or materials move in, clearing, excavation, construction, or other work on the site, every tree to be retained shall be securely fenced- off as delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.
- If the proposed development, including any site work, will encroach upon the tree protection zone, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.
- Underground trenching shall avoid the major support and absorbing tree roots of protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required. Trenches shall be consolidated to service as many units as possible. Boring/tunneling under roots should be considered as an alternative to trenching.
- Concrete or asphalt paving shall not be placed over the root zones of protected trees, unless otherwise permitted by the project arborist.
- Artificial irrigation shall not occur within the root zone of native oaks, unless deemed appropriate on a temporary basis by the project arborist to improve tree vigor or mitigate root loss.
- Compaction of the soil within the tree protection zone shall be avoided.
- Any excavation, cutting, or filling of the existing ground surface within the tree protection zone shall be minimized and subject to such conditions as the project arborist may impose. Retaining walls shall likewise be designed, sited, and constructed to minimize their impact on protected trees.
- Burning or use of equipment with an open flame near or within the tree protection zone shall be avoided. All brush, earth, and other debris shall be removed in a manner that prevents injury to the tree.
- Oil, gas, chemicals, paints, cement, stucco or other substances that may be harmful to trees shall not be stored or dumped within the tree protection zone of any protected tree, or at any other location on the site from which such substances might enter the tree protection zone of a protected tree.
- Construction materials shall not be stored within the tree protection zone of a protected tree.

Project Arborist Duties and Inspection Schedule:

The project arborist is the person(s) responsible for carrying out technical tree inspections, assessment of tree health, structure and risk, arborist report preparation, consultation with designers and municipal planners, specifying tree protection measures, monitoring, progress reports and final inspection.

A qualified project arborist (or firm) should be designated and assigned to facilitate and insure tree preservation practices. He/she/they should perform the following inspections:

Inspection of site: Prior to equipment and materials move in, site work, demolition, landscape construction and tree removal. The project arborist will meet with the general contractor, architect / engineer, and owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection fencing, specify equipment access routes and materials storage areas, review the existing condition of trees and provide any necessary recommendations.

Inspection of site: During excavation or any activities that could affect trees. Inspect site during any activity within the Tree Protection Zones of preserved trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.

Final Inspection of Site: Inspection of site following completion of construction. Inspect for tree health and make any necessary recommendations.

Kurt Fouts shall be the Project Arborist for this project. All scheduled inspections shall include a brief Tree Monitoring report, documenting activities and provided to the City Arborist.

Tree Protection Fencing

Tree Protection fencing shall be installed prior to the arrival of construction equipment or materials. Fence shall be comprised of six -foot chain link fence mounted on eight - foot tall, 1 and 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced on a minimum of 10-foot centers. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

A final inspection by the City Arborist at the end of the project will be required prior to removing any tree protection fencing.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Tree Work Standards and Qualifications

All tree work, removal, pruning, planting, shall be performed using industry standards of workmanship as established in the Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute series, *Safety Requirements in Arboriculture Operations* ANSI Z133-2017,

Contractor licensing and insurance coverage shall be verified.

During tree removal and clearance, sections of the Tree Protection Fencing may need to be temporarily dismantled to complete removal and pruning specifications. After each section is completed, the fencing is to be re-installed.

Trees to be removed shall be cut into smaller manageable pieces consistent with safe arboricultural practices, and carefully removed so as not to damage any surrounding trees or structures. The trees shall be cut down as close to grade as possible. Tree removal is to be performed by a qualified contractor with valid City Business/ State Licenses and General Liability and Workman's Compensation insurance.

Development Site Tree Health Care Measures

RECOMMENDED TO PROVIDE OPTIMUM GROWING CONDITIONS, PHYSIOLOGICAL INVIGORATION AND STAMINA, FOR PROTECTION AND RECOVERY FROM CONSTRUCTION IMPACT.

Establish and maintain TPZ fencing, trunk and scaffold limb barriers for protection from mechanical damage, and other tree protection requirements as specified in the arborist report.

Project arborist to specify site-specific soil surface coverings (wood chip mulch or other) for prevention of soil compaction and loss of root aeration capacity.

Soil, water and drainage management is to follow the ISA BMP for "Managing Trees During Construction" and the ANSI Standard A300(Part 2)- 2011 Soil Management (a. Modification, b. Fertilization, c. Drainage.)

Fertilizer / soil amendment product(s) amounts and method of application to be specified by certified arborist.

City of Sunnyvale – Protected Tree

- “Protected tree” means a tree of significant size.
- “Significant size” means a tree thirty-eight inches or greater in circumference measured four and one-half feet above ground for single-trunk trees. For multi-trunk trees “significant size” means a tree which has at least one trunk with a circumference thirty-eight inches or greater measured four and one-half feet above ground level, or in which the measurements of the circumferences of each of the multi-trunks, when measured four and one-half feet above the ground level, added together equal an overall circumference one hundred thirteen inches or greater.

ASSUMPTIONS AND LIMITING CONDITIONS

- Any legal description provided by the appraiser/consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as the quality of any title.
- The appraiser/consultant can neither guarantee nor be responsible for accuracy of information provided by others.
- The appraiser/consultant shall not be required to give testimony or to attend court by reason of this appraisal unless subsequent written arrangements are made, including payment of an additional fee for services.
- Loss or removal of any part of this report invalidates the entire appraisal/evaluation.
- Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person(s) to whom it is addressed without written consent of this appraiser/consultant.
- This report and the values expressed herein represent the opinion of the appraiser/consultant, and the appraiser/consultant's fee is in no way contingent upon the reporting of a specified value nor upon any finding to be reported.
- Sketches. Diagrams. Graphs. Photos. Etc., in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys.
- This report has been made in conformity with acceptable appraisal/evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.
- When applying any pesticide, fungicide, or herbicide, always follow label instructions.
- No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects which could only have been discovered by climbing. A full root collar inspection, consisting of excavating around the tree to uncover the root collar and major buttress roots, was not performed, unless otherwise stated. We cannot take responsibility for any root defects which could only have been discovered by such an inspection.

CONSULTING ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education. Knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.

Kurt Fouts
Arborist Consultant

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MEMBER
INTERNATIONAL SOCIETY OF ARBORICULTURE
ISA

1019 EDMONDS CT
SUNNYVALE, CA 94087
MATAS RESIDENCE

BEKOM
DESIGN

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ISSUANCES		
No.	Description	Date
1	PLANNING SUBMITTAL	07.25.2018
1	PLANNING PLAN CHECK COMMENTS 1	11.16.2018
2	REVISION 1	11.16.2018
3	PLANNING PLAN CHECK COMMENTS 2	12.19.2018

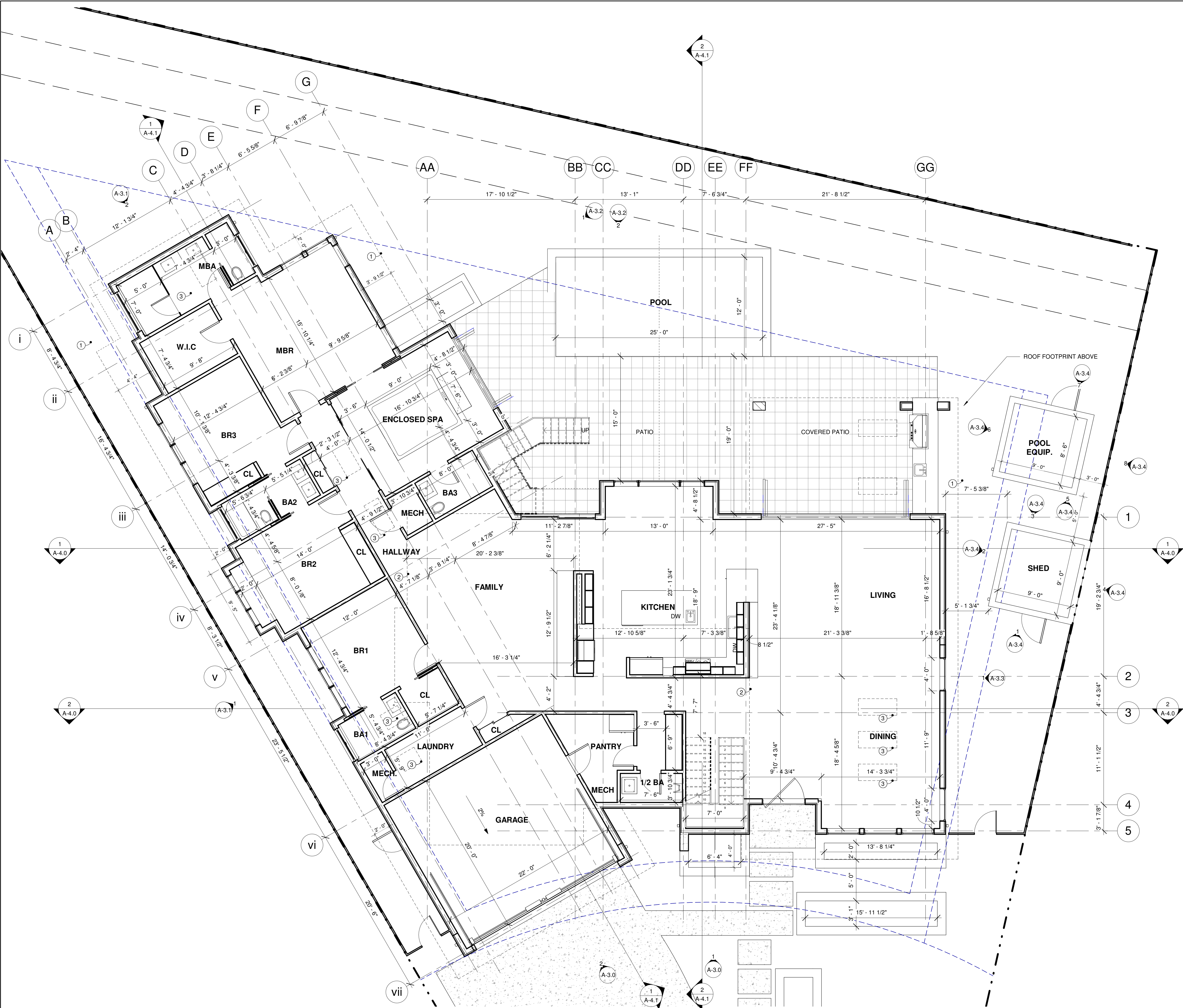
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ARBORIST REPORT

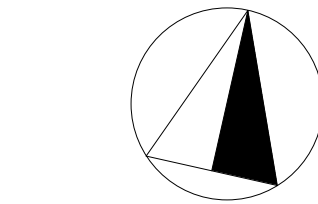
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Job No. -

A-0.12



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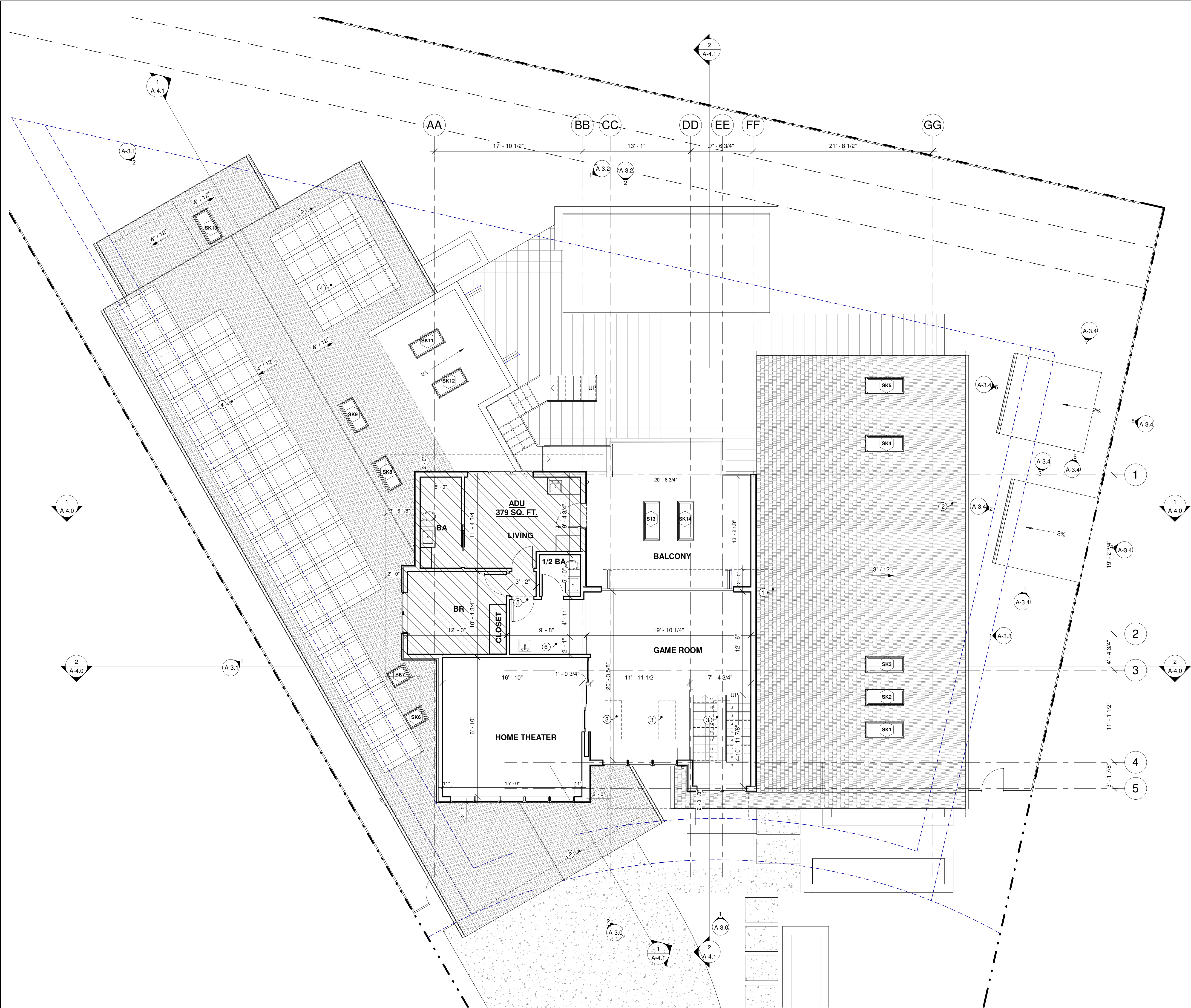
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PROPOSED
FIRST FLOOR
PLAN

Drawing Scale: 3/16" = 1'-0"

Job No.

A-1.0



- LEGEND**
- 1 ROOF FOOTPRINT, ABOVE
 - 2 FIRST FLOOR FOOTPRINT, BELOW
 - 3 SKYLIGHTS
 - 4 SOLAR PANELS
 - 5 1 HOUR FIRE RATED DOOR, SELF CLOSING AND LATCHING, TO BE INSTALLED BETWEEN ADU AND MAIN HOUSE
 - 6 WETBAR - NO COOKING EQUIPMENT PROPOSED

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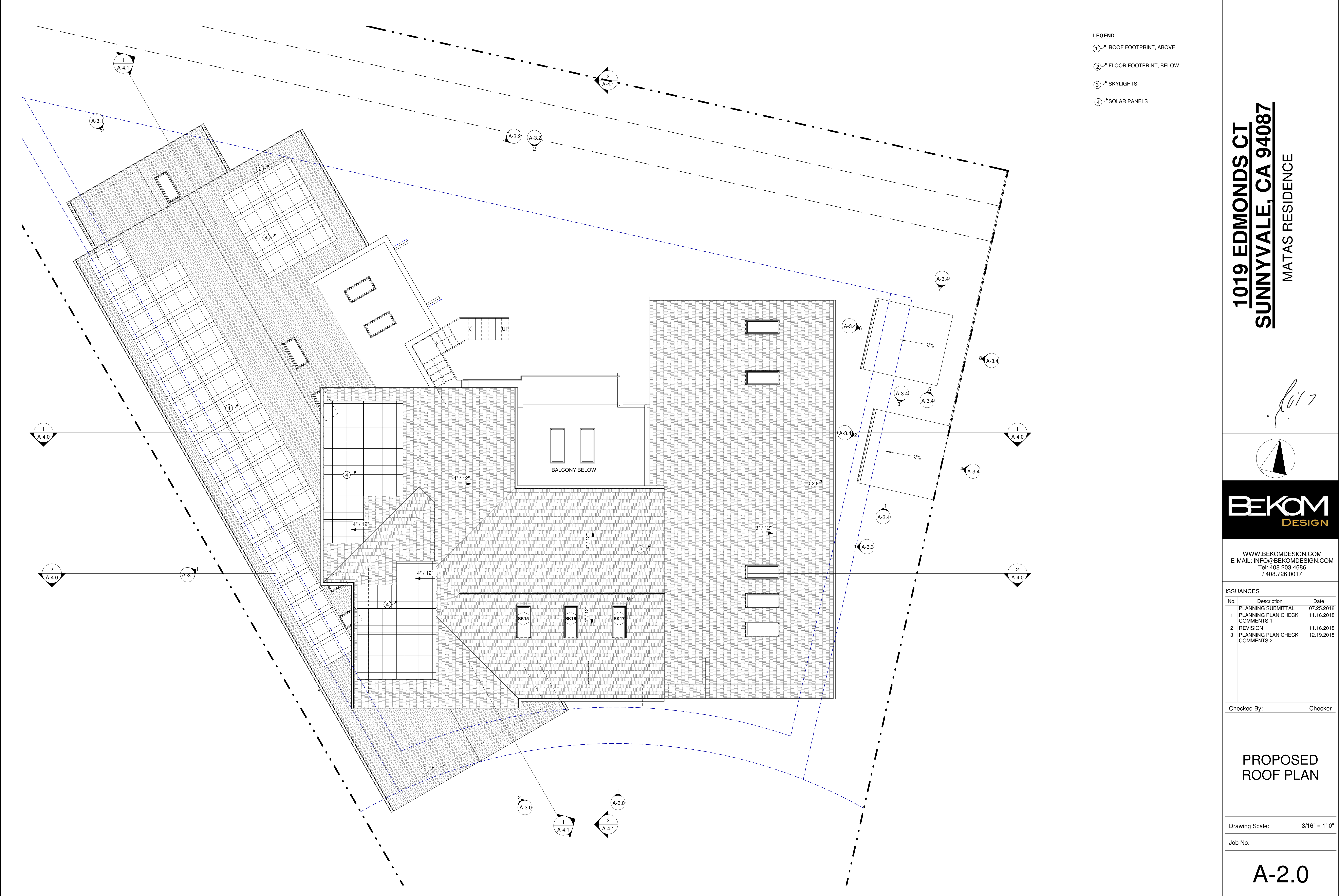
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PROPOSED
SECOND FLOOR
PLAN

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Job No. _____

A-1.1



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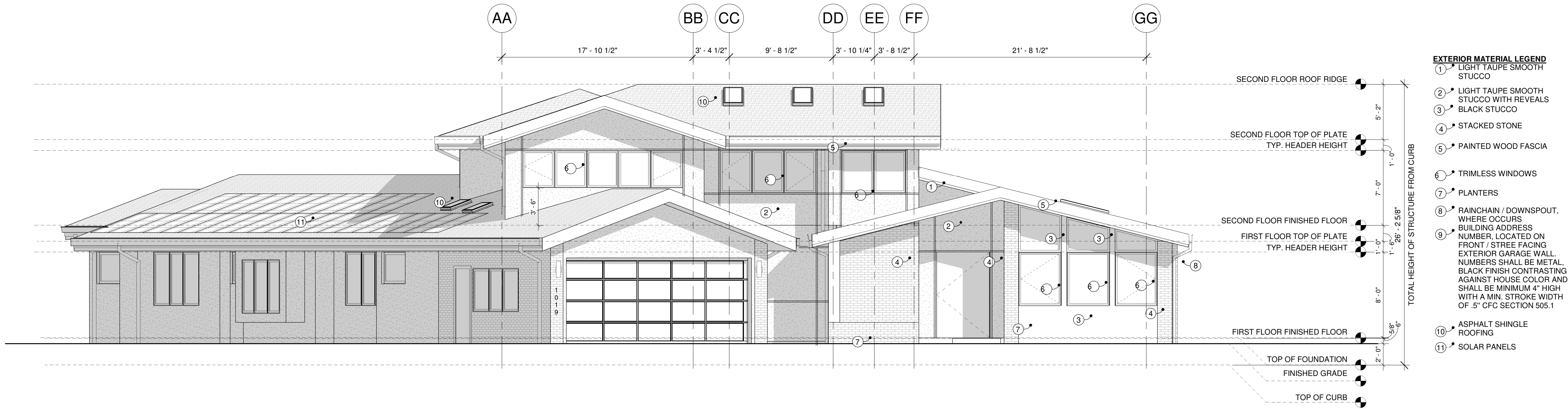
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PROPOSED
ELEVATIONS

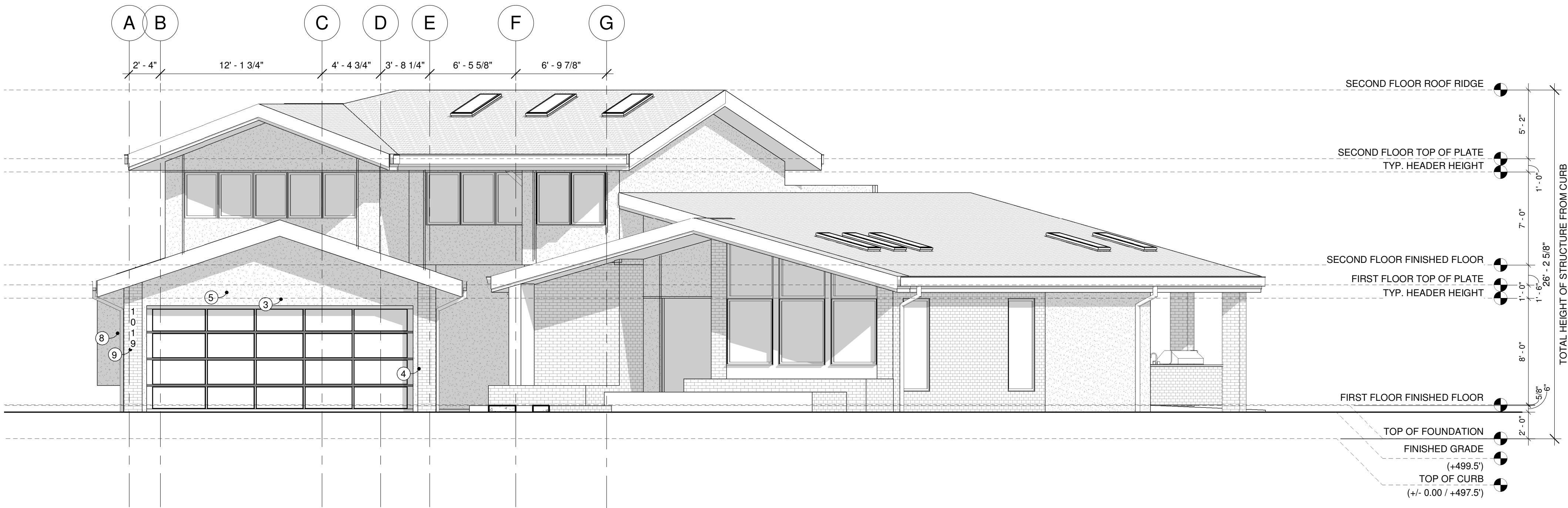
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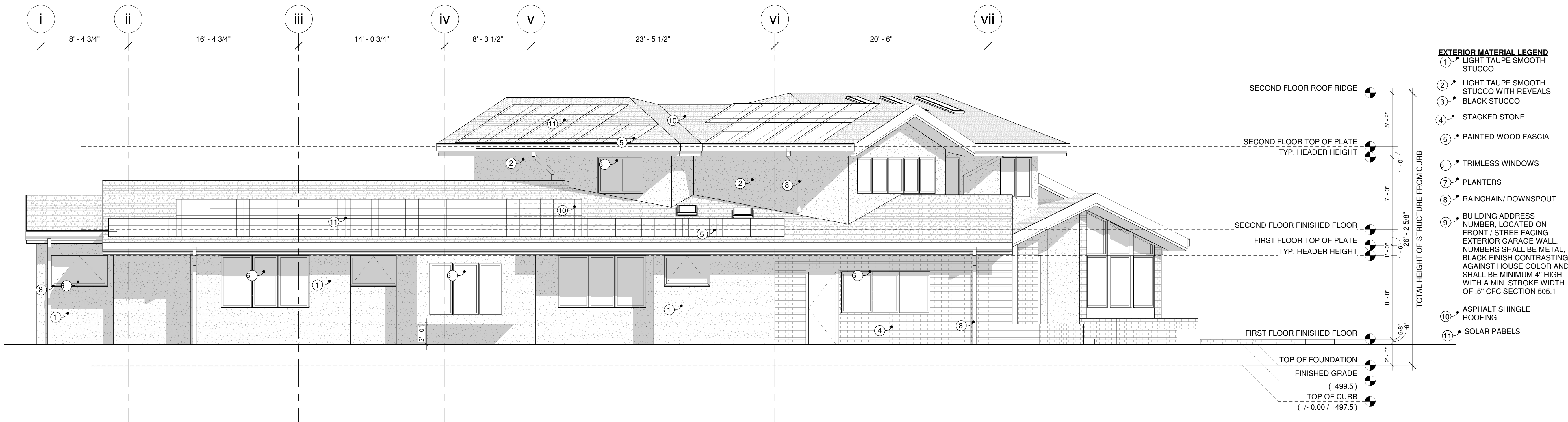
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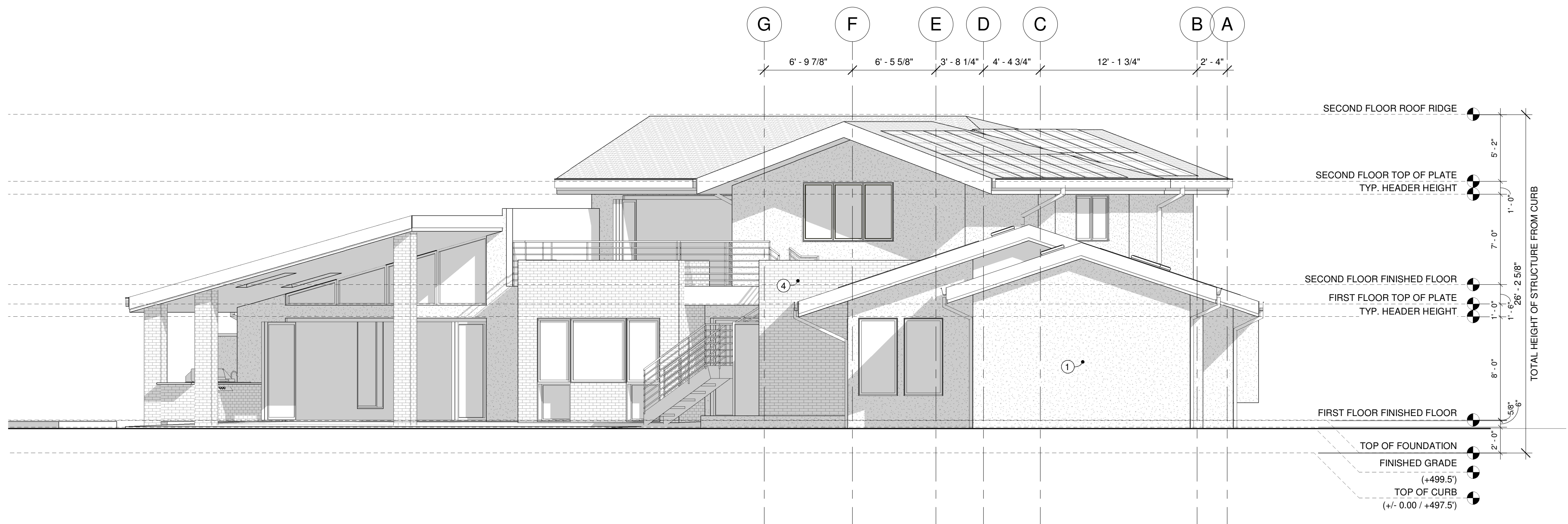
1 SOUTH ELEVATION
3/16" = 1'-0"



2 SOUTH EAST ELEVATION
3/16" = 1'-0"



1 WEST ELEVATION
3/16" = 1'-0"



2 NORTH WEST ELEVATION
3/16" = 1'-0"

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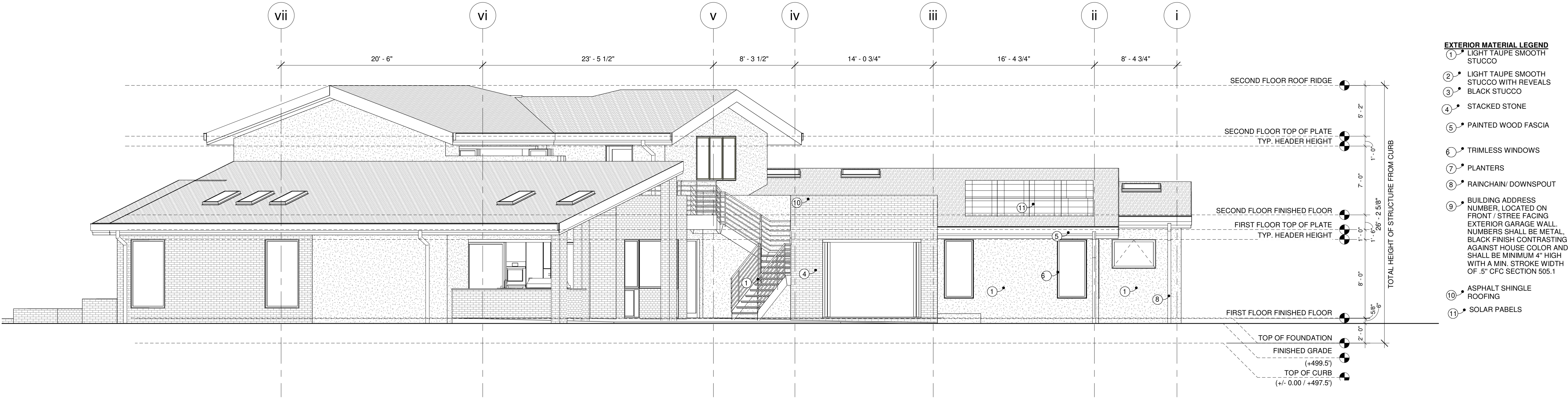
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PROPOSED
ELEVATIONS

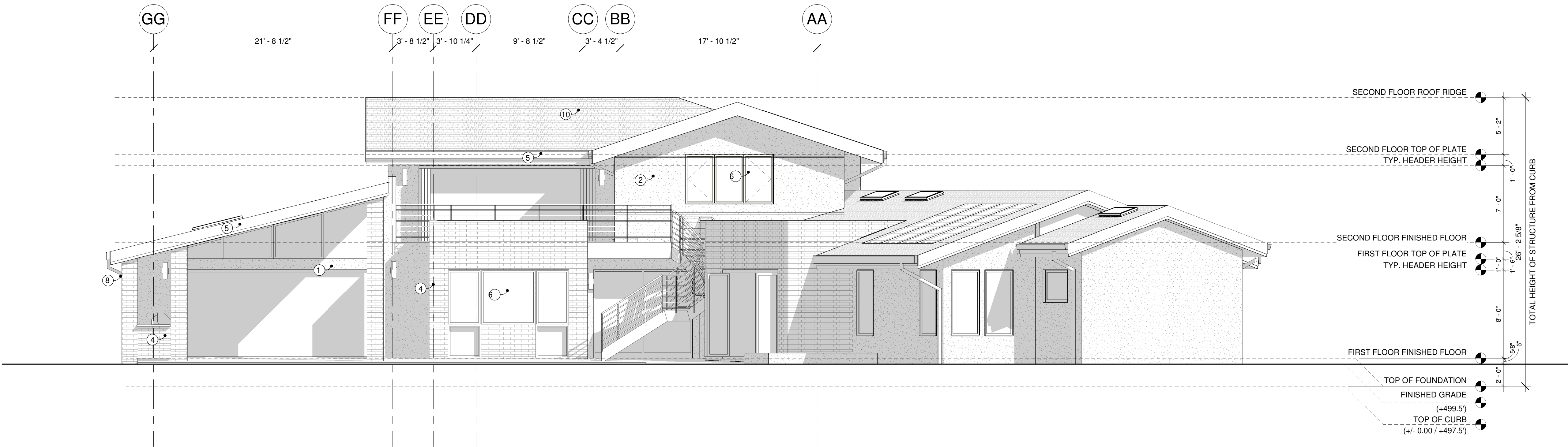
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Job No. -

A-3.1



1 NORTH EAST ELEVATION
3/16" = 1'-0"



2 NORTH ELEVATION
3/16" = 1'-0"

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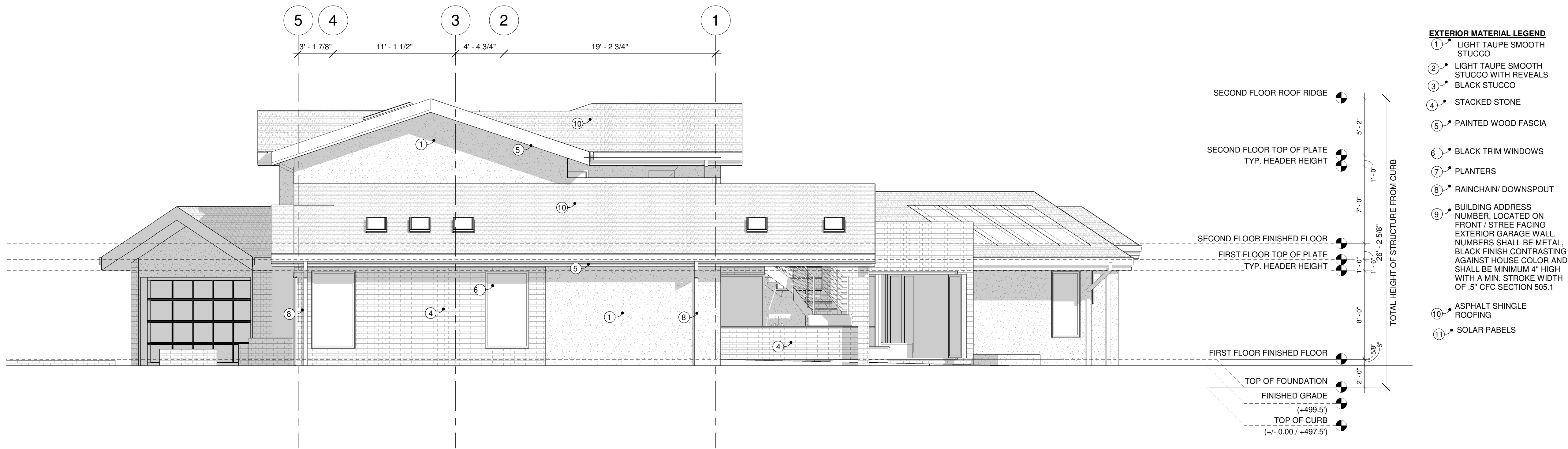
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PROPOSED
ELEVATIONS

Drawing Scale: 3/16" = 1'-0"

Job No. -

A-3.2



1 EAST ELEVATION
3/16" = 1'-0"

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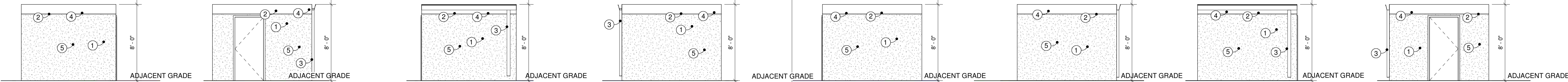
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PROPOSED
ELEVATIONS

Drawing Scale: 3/16" = 1'-0"

Job No. -

A-3.3



- EXTERIOR MATERIAL LEGEND**
- ① DARK TAUPE SMOOTH STUCCO
 - ② PAINTED WOOD FASCIA
 - ③ GUTTER AND DOWNSPOUT
 - ④ FLAT ROOF
 - ⑤ 1 HOUR FIRE RATED WALL

8 POOL EQUIPMENT EAST ELEVATION
3/16" = 1'-0"

7 POOL EQUIPMENT NORTH ELEVATION
3/16" = 1'-0"

6 POOL EQUIPMENT WEST ELEVATION
3/16" = 1'-0"

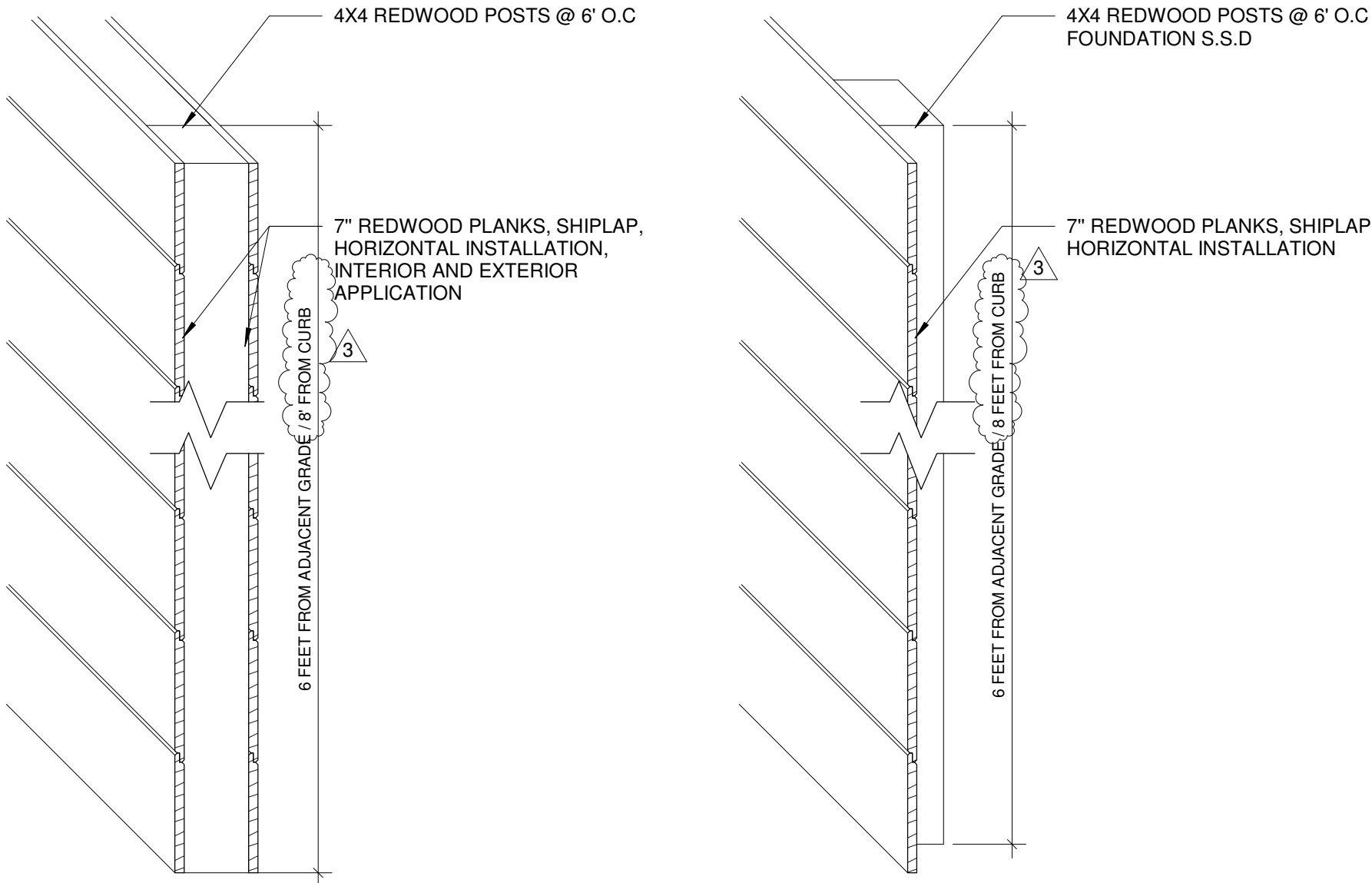
5 POOL EQUIPMENT SOUTH ELEVATION
3/16" = 1'-0"

4 SHED EAST ELEVATION
3/16" = 1'-0"

3 SHED NORTH ELEVATION
3/16" = 1'-0"

2 SHED WEST ELEVATION
3/16" = 1'-0"

1 SHED SOUTH ELEVATION
3/16" = 1'-0"

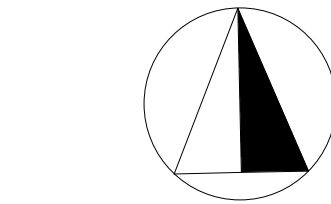


GATE

FENCE

9 FENCE AND GATE DETAILS
1 1/2" = 1'-0"

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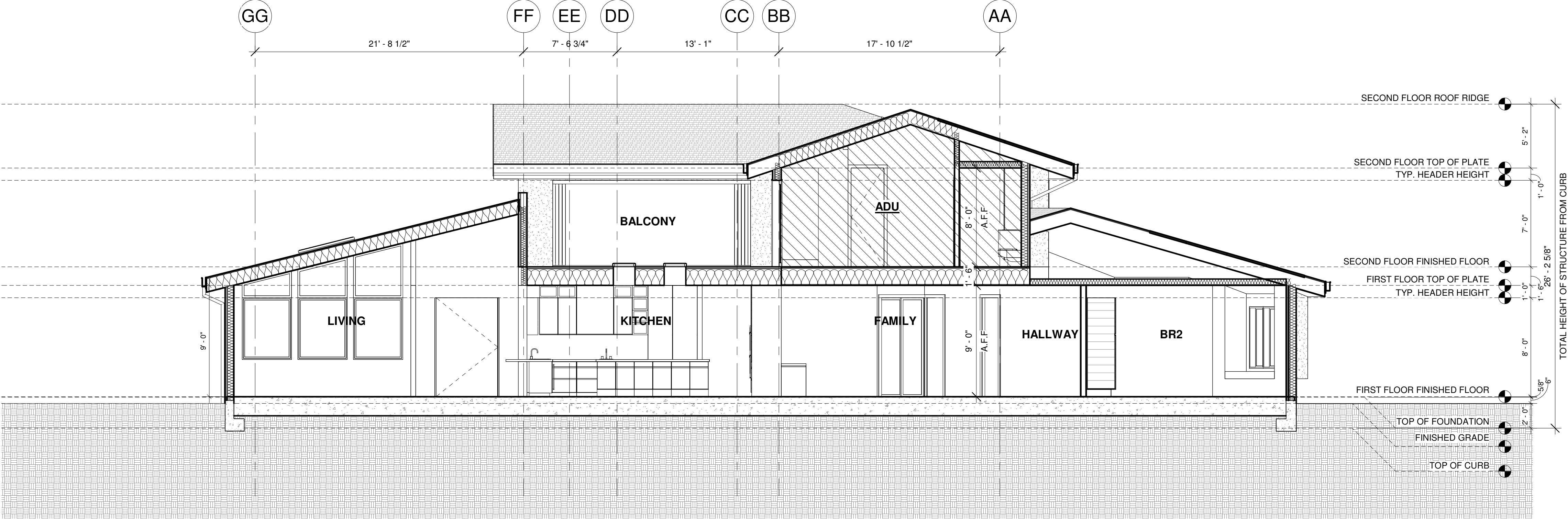
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PROPOSED
ELEVATIONS

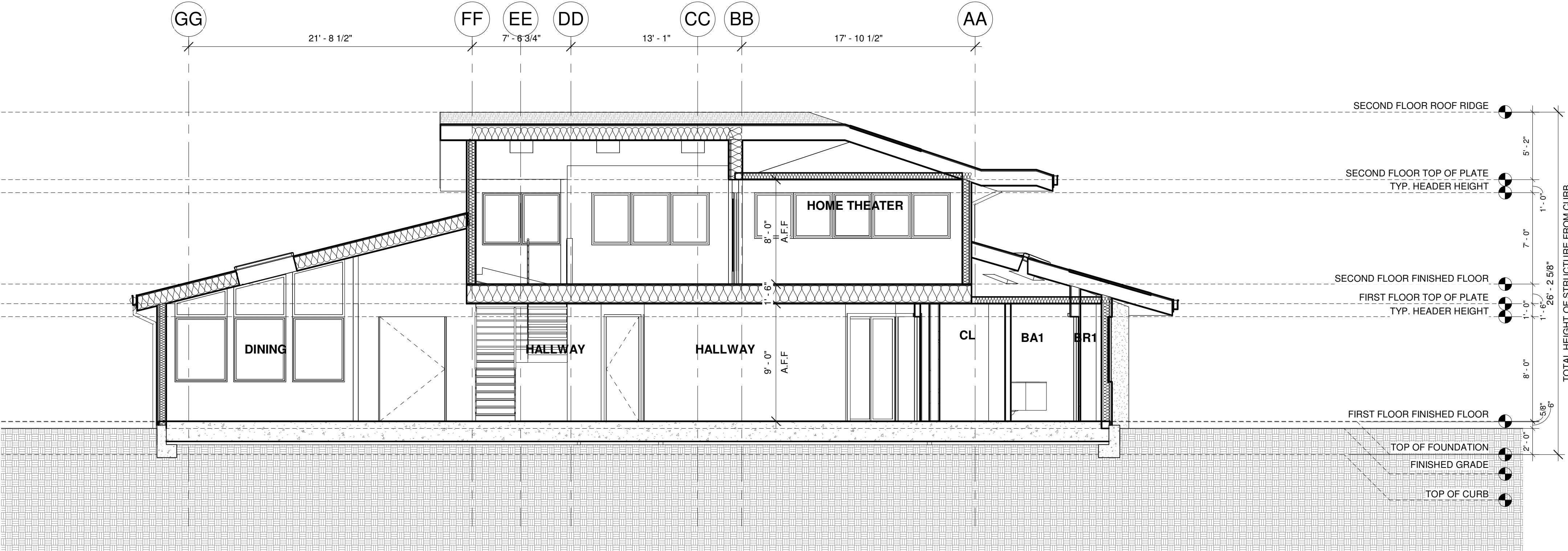
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A-3.4



1 SECTION A-A
3/16" = 1'-0"



2 SECTION B-B
3/16" = 1'-0"

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BUILDING
SECTIONS

Drawing Scale: 3/16" = 1'-0"

Job No. -

A-4.0

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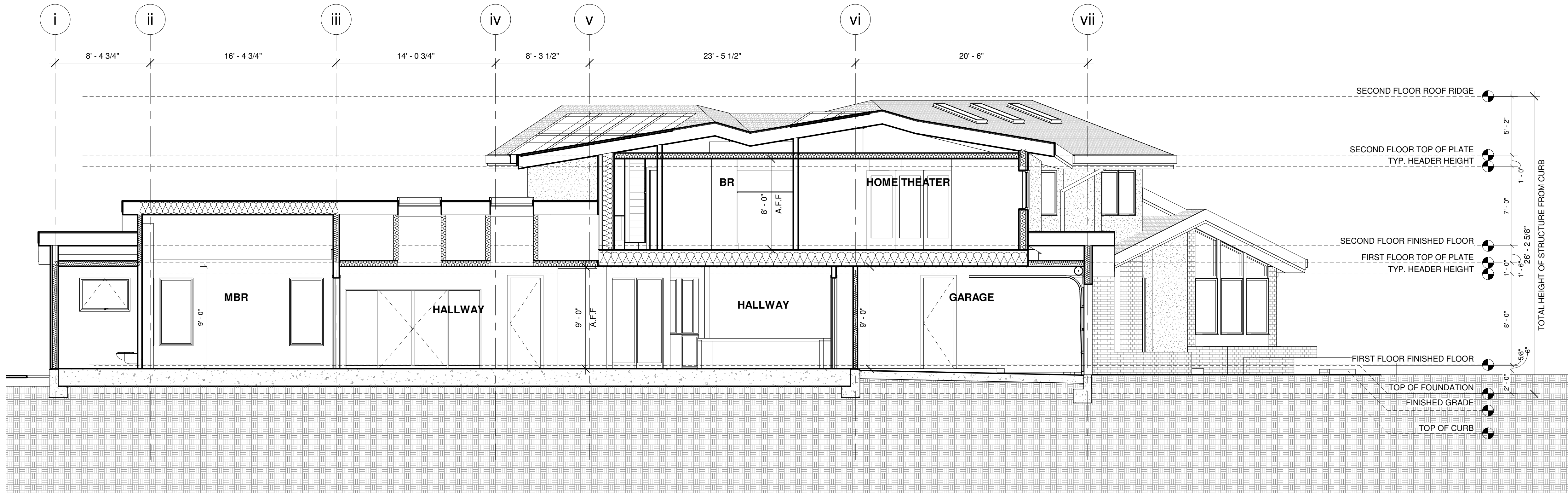
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BUILDING
SECTIONS

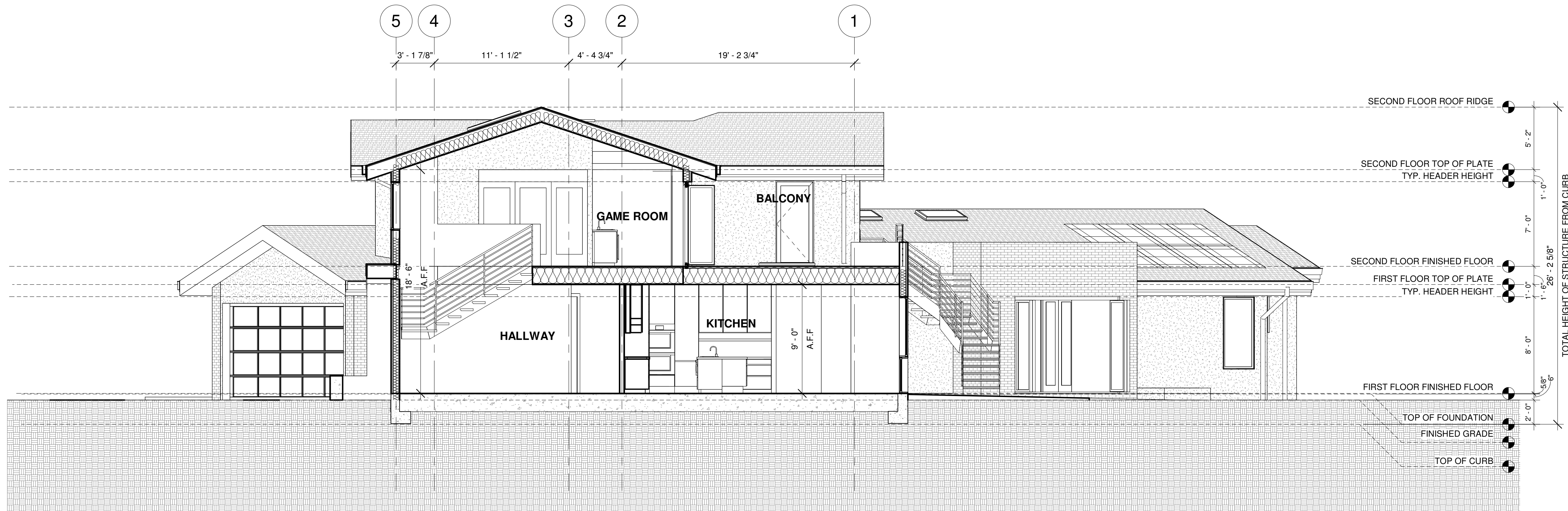
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Job No. -

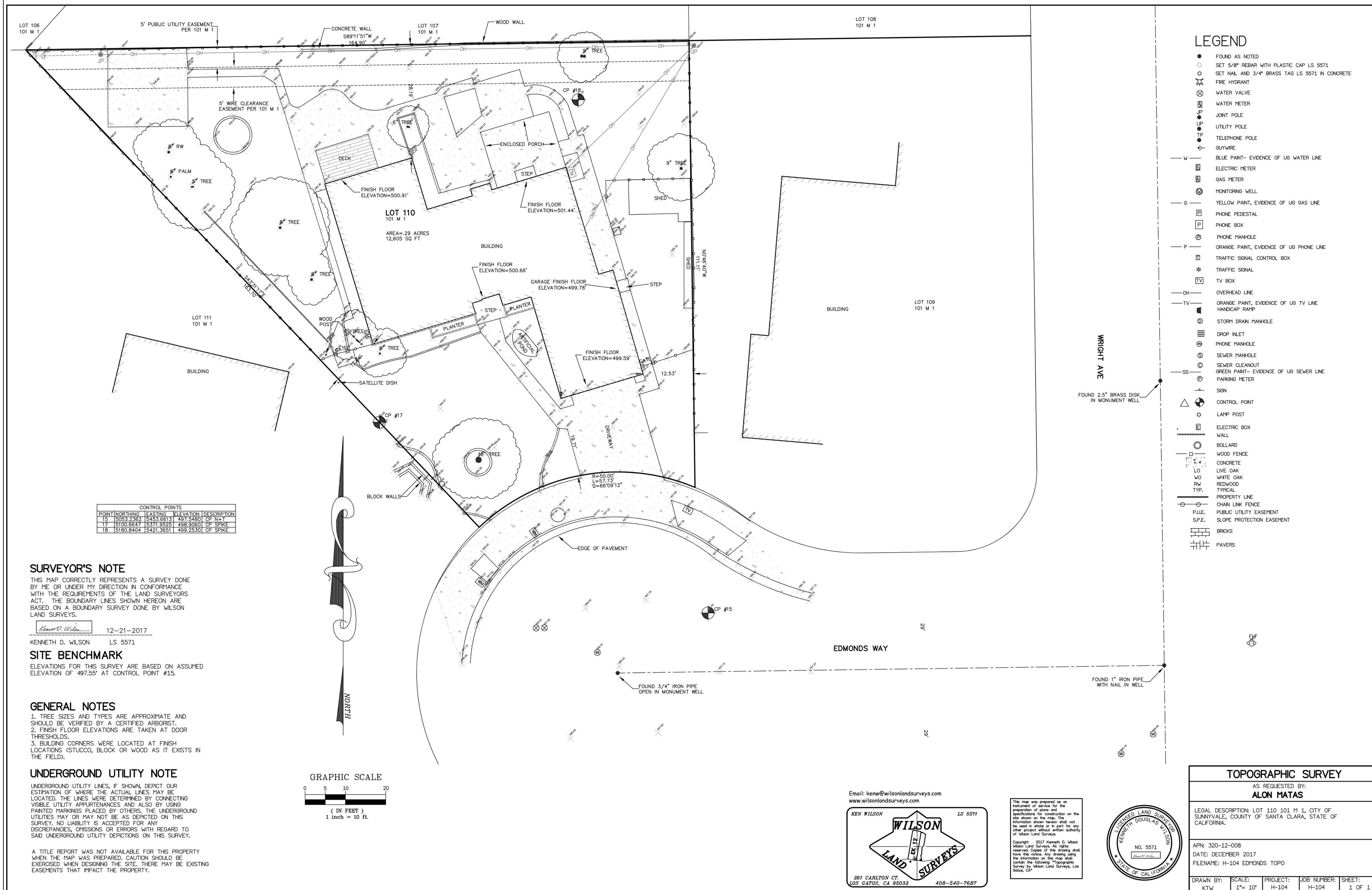
A-4.1



1 SECTION C-C
3/16" = 1'-0"



2 SECTION D-D
3/16" = 1'-0"



ARBORIST REPORT-
Tree Resource Analysis, Construction Impacts & Protection
Plan for:

1019 Edmonds Court/ APN: 320-12-008
Sunnyvale, CA
November 10, 2018

Prepared for:

Mr. Alan Matas
1019 Edmonds Court
Sunnyvale, CA 94087

Prepared by:



Table of Contents

SUMMARY	1
Background.....	1
Assignment	1
Limits of the Assignment	2
Purpose and use of the report.....	2
Resources.....	2
OBSERVATIONS	3
DISCUSSION.....	4
Species List.....	4
Tree Evaluation and Recording Methods.....	4
Condition Rating	5
Suitability for Preservation	5
Impact Level.....	5
Tree Protection Zone	6
Critical Root Zone	6
Construction Impacts to Subject Trees.....	7
Replacement Trees	7
CONCLUSION /	
RECOMMENDATIONS.....	8

Attachments: Appendix A - F

Appendix A – Tree Assessment Chart

Appendix B – Criteria for Tree Assessment Chart

Appendix C - Tree Location Map Sheet

Appendix D – Bibliography

Appendix E - Tree Protection Guidelines & Restrictions

- Protecting Trees During Construction
- Project Arborist Duties & Inspection Schedule
- Tree Protection Fencing
- Tree Protection Signs
- Monitoring
- Root Pruning
- Tree Work Standards & Qualifications
- City of Sunnyvale Protected Trees

Appendix F - Assumptions & Limiting Conditions

SUMMARY

- An existing home will be demolished, and a new single-family home will be constructed.
- Thirteen trees including one “protected” tree, were inventoried.
- The thirteen trees are comprised of ten species. Most of the trees are in fair to good condition.
- There is one "protected" tree on the property.
- The “protected” tree is in fair condition, will suffer significant construction impacts and its removal is recommended.
- Nine “not protected” trees are in fair to good condition, will suffer significant construction impacts and their removal is recommended.
- Three “not protected” trees are in fair to good condition, will suffer low construction impacts but are not compatible with new landscape plan and their removal is recommended.
- Replacement trees will be required if the “protected” tree is approved for removal.
- A landscape planting plan which includes replacement trees will be submitted with plan set.

Background

Plans will be submitted to the City of Sunnyvale Planning Department, to subdivide an existing duplex into two separate condominiums. Mr. Alan Matas has requested my services, to assess the condition of twelve trees on the applicant's property, and the construction impacts that may affect them. Further, to provide a report with my findings and recommendations to meet City of Sunnyvale planning requirements.

Assignment

Provide an arborist report that includes an assessment of the trees within the project area. The assessment is to include the species, size (trunk diameter, height and canopy spread), condition (health and structure), and suitability for preservation ratings.

To complete this assignment, the following services were performed:

- **Tree Resource Evaluation:** Inventory, evaluate and assign suitability for preservation ratings for subject trees.
- **Plan Review: Reviewed provided plans including:** Site Plan, by BEKOM Design dated 7/25/2018.
- **Construction Impact Assessment:** Combine tree resource data with anticipated construction impacts, to provide recommendations for removal or retention of trees.
- **Mapping:** Tree canopies were plotted onto: Site Plan, by BEKOM Design dated 7/25/2018, and a Tree Location Map sheet was developed.

Limits of the Assignment

The information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection on November 10, 2018.

The inspection is limited to visual examination of accessible items without climbing, dissection, excavation, probing, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the trees in questions may not arise in the future.

Purpose and use of the report

The report is intended to identify all the trees within the plan area that could be affected by a project. The report is to be used by the developer, their agents, and the City of Sunnyvale as a reference for existing tree conditions and to help satisfy the City of Sunnyvale planning requirements.

Resources

All information within this report is based on site plans as of the date of this report. Resources are as follows:

- Site Plan, by BEKOM Design dated 7/25/2018
- Site Visit, Tree Inventory & Condition Evaluation at, 1019 Edmonds Court, Sunnyvale, 11/10/2018.
- City of Sunnyvale Municipal Code – Chapter 19.94 *Tree Preservation* (applicable sections).

OBSERVATIONS

The project site contains a one-story single-family home on a level parcel. There are trees within the project limits in both the front and back yards. There is one “protected” tree on the property, a flowering cherry (*Prunus serrulata*) located in the front yard. The flowering cherry is in fair condition. The remaining trees on the property are “not protected” and include two mature persimmons and a saucer magnolia.



Image #1 – Tree T1 – flowering cherry, the only “protected” tree on the property.

DISCUSSION

A total of 13 trees were inventoried. All thirteen trees are recommended for removal. Six trees, T2,3,4,5,6, and 7, are located within the footprint of the new home or new garage. Three trees, T1, T11 & T13, are located within the footprint of the new driveway, pool or pool equipment shed. One tree, T8 is located less than 3 feet from the new home foundation, will suffer significant root loss and cannot be effectively clearance pruned with significant structural damage. Three “not protected” trees T9, T10 & T12 will suffer moderate to low impacts, but are not compatible with the new landscape design and their removal is recommended.

“Protected” tree T1, a flowering cherry is within the footprint of the new driveway. No reasonable alteration of the proposed driveway footprint would allow for its retention.

TOTAL SUBJECT TREES: 13 Trees

Protected: 1

1	Flowering Cherry	(<i>Prunus serrulata</i>)
---	------------------	-----------------------------

Not Protected: 12

2	Persimmon	(<i>Diospyros sp.</i>)
2	Citrus	(<i>Citrus sp.</i>)
2	Hollywood juniper	(<i>Juniperis chinensis 'Torulosa'</i>)
1	Plum	(<i>Prunus sp.</i>)
1	Mexican Fan Palm	(<i>Washington robusta</i>)
1	Lemon Bottlebrush	(<i>Callistemon citrinus</i>)
1	Saucer Magnolia	(<i>Magnolia soulangiana</i>)
1	Japanese maple	(<i>Acer palmatum</i>)
1	Willow	(<i>Salix sp.</i>)

Tree Evaluation and Recording Methods

Site evaluations were made on 11/10/2018. *The inventory included all trees on the property within the project limits.* The health and structural **condition** of each tree was assessed and recorded. Based on the trees health and structural condition, each trees **suitability for preservation** was rated and recorded.

The recorded data is included in the *Tree Assessment Chart, Appendix A*, of this report. Tree numbers were plotted on the attached *Tree Protection Plan sheet, T1*. **To correlate the data in the Tree Assessment Chart to the tree's location on the site, refer to the Tree Location Map sheet - Appendix C.**

Condition Rating

A tree's condition is determined by assessing both the **health** and **structure**, then combining the two factors to reach a *condition rating*. Tree condition is rated as poor, fair or good. The quantity of trees assigned for each category (good, fair or poor), is indicated below:

Tree Condition Rating

- Good - 3
- Fair - 9
- Poor - 1

Suitability for Preservation

A tree's suitability for preservation is determined based on its health, structure, age, species characteristics and longevity using a scale of good, fair or poor. The quantity of trees assigned to each category (good, fair or poor), is listed below.

Suitability Rating

- Good - 3
- Fair - 9
- Poor - 1

Impact Level

Impact level rates the degree a tree may be impacted by construction activity and is primarily determined by how close the construction procedures occur to the tree. Construction impacts are rated as low, moderate, high. The quantity of trees assigned for each category (low, moderate, high), is indicated below:

Impact Rating

- Low - 2
- Moderate - 1
- High - 10

Tree Protection Zone

The tree protection zone (TPZ), is a defined area within which certain activities are prohibited or restricted to minimize potential injury to designated trees during construction.

The size of the optimal TPZ can be determined by a formula based on: 1) trunk diameter 2) species tolerance to construction impacts, and 3) tree age (Matheny, N. and Clark, J 1998). In some instances, tree drip line is used as the TPZ. Development constraints can also influence the final size of the tree protection zone.

Fencing is installed to delineate the (TPZ), and to protect tree roots, trunk, and scaffold branches from construction equipment. *The fenced protection area may be smaller than the optimal or designated TPZ area in some circumstances.* Tree protection may also involve the armoring of the tree trunk and/or scaffold limbs with barriers to prevent mechanical damage from construction equipment. *See Tree Protection Guidelines & Restrictions – Appendix E.*

Once the TPZ is delineated and fenced (prior to any site work, equipment and materials move in), construction activities are only to be permitted within the TPZ if allowed for and specified by the project arborist.

Where tree protection fencing cannot be used, or as an additional protection from heavy equipment, tree wrap may be used. Wooden slats at least one inch thick are to be bound securely, edge to edge, around the trunk. A single layer or more of orange plastic construction fencing is to be wrapped and secured around the outside of the wooden slats. Major scaffold limbs may require protection as determined by the City arborist or Project arborist. Straw wattle may also be used as a trunk wrap and secured with orange plastic fencing.

Data has been entered in the *Tree Assessment Chart – Appendix A*, which indicates the optimal Tree Protection Zone for each tree.

Additional general tree protection guidelines are included in *Tree Protection Guidelines & Restrictions – Appendix G*.

Critical Root Zone

Critical Root Zone (CRZ) is the area of soil around the trunk of a tree where roots are located that provide critical stability, uptake of water and nutrients required for a tree's survival. The CRZ is the minimum distance from the trunk that trenching that requires root cutting should occur and can be calculated as three to the five times the trunk Diameter at Breast Height (DBH). For example, if a tree is one foot in trunk diameter then the CRZ is three to five feet from the trunk location. We will often average this as four times the trunk diameter or 1ft. DBH = 4ft. CRZ (Smiley, E.T., Fraedrich, B. and Hendrickson, N. 2007).

Construction Impacts to Subject Trees

Demolition Elements Affecting Subject Trees

1. Removal of existing home foundation

Construction Phases Affecting Subject Trees –

1. Installation of new home, garage and foundation.
2. Installation of new driveway, pool or pool equipment shed.
3. Installation of new landscaping.
4. Installation of new utilities.

Impacts to Subject Trees by Tree Number –

Demolition:

1. Removal of existing foundation will impact trees T2,T3,T4,T5,T6,T7, & T8.

Construction Phases:

1. Installation of new home, garage and foundation will impact trees T2,T3,T4,T5,T6 & T7
2. Installation of new driveway will impact tree T1.
3. Installation of new pool will impact tree T11.
4. Installation of new pool equipment shed will impact tree T13.
5. Installation of new landscaping will impact trees T9, T10 & T12.
6. Installation of new utilities, *if installed*, could impact trees T1, T2, T3, & T4.

Tree Replacement

If “protected” trees are removed, replacement trees will be required.

The following is an excerpt from the City of Sunnyvale Municipal Code Section 19.94.110: *Requirements concerning protected trees during site development or modification.*

(c) Replanting Plans. When protected trees must be removed, replanting plans shall be submitted as part of the landscaping plan for the proposed project. The replanting plan shall be subject to the requirements of Section 19.94.110., but actual number and sizes of replacement trees shall be reviewed on a case by case basis

Tree Inventory & Impact Assessment
Parcel Improvements

1019 Edmonds Court
Page 8

CONCLUSION

- An existing home will be demolished, and a new single-family home will be constructed.
- Thirteen trees including one “protected” tree, were inventoried.
- The thirteen trees are comprised of ten species. Most of the trees are in fair to good condition.
- One “protected” tree is in fair condition, will suffer significant construction impacts and its removal is recommended.
- Nine “not protected” trees are in fair to good condition, will suffer significant construction impacts and their removal is recommended.
- Three “not protected” trees are in fair to good condition, will suffer low construction impacts but are not compatible with the new landscape plan and their removal is recommended.
- If removal is approved, replacement trees will be required for removal of “protected” tree T1.
- A landscape planting plan, which includes replacement trees will be submitted with plan set.
- The number and size of replacement trees shall be determined by the City of Sunnyvale.

RECOMMENDATIONS

1. Obtain all necessary permits prior to removing or significantly altering any trees on site.
2. If protected trees are removed, plant replacement trees. Size and number to be determined by the City of Sunnyvale.

Respectfully submitted,

Kurt Fouts

Kurt Fouts ISA Certified Arborist WE0681A



1019 Edmonds Court, Sunnyvale
Tree Assessment Chart - Appendix A

Suitability for Preservation Ratings:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment

Retention or Removal Code:

RT: Retain Tree


RI: Remove Due to Construction Impacts

I.M. Impacts can be Mitigated with Pre-Const

R.C. Remove Due to Condition


Protected Tree City of Sunnyvale -

Any tree 12 inches or greater in diameter measured at 4.5 feet above grade.

Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T1	flowering cherry (<i>Prunus serrulata</i>)	32"	Yes	15'X20'	Fair	Fair	Fair	15'	High (Root loss: excavation)	R.I	Within new driveway footprint.
T2	citrus (<i>Citrus sp.</i>)	3",3",2"	No	6'X5'	Fair	Fair	Fair	6'	High (Root loss: excavation)	R.I	Within footprint of new garage.
 826 Monterey Avenue Capitola, CA 95010 831-359-3607 scharborgrounds@yahoo.com							Page 1 of 3				11/10/2018


1019 Edmonds Court, Sunnyvale

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T3	citrus (<i>Citrus sp.</i>)	3",3"	No	6'X4'	Poor	Poor	Poor	6'	High (Root loss: excavation)	RI	Within footprint of new home.
T4	Hollywood juniper (<i>Juniperus chinensis 'Torulosa'</i>)	4",4",4",3"	No	8'X10'	Fair	Fair	Fair	10'	High (Root loss: excavation)	RI	Within footprint of new home.
T5	Japanese maple (<i>Acer palmatum</i>)	5",4"	No	10'X10'	Poor	Poor	Poor	6'	High (Root loss: excavation)	RI	Within footprint of new home.
T6	persimmon (<i>Diospyros sp.</i>)	9" (at 3.5' above grade)	No	17'X20'	Good	Good	Good	20'	High (Root loss: excavation)	RI	Within footprint of new home. Scaffolds start at 4' above grade.
T7	persimmon	11" (at 3.5' above grade)	No	17'X30'	Good	Good	Good	20'	High (Root loss: excavation)	RI	Within footprint of new home. Scaffolds start at 4' above grade.
T8	plum (<i>Prunus sp.</i>)	5",5",3"	No	12'X15'	Fair	Fair	Fair	15'	High (Root loss: excavation, Canopy loss: clearance pruning)	RI	Less than 3' from new home foundation.
 <p>826 Monterey Avenue Capitola, CA 95010 831-359-3607 scharborgrounds@yahoo.com</p>							Page 2 of 3				11/10/2018

1019 Edmonds Court, Sunnyvale

Tree Assessment Chart - Appendix A

Tree #	Species	Trunk Diameter @ 4.5'	Protected Tree	Crown Height & Spread	Health Rating	Structural Rating	Suitability for Preservation (Based Upon Condition)	Tree Protection Zone (in feet)	Construction Impacts (Rating & Description)	Retention or Removal Code	Comments
T9	Mexican fan palm (<i>Washingtonia robusta</i>)	9"	No	20'X5'	Fair	Good	Good	6'	Low (Root loss: excavation)	Remove- Not compatible w/new L/S	6- 7' from new home foundation. Not compatible with new landscape plan.
T10	Hollywood juniper (<i>Juniperus chinensis</i> 'Torulosa')	10"	No	20'X20'	Fair	Fair	Fair	15'	Moderate (Root loss: excavation)	Remove- Not compatible w/new L/S	9' from new home foundation. Not compatible with new landscape plan.
T11	lemon bottlebrush (<i>Callistemon citrinus</i>)	8", 5", 4", 4"	No	12'X10'	Fair	Fair	Fair	10'	High (Root loss: excavation)	RI	Within foot print of new pool.
T12	saucer magnolia (<i>Magnolia soulangiana</i>)	8", 7"	No	25'X20'	Fair	Fair	Fair	15'	Low (Root loss: new planting excavation)	Remove- Not compatible w/new L/S	Not compatible with new landscape plan.
T13	willow (<i>Salix sp.</i>)	11" (at 3.5' above grade)	No	25'X15'	Fair	Fair	Fair	10'	High (Root loss: excavation)	RI	
 <p>Kurt Fouts Arborist Consultant 826 Monterey Avenue Capitola, CA 95010 831-359-3607 scharborgrounds@yahoo.com</p>							Page 3 of 3				11/10/2018

APPENDIX B – CRITERIA FOR TREE ASSESSMENT CHART

Following is an explanation of the data used in the tree evaluations. The data is incorporated in the *Tree Assessment Chart, Appendix A*.

Trunk Diameter and Number of Trunks:

Trunk diameter as measured at 4.5 feet above grade. The number of trunks refers to a single or multiple trunked tree. Multiple trunks are measured at 4.5 feet above grade.

Health Ratings:

Good: A healthy, vigorous tree, reasonably free of signs and symptoms of disease

Fair: Moderate vigor, moderate twig and small branch dieback, crown may be thinning and leaf color may be poor

Poor: Tree in severe decline, dieback of scaffold branches and/or trunk, most of foliage from epicormics

Structure Ratings:

Good: No significant structural defects. Growth habit and form typical of the species

Fair: Moderate structural defects that might be mitigated with regular care

Poor: Extensive structural defects that cannot be abated.

Suitability for Preservation Ratings:

Rating factors:

Tree Health: Healthy vigorous trees are more tolerant of construction impacts such as root loss, grading and soil compaction, then are less vigorous specimens.

Structural integrity: Preserved trees should be structurally sound and absent of defects or have defects that can be effectively reduced, especially near structures or high use areas.

Tree Age: Over mature trees have a reduced ability to tolerate construction impacts, generate new tissue and adjust to an altered environment. Young to maturing specimens are better able to respond to change.

Species response: There is a wide variation in the tolerance of individual tree species to construction impacts.

Rating Scale:

Good: Trees in good health and structural condition with potential for longevity on the site

Fair: Trees in fair health and/or with structural defects that may be reduced with treatment procedures.

Poor: Trees in poor health and/or with poor structure that cannot be effectively abated with treatment. Trees can be expected to decline or fail regardless of construction impacts or management . The species or individual may possess characteristics that are incompatible or undesirable in landscape settings or unsuited for the intended use of the site.

Construction Impacts:

Rating Scale:

High: Development elements proposed that are located within the Tree Protection Zone that would severely impact the health and /or stability of the tree. The tree impacts cannot be mitigated without design changes. The tree may be located within the building footprint.

Moderate: Development elements proposed that are located within the Tree Protection Zone that will impact the health and/or stability of the tree and can be mitigated with tree protection treatments.

Low: Development elements proposed that are located within or near the Tree Protection Zone that will have a minor impact on the health of the tree and can be mitigated with tree protection treatments.

None: Development elements will have no impact on the health and stability of the Tree.

Tree Protection Zone (TPZ):

Defined area within which certain activities are prohibited or restricted to prevent or minimize potential injury to designated trees, particularly during construction or development.

Tree Location Map

Kurt Fouts 11/10/2018

Legend

Tree Location & Number

Tree Protection Fencing

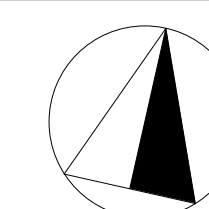
Tree Canopy Extents

Hand Trenching & Root Pruning

Remove Tree



1019 EDMONDS CT
SUNNYVALE, CA 94087
MATAS RESIDENCE

BEKOM
DESIGN

WWW.BEKOMDESIGN.COM
E-MAIL: INFO@BEKOMDESIGN.COM
Tel: 408.203.4686
/ 408.726.0017

ISSUANCES

No.	Description	Date
	PLANNING SUBMITTAL	07.25.2018

Checked By:

Checker

SITE PLAN

Drawing Scale: $1/8" = 1'-0"$

Job No.

A-0.3

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Matheny, N. and Clark, J. Trees & Development – A Technical Guide to Preservation of Trees During Land Development. Champaign, IL: International Society of Arboriculture c. 1998

Costello, L.R., Watson, G., Smiley E.T. Root Management – Best Management Practices, Champaign, ILL: International Society of Arboriculture c. 2017

Harris, R.W., Clark, J.R. and Matheny, N.P. Arboriculture: *Integrated management of landscape tree, shrubs, and vines*. 4th ed. Upper Saddle River, NJ: Prentice-Hall, Inc. c.2004

Matheny, N. and Clark, J. Evaluation of Hazard Trees in Urban Areas. Champaign, IL: Wadley Graphix Corp. c.1994

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Costello, L., Perry, E., & Matheny, N. Abiotic Disorders of Landscape Plants: A Diagnostic Guide Oakland, CA:UC/ANR Publications (Publication 3420) c.2003.

Appendix E - TREE PROTECTION GUIDELINES AND RESTRICTIONS

Protecting Trees During Construction:

- 1) Before the start of site work, equipment or materials move in, clearing, excavation, construction, or other work on the site, every tree to be retained shall be securely fenced- off as delineated in approved plans. Such fences shall remain continuously in place for the duration of the work undertaken in connection with the development.
- 2) If the proposed development, including any site work, will encroach upon the tree protection zone, special measures shall be utilized, as approved by the project arborist, to allow the roots to obtain necessary oxygen, water, and nutrients.
- 3) Underground trenching shall avoid the major support and absorbing tree roots of protected trees. If avoidance is impractical, hand excavation undertaken under the supervision of the project arborist may be required. Trenches shall be consolidated to service as many units as possible. Boring/tunneling under roots should be considered as an alternative to trenching.
- 4) Concrete or asphalt paving shall not be placed over the root zones of protected trees, unless otherwise permitted by the project arborist.
- 5) Artificial irrigation shall not occur within the root zone of native oaks, unless deemed appropriate on a temporary basis by the project arborist to improve tree vigor or mitigate root loss.
- 6) Compaction of the soil within the tree protection zone shall be avoided.
- 7) Any excavation, cutting, or filling of the existing ground surface within the tree protection zone shall be minimized and subject to such conditions as the project arborist may impose. Retaining walls shall likewise be designed, sited, and constructed to minimize their impact on protected trees.
- 8) Burning or use of equipment with an open flame near or within the tree protection zone shall be avoided. All brush, earth, and other debris shall be removed in a manner that prevents injury to the tree.
- 9) Oil, gas, chemicals, paints, cement, stucco or other substances that may be harmful to trees shall not be stored or dumped within the tree protection zone of any protected tree, or at any other location on the site from which such substances might enter the tree protection zone of a protected tree.
- 10) Construction materials shall not be stored within the tree protection zone of a protected tree.

Project Arborist Duties and Inspection Schedule:

The project arborist is the person(s) responsible for carrying out technical tree inspections, assessment of tree health, structure and risk, arborist report preparation, consultation with designers and municipal planners, specifying tree protection measures, monitoring, progress reports and final inspection.

A qualified project arborist (or firm) should be designated and assigned to facilitate and insure tree preservation practices. He/she/they should perform the following inspections:

Inspection of site: Prior to equipment and materials move in, site work, demolition, landscape construction and tree removal: The project arborist will meet with the general contractor, architect / engineer, and owner or their representative to review tree preservation measures, designate tree removals, delineate the location of tree protection fencing, specify equipment access routes and materials storage areas, review the existing condition of trees and provide any necessary recommendations.

Inspection of site: During excavation or any activities that could affect trees: Inspect site during any activity within the Tree Protection Zones of preserved trees and any recommendations implemented. Assess any changes in the health of trees since last inspection.

Final Inspection of Site: Inspection of site following completion of construction. Inspect for tree health and make any necessary recommendations.

Kurt Fouts shall be the Project Arborist for this project. All scheduled inspections shall include a brief Tree Monitoring report, documenting activities and provided to the City Arborist.

Tree Protection Fencing

Tree Protection fencing shall be installed prior to the arrival of construction equipment or materials. Fence shall be comprised of six -foot chain link fence mounted on eight - foot tall, 1 and 7/8-inch diameter galvanized posts, driven 24 inches into the ground and spaced on a minimum of 10-foot centers. Once established, the fence must remain undisturbed and be maintained throughout the construction process until final inspection.

A final inspection by the City Arborist at the end of the project will be required prior to removing any tree protection fencing.

Tree Protection Signs

All sections of fencing should be clearly marked with signs stating that all areas within the fencing are Tree Protection Zones and that disturbance is prohibited.

Monitoring

Any trenching, construction or demolition that is expected to damage or encounter tree roots should be monitored by the project arborist or a qualified ISA Certified Arborist and should be documented.

The site should be evaluated by the project arborist or a qualified ISA Certified Arborist after construction is complete, and any necessary remedial work that needs to be performed should be noted.

Root Pruning

Root pruning shall be supervised by the project arborist. When roots over two inches in diameter are encountered they should be pruned by hand with loppers, handsaw, reciprocating saw, or chain saw rather than left crushed or torn. Roots should be cut beyond sinker roots or outside root branch junctions and be supervised by the project arborist. When completed, exposed roots should be kept moist with burlap or backfilled within one hour.

Tree Work Standards and Qualifications

All tree work, removal, pruning, planting, shall be performed using industry standards of workmanship as established in the Best Management Practices of the International Society of Arboriculture (ISA) and the American National Standards Institute series, *Safety Requirements in Arboriculture Operations* ANSI Z133-2017,

Contractor licensing and insurance coverage shall be verified.

During tree removal and clearance, sections of the Tree Protection Fencing may need to be temporarily dismantled to complete removal and pruning specifications. After each section is completed, the fencing is to be re-installed.

Trees to be removed shall be cut into smaller manageable pieces consistent with safe arboricultural practices, and carefully removed so as not to damage any surrounding trees or structures. The trees shall be cut down as close to grade as possible. Tree removal is to be performed by a qualified contractor with valid City Business/ State Licenses and General Liability and Workman's Compensation insurance.

Development Site Tree Health Care Measures

RECOMMENDED TO PROVIDE OPTIMUM GROWING CONDITIONS, PHYSIOLOGICAL INVIGORATION AND STAMINA, FOR PROTECTION AND RECOVERY FROM CONSTRUCTION IMPACT.

Establish and maintain TPZ fencing, trunk and scaffold limb barriers for protection from mechanical damage, and other tree protection requirements as specified in the arborist report.

Project arborist to specify site-specific soil surface coverings (wood chip mulch or other) for prevention of soil compaction and loss of root aeration capacity.

Soil, water and drainage management is to follow the ISA BMP for "Managing Trees During Construction" and the ANSI Standard A300(Part 2)- 2011 Soil Management (a. Modification, b. 'Fertilization, c. Drainage.)

Fertilizer / soil amendment product(s) amounts and method of application to be specified by certified arborist.

City of Sunnyvale – Protected Tree

(3) “Protected tree” means a tree of significant size.

(4) “Significant size” means a tree thirty-eight inches or greater in circumference measured four and one-half feet above ground for single-trunk trees. For multi-trunk trees “significant size” means a tree which has at least one trunk with a circumference thirty-eight inches or greater measured four and one-half feet above ground level, or in which the measurements of the circumferences of each of the multi-trunks, when measured four and one-half feet above the ground level, added together equal an overall circumference one hundred thirteen inches or greater.

ASSUMPTIONS AND LIMITING CONDITIONS

1. Any legal description provided by the appraiser/consultant is assumed to be correct. No responsibility is assumed for matters legal in character nor is any opinion rendered as the quality of any title.
2. The appraiser/consultant can neither guarantee nor be responsible for accuracy of information provided by others.
3. The appraiser/consultant shall not be required to give testimony or to attend court by reason of this appraisal unless subsequent written arrangements are made, including payment of an additional fee for services.
4. Loss or removal of any part of this report invalidates the entire appraisal/evaluation.
5. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person(s) to whom it is addressed without written consent of this appraiser/consultant.
6. This report and the values expressed herein represent the opinion of the appraiser/consultant, and the appraiser/consultant's fee is in no way contingent upon the reporting of a specified value nor upon any finding to be reported.
7. Sketches. Diagrams. Graphs. Photos. Etc., in this report, being intended as visual aids, are not necessarily to scale and should not be construed as engineering reports or surveys.
8. This report has been made in conformity with acceptable appraisal/evaluation/diagnostic reporting techniques and procedures, as recommended by the International Society of Arboriculture.
9. When applying any pesticide, fungicide, or herbicide, always follow label instructions.
10. No tree described in this report was climbed, unless otherwise stated. We cannot take responsibility for any defects which could only have been discovered by climbing. A full root collar inspection, consisting of excavating around the tree to uncover the root collar and major buttress roots, was not performed, unless otherwise stated. We cannot take responsibility for any root defects which could only have been discovered by such an inspection.

CONSULTING ARBORIST DISCLOSURE STATEMENT

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce risk of living near trees. Clients may choose to accept or disregard the recommendations of the arborist, or to seek additional advice.

Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed.

Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees.




Address	Stories	Lot Size (sq.ft.)	Gross Floor Area (sq.ft.)	FAR
1026 Earlington Ct	1	12,274	3,335	27.2%
<i>1018 Earlington Ct</i>	<i>1</i>	<i>12,604</i>	<i>2,086</i>	<i>16.6%</i>
1002 Earlington Ct	1	9,520	2,543	26.7%
<i>1003 Edmonds Ct</i>	<i>1</i>	<i>9,520</i>	<i>2,531</i>	<i>26.6%</i>
1019 Edmonds Ct	2	12,604	5,996	47.6%
<i>1027 Edmonds Ct</i>	<i>1</i>	<i>12,274</i>	<i>2,630</i>	<i>21.4%</i>
1028 Edmonds Ct	1	12,235	2,619	21.4%
1020 Edmonds Ct	1	12,696	2,799	22.0%
1004 Edmonds Ct	1	10,540	2,375	22.5%
1550 Wright Av	1	8,150	2,438	29.9%
996 Edmonds Wy	1	8,034	2,589	32.2%
1538 Wright Av	1	8,000	2,069	25.9%
Average		10,704	2,834	27.7%

Note:

1. The row with grey highlight indicates the proposed project.
2. The rows with bolded and italicized texts indicate the proposed project's immediate neighbors.

Public Review Log

Permit Type: Design Review
Permit Number: 2018-7655
Address: 1019 Edmonds Court
Public Hearing Date: February 11, 2019

Date	Name/Address	Contact Info (Phone/Email)	Comments
1-25-19	Kristina Irwin 1028 Edmonds Ct. Sunnyvale, CA 94087		North west elevation window at rear is it possible to eliminate the window or make it a high sill window since there is a door on the side, this is for rear neighbors privacy The rear balcony and sliding doors also encroach on the rear neighbors privacy. Trees needed in rear?
			Rear home at 1018 Earlington Ct. is 1-2 feet lower in elevation/grade and 2 nd story windows/glass doors/balcony will impact privacy in yard & home.

Kelly Cha

From: thomas george [REDACTED]
Sent: Saturday, February 02, 2019 1:50 PM
To: [REDACTED]
Cc: [REDACTED]; Kelly Cha
Subject: Concerns regarding property development
Attachments: CURRENT.png; NEW.png

Dear Matas Family,

CC'ing Kelly Cha (Project Planner), and Hila

Thank you for stopping by last weekend and sharing with us the plans for your new home. We have gone through the plans carefully and have some concerns about the new property development.

Currently, all the houses in the court have the garages next to each other, but with your new plan you have moved the garage to the other side of the existing house. We checked houses around the neighborhood and all the garages are built next to a neighbors garage. This an issue for us, because the new garage location covers up two of our bedroom windows that look out to the court. With the new plan, our two bedroom windows will now be looking at your fence and garage. We will be losing a lot of openness that is important to us. Furthermore, when someone enters the court, the left side of our house will be covered by your garage and fence, hiding our front yard. Our house will looked squeezed behind your garage. With that in mind can you please consider keeping the garage to the right side of the home like the existing property. I have attached a rough drawing to help visualize our concern.

In regards to the second floor, there is a window that faces into our property. If you look out that window you will be able to look into our backyard and bedroom windows. This is a big privacy issue for us and we do not feel comfortable giving up that privacy.

Thank you,
Thomas M George
[REDACTED]

