

Appendix E
Transportation Memo

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Memorandum

Date: March 1, 2022

To: Ms. Christina Lau, MIG

From: Michelle Hunt, Katie Riutta

Subject: Transportation Analysis for the Proposed Commercial Development at 696 Blossom Hill Road in San Jose, CA

Hexagon Transportation Consultants, Inc. has completed a transportation analysis (TA) for the proposed commercial development at 696 Blossom Hill Road in San Jose, California. The project site is located at the southeast corner of the intersection of Cahalan Avenue and Blossom Hill Road (see Figure 1). The project site is located within the Blossom Hill/Cahalan Urban Village boundary, which is a Horizon #2 Urban Village. The project would build retail space totaling 9,573 square feet of gross leasable area (GLA) and office space totaling 10,999 square feet of gross floor area (GFA). The site is currently vacant. Vehicle access to the project site would be provided via a full-access driveway on Cahalan Avenue (see Figure 2).

This memorandum includes a discussion of the City's VMT Policy and its application to this project. A traffic operations analysis is also presented to quantify the trips generated by the proposed project and to identify any deficiencies related to bicycle, pedestrian, and transit facilities, site access, on-site circulation, and parking demand.

CEQA Vehicle Miles Traveled (VMT) Analysis

As established in Council Policy 5-1, San Jose evaluates transportation impacts under CEQA based on vehicle miles traveled (VMT). All new projects are required to analyze transportation impacts using the VMT metric and conform to Council Policy 5-1. The Policy aligns with the Envision San Jose 2040 General Plan which seeks to focus new development growth within Planned Growth Areas, bringing together office, residential, and service land uses to internalize trips and reduce VMT. VMT-based policies support dense, mixed-use, infill projects as established in the General Plan's Planned Growth Areas.

The City of San Jose's *Transportation Analysis Handbook* provides CEQA transportation analysis exemption screening criteria for development projects. The criteria are based on the type of project, characteristics, and/or location. If a project meets the City's screening criteria, the project is expected to result in less-than-significant VMT impacts and a detailed CEQA VMT analysis is not required. The project proposes 9,573 square feet of retail space, which meets the screening criterion for local-serving retail developments (100,000 s.f. or less and without drive-through operations). Therefore, the retail use would be expected to result in a less-than-significant VMT impact. Furthermore, the City has determined that a VMT analysis is not required for the proposed office space since the project application was submitted in 2017 before Council Policy 5-1 was adopted.

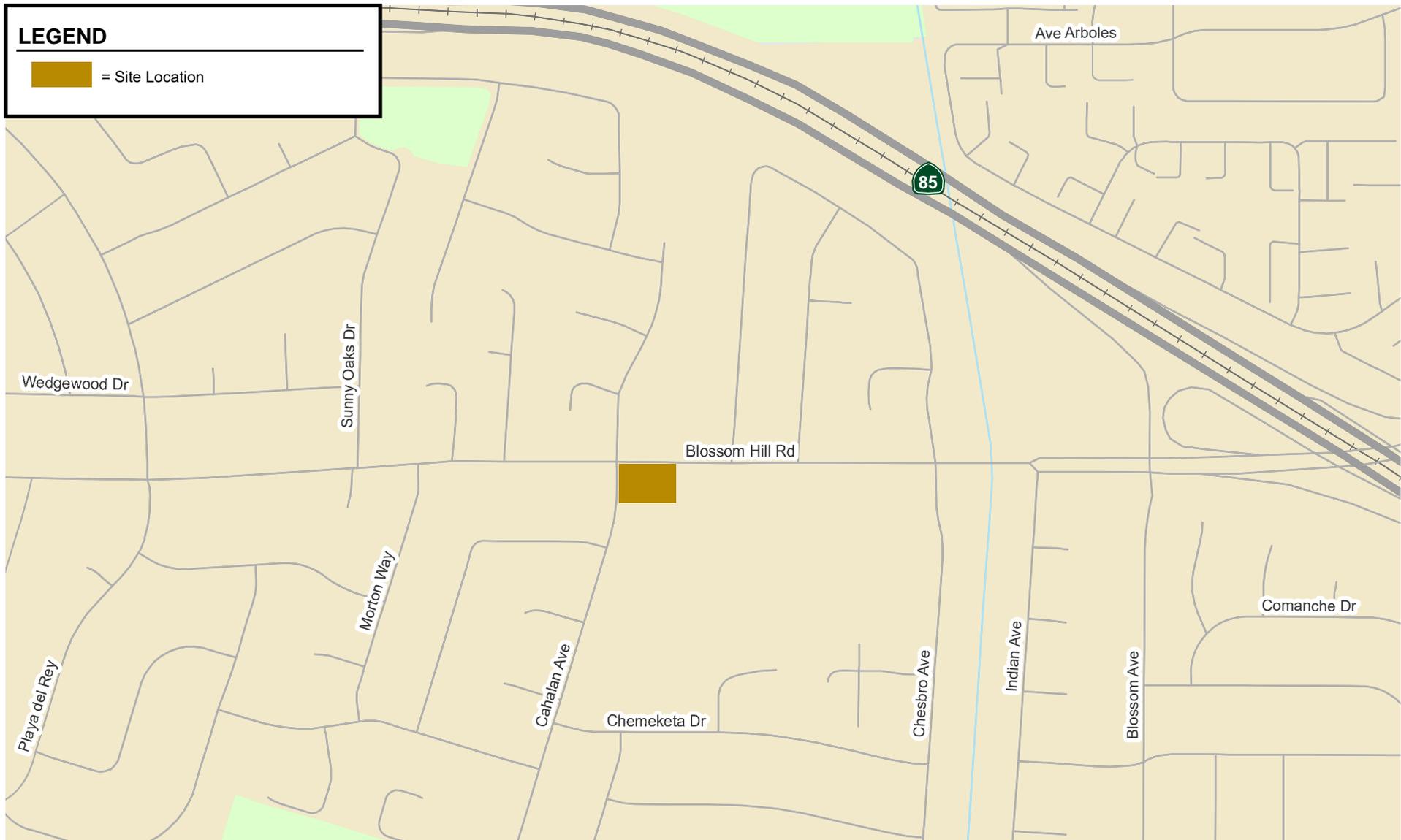


Figure 1
Project Site Location

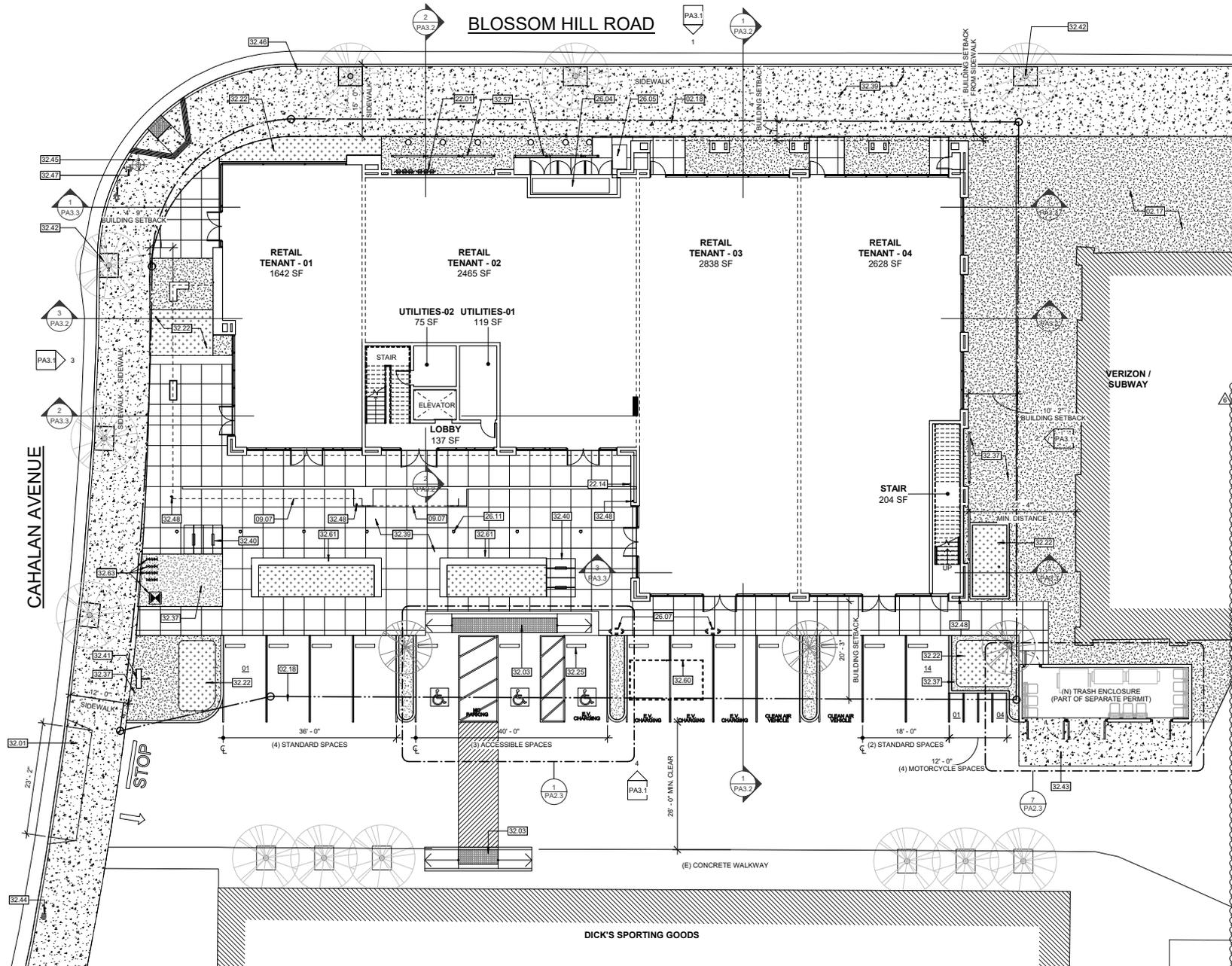


Figure 2
Site Plan

Project Trip Estimates

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

Trip Generation

Trip generation rates resulting from new development proposed within the City of San Jose typically are estimated using trip rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition*. Trips that would be generated by the proposed commercial development were estimated using the ITE trip rates for "General Office" (Land use 710) and "Strip Retail Plaza (<40k)" (Land use 822). The "General Office" category refers to a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted, typically with a gross floor area of greater than 10,000 square feet. The rates used are for the general urban/suburban setting. The "Strip Retail Plaza" category refers to an integrated group of commercial establishments. This category includes the trip data for retail/commercial uses less than 40,000 square feet.

Trip Adjustments and Reductions

In accordance with the *Transportation Analysis Handbook* (Section 4.8, "Intersection Operations Analysis"), the project qualifies for a location-based trip adjustment from the baseline trip generation. The location-based adjustment reflects the project's vehicle mode share based on the "place type" in which the project is located per the San Jose Travel Demand Model. The project's place type was obtained from the San Jose VMT evaluation tool. Based on the VMT evaluation tool, the project site is located within an area designated as Suburb with Single-Family Homes. Therefore, the baseline project trips were adjusted to reflect the mode share found in a Suburb with Single-Family Homes. Office developments within this area type have a vehicle mode share of 95 percent and retail developments have a vehicle mode share of 91 percent. Thus, a 5 and 9 percent location-based trip reduction for non-vehicle mode share was respectively applied to the office and retail uses in the trip generation estimates.

In addition, trip generation for retail uses are typically adjusted to account for pass-by trips. Pass-by trips are trips that would already be on the adjacent roadways (and are therefore already counted in the existing traffic) but would turn into the site while passing by. An average pass-by trip reduction of 30% was applied to the PM peak hour trips of the retail component of the project based on the VTA TIA Guidelines.

Existing Trip Credits

Since the project site is currently vacant, no existing trips were subtracted from the gross project trip generation estimates.

Net Project Trips

After applying the trip reductions, it is estimated that the proposed project would generate 516 new daily trips, including 37 new trips (27 inbound and 10 outbound) during the AM peak hour and 55 new trips (23 inbound and 32 outbound) during the PM peak hour (see Table 1).

**Table 1
Project Trip Generation Estimates**

Land Use	Size	Daily		AM Peak Hour						PM Peak Hour					
		Trip Rate	Trips	Trip Rate	Splits		Trips		Trip Rate	Splits		Trips			
					In	Out	In	Out		Total	In	Out	In	Out	Total
Proposed Land Uses															
Office¹	10,999 s.f. GFA	10.84	119	1.52	88%	12%	15	2	17	1.44	17%	83%	3	13	16
Location-Based Non-Vehicle Mode Share (5%) ²			-6				-1	0	-1				0	-1	-1
<i>Sub-Total Office</i>			113			14	2	16				3	12	15	
Retail³	9,573 s.f. GLA	54.45	521	2.36	60%	40%	14	9	23	6.59	50%	50%	32	31	63
Location-Based Non-Vehicle Mode Share (9%) ⁴			-47				-1	-1	-2				-3	-3	-6
Pass-By Reduction (15% Daily/0% AM/30% PM) ⁵			-71				0	0	0				-9	-8	-17
<i>Sub-Total Retail</i>			403			13	8	21				20	20	40	
Total Gross Project Trips			516			27	10	37				23	32	55	
Net Project Trips			516			27	10	37				23	32	55	

Notes:

GFA = Gross Floor Area, GLA = Gross Leasable Area

All trip rates are from ITE *Trip Generation Manual, 11th Edition, 2021*.

1. General Office (ITE Land Use 710): average trip rates in trips per 1,000 s.f. were used.

2. A 5% reduction for the office use was applied to the project based on the location-based vehicle mode share percentage outputs (Table 6 of TA Handbook) produced from the San Jose Travel Demand Model for the Suburb with Single-Family Homes area.

3. Strip Retail Plaza (<40k) (Land Use 822): average trip rates per 1,000 s.f. were used.

4. A 9% reduction for the retail use was applied to the project based on the location-based vehicle mode share percentage outputs (Table 6 of TA Handbook) produced from the San Jose Travel Demand Model for the Suburb with Single-Family Homes area.

5. An average 30% pass-by trip reduction was applied to the retail PM peak-hour trips based the maximum allowable pass-by trip reduction rate in the VTA *Transportation Impact Analysis Guidelines, October 2014*. Hexagon assumes no pass-by trip reduction during the AM peak hour for retail uses.

Trip Distribution and Assignment

The estimated project trip distribution pattern for the proposed office and retail uses were developed based on existing travel patterns on the surrounding roadway network, the locations of complementary land uses, and freeway access points. Figure 3 shows the estimated project distribution pattern. The peak hour vehicle trips generated by the proposed project uses were assigned to the roadway network in accordance with the trip distribution pattern and the location of the project driveway. Figure 4 shows the project generated trips at the site driveway.

Vehicular Site Access and On-Site Circulation

The site access and circulation evaluations are based on the site plan prepared by Eaton Hall Architecture, updated on January 20, 2022 (see Figure 2). Site access was evaluated to determine the adequacy of the site’s driveway with regard to the following: traffic volume, design, and stopping sight distance. On-site vehicular circulation and parking layout were reviewed in accordance with generally accepted traffic engineering standards and transportation planning principles.

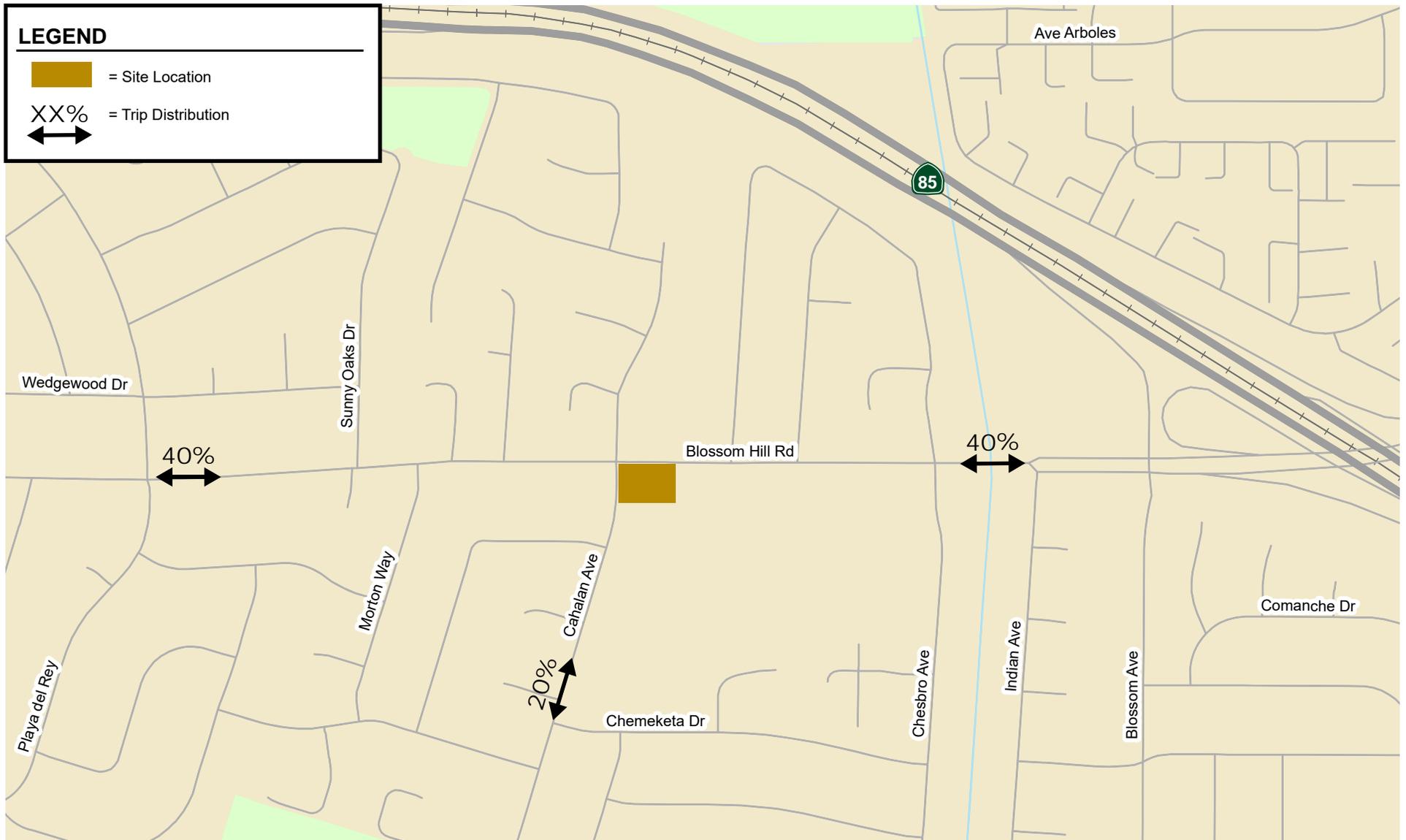
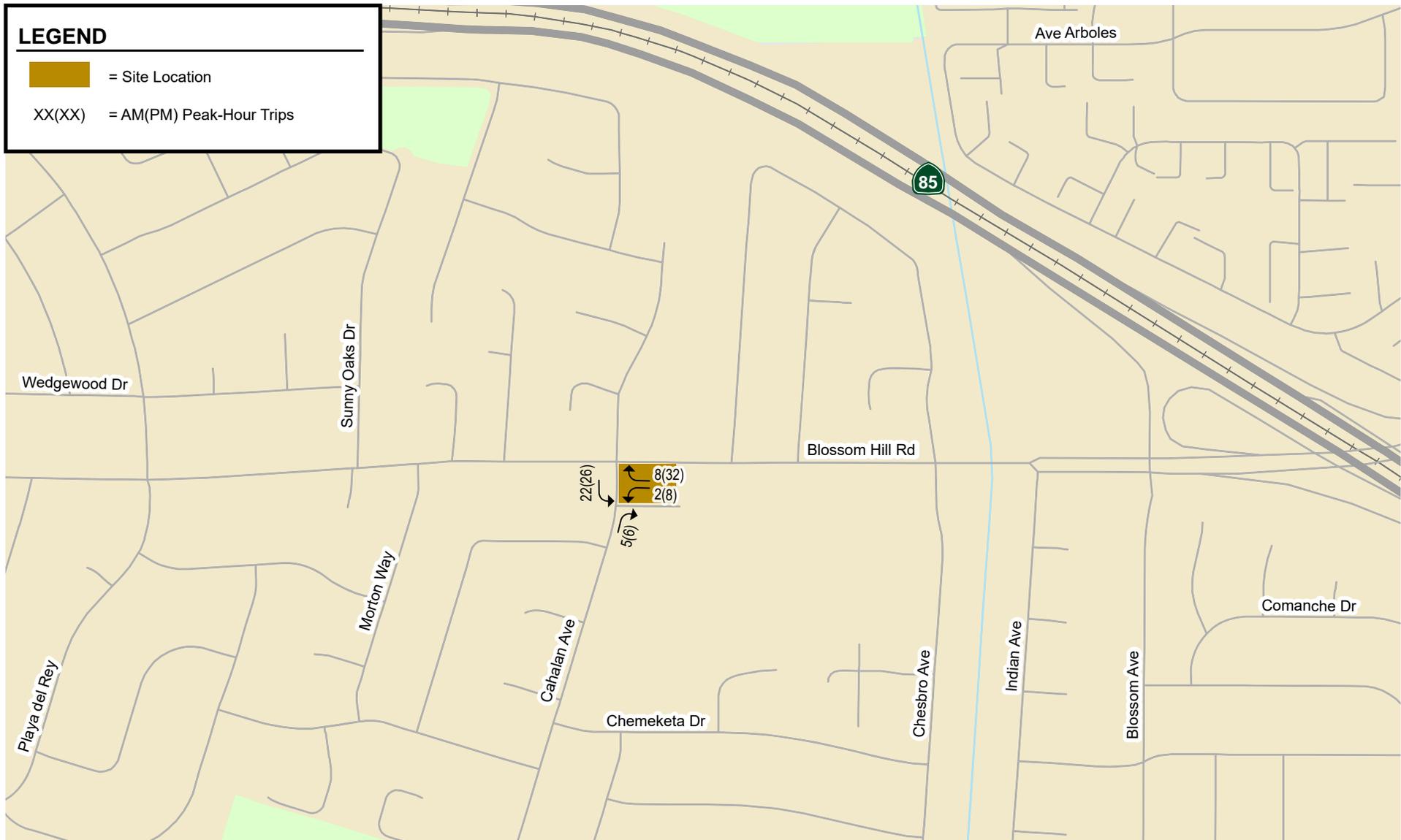


Figure 3
Project Trip Distribution



Note: The volumes shown include pass-by trips, which are not new trips to the adjacent roadways, but nonetheless are new trips at the site driveway.

Figure 4
Project Trip Assignment

Site Access

Vehicular access to the project site would be provided via an existing full access driveway on Cahalan Avenue. The City of San Jose standard driveway width for commercial developments is 26 feet wide. The standard width provides adequate width for vehicular ingress and egress and provides a reasonably short crossing distance for pedestrians. The driveway is shown to be 23 feet wide.

Recommendation: Prior to final design, the driveway should be shown to have a width of 26 feet.

The total project-generated trips that are estimated to occur at the project driveway are 27 inbound trips and 10 outbound trips during the AM peak hour, and 32 inbound trips and 40 outbound trips during the PM peak hour. These estimates include pass-by trips during the PM peak hour. Due to the relatively low number of project-generated trips at the driveway and low traffic volumes on Cahalan Avenue, significant operational issues related to vehicle queuing and/or vehicle delay are not expected to occur. Some minor on-site vehicle queuing could occur due to a combination of the inherent unpredictability of vehicle arrivals at driveways and the random occurrence of gaps in traffic along Cahalan Avenue.

The site can also be accessed via a signalized full access driveway on Blossom Hill Road and a full access driveway on Chesbro Avenue by circulating through the adjacent shopping center.

Sight Distance at the Project Driveway

The project driveway should be free and clear of any obstructions to provide adequate sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and vehicles and bicycles traveling on Cahalan Avenue. Any landscaping and signage should be located in such a way to ensure an unobstructed view for drivers exiting the site. Providing the appropriate sight distance reduces the likelihood of a collision at a driveway and provides drivers with the ability to locate sufficient gaps in traffic and exit a driveway.

The minimum acceptable sight distance is based on the Caltrans recommended stopping sight distance. Sight distance requirements vary depending on roadway speeds. For driveways on Cahalan Avenue, which has a posted speed limit of 35 mph, the Caltrans stopping sight distance is 300 feet (based on a design speed of 40 mph). Thus, a driver must be able to see 300 feet in both directions of Cahalan Avenue to locate a sufficient gap to turn out of the driveway.

Vehicles turning onto southbound Cahalan Avenue from Blossom Hill Road will be traveling at lower speeds. At a turning speed of 15 mph, the stopping sight distance is 100 feet. The project driveway is approximately 110 feet south of Blossom Hill Road (north side of driveway exit lane to south curb line on Blossom Hill Road). Thus, vehicles at the site driveway would be able to see vehicles on southbound Cahalan Avenue after they turn from Blossom Hill Road. There are no roadway curves on Cahalan Avenue that would obstruct the vision of exiting drivers. Thus, vehicles at the site driveway would also be able to see vehicles 300 feet south on northbound Cahalan Avenue.

According to the site plan, street trees would be added along the project frontage on Cahalan Avenue. The type and location of the street trees would be determined by the City of San Jose Public Works Department at the implementation stage. Note that street trees have a high canopy and would not obstruct the view of drivers exiting the project driveway. It can be concluded that the project driveway would meet the Caltrans stopping sight distance standard.

On-Site Circulation

The driveway would provide access to a drive aisle that would lead to the Sunrise Plaza Shopping Center parking lot. The 26-foot-wide drive aisle would provide access to 90-degree retail and office surface parking spaces along the aisle. As proposed, the width of the drive aisle would be adequate to serve two-way traffic generated by the project. Note that the City's standard width for two-way drive aisles is 26 feet where 90-degree parking is provided to allow sufficient room for vehicles to back out.

As measured on the site plan, the driveway throat length measures about 20 feet from the back of sidewalk to the nearest parking space. This is enough space for one car to queue, which should be adequate given the minimal projected driveway volumes and the moderate traffic volumes on Cahalan Avenue.

Parking Stall Dimensions

The City's standard dimensions for off-street parking spaces is 9 feet wide by 18 feet long for 90-degree full-size parking stalls. The site plan shows all standard parking stalls to be 9 feet wide and 18 feet long, which would meet the requirement.

The Americans with Disabilities Act (ADA) standard for parking stall dimensions is 8 feet wide, or 11 feet wide for van-accessible spaces, with 5-foot-wide access aisles. Van-accessible spaces may be 8 feet wide if adjacent access aisles are also 8 feet wide. The site plan shows all handicap parking stalls to be 9 feet wide and 18 feet long, with access aisles that are 8 feet wide and 4 feet, 11 inches wide.

Recommendation: Prior to final design, the project applicant should ensure that all accessible parking spaces meet the ADA requirements.

Passenger Loading

The site plan does not indicate passenger loading zones along the project frontages or within the parking area for people accessing the site using Uber/Lyft or other rideshare apps (e.g., Scoop, Waze Carpool). Since there are bike lanes along the project frontages on Cahalan Avenue and Blossom Hill Road, passenger loading spaces cannot be located along the curb. Therefore, it is assumed that rideshare vehicles would turn into the project site and passengers would be dropped off within the parking area.

Truck Access and Circulation

Loading Operations

According to the City of San Jose Zoning Code Section 20.90.410, developments having a floor area of 10,000 square feet or more should provide at a minimum one off-street loading space, plus one additional loading space for each 20,000 square feet of floor area. The site plan does not show any loading spaces for the project. However, the Planning Director may approve a development with no off-street loading spaces if the Director finds that the project includes adequate provision for loading taking into consideration the nature of the allowed uses, the configuration of buildings and their relationship to the street.

Recommendation: The project applicant should coordinate with City staff to determine if any loading spaces would be required to serve the project.

Garbage Collection

The site plan shows a trash enclosure along the drive aisle between the project site and the Verizon store. Trash bins should be wheeled out of the trash enclosure when garbage pickup occurs and returned to the trash enclosures immediately after garbage pick-up. Since garbage collection would occur on-site, traffic operations along Cahalan Avenue or Blossom Hill Road would not be affected during garbage collection activities.

Recommendation: Garbage trucks should enter the site via the Sunrise Plaza Shopping Center parking lot to minimize disruptions to eastbound traffic flow in the drive aisle. Garbage trucks should pick up garbage along the drive aisle and exit the site towards Cahalan Avenue.

Emergency Vehicle Access

Blossom Hill Road, Cahalan Avenue and the project drive aisle would provide emergency vehicle access to the project site. The project driveway would be 23 feet wide and the drive aisle would be 26 feet wide. The City of San Jose Fire Code requires driveways to provide at least 20 feet for fire access. Therefore, the project would meet the requirement.

The City of San Jose Fire Department requires that all portions of the buildings be within 150 feet of a fire department access road and requires a minimum of 6 feet clearance from the property line along all sides of the buildings. According to the project site plan, the project would meet the 6-foot clearance requirement and the 150-foot fire access requirement.

Pedestrian, Bicycle, and Transit Facilities

All new development projects in San Jose should encourage multi-modal travel, consistent with the goals and policies of the City's General Plan. It is the goal of the General Plan that all development projects accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and vehicle miles traveled. In addition, the adopted City Bike Master Plan establishes goals, policies and actions to make bicycling a daily part of life in San Jose. The Master Plan includes designated bike lanes along many City streets, as well as designated bike corridors. In order to further the goals of the City, pedestrian and bicycle facilities should be encouraged with new development projects.

Pedestrian Access and On-Site Circulation

Pedestrian facilities consist of sidewalks along the streets in the immediate vicinity of the project site. The existing sidewalk on Blossom Hill Road and Cahalan Avenue would be reconstructed along the entire project frontages. The new sidewalk would be 15 feet wide on Blossom Hill Road and 12 feet wide on Cahalan Avenue. The project would provide pedestrian access to the site on both project frontages. The project would also add a new internal crosswalk across the on-site drive aisle with ADA-compliant ramps on the walkways at both ends of the crosswalk. Internal sidewalks would provide pedestrian access to the lobby and common areas, including the elevators and stairs. Benches would also be provided on-site for outdoor use.

The continuous network of sidewalks and crosswalks in the study area exhibits good connectivity and would provide employees and guests of the project site with safe routes to transit stops and other points of interest in the project area. Marked crosswalks are provided with pedestrian signal heads at all signalized intersections in the surrounding area. The Cahalan Avenue and Blossom Hill Road intersection has crosswalks on three legs, which would provide a continuous pedestrian connection in any direction from the project site. The Cahalan Avenue and Blossom Hill Road intersection has existing curb ramps on all corners, however truncated domes are missing on the

southwest and southeast corners. Truncated domes are the standard design requirement for detectable warnings, which enable people with visual disabilities to determine the boundary between the sidewalk and the street. The project would provide new truncated domes on the southeast corner of Cahalan Avenue and Blossom Hill Road.

Bicycle Access and On-Site Circulation

Class II striped bike lanes are present on Cahalan Avenue between Blossom Hill Road and Santa Teresa Boulevard and on Blossom Hill Road between Meridian Avenue and Cottle Road/Endicott Boulevard. In addition, a Class I shared use path is present north of Cahalan Avenue, providing access across SR 85 to Chynoweth Avenue and Martial Cottle Park. The nearby residential streets have relatively low traffic volumes and are therefore conducive to cyclists.

The San Jose Better Bike Plan 2025 plans to implement Class IV protected bike lanes along the project frontage on Blossom Hill Road and buffered or protected bike lanes along the project frontage on Cahalan Avenue. Additional improvements per the San Jose Better Bike Plan 2025 in the project vicinity include a bike boulevard on Cahalan Avenue connecting Blossom Hill Road and the existing Class I shared use path.

Recommendation: Per the San Jose Better Bike Plan 2025, the project should provide a voluntary monetary contribution toward the cost of the planned Class IV protected bike lanes along its project frontage on Blossom Hill Road.

The site plan shows eight short-term bicycle parking spaces (bike racks) located near the proposed lobby and building entrances. Providing adequate and convenient bike parking would help to create a bicycle-friendly environment and encourage bicycling by employees and visitors of the project.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. The City's General Plan identifies both walk and bicycle commute mode split targets as 15 percent or more for the year 2040. This level of pedestrian and bicycle mode share is a reasonable goal for this project, particularly if transit is utilized in combination with bicycle commuting.

Transit Services

The project site is served by VTA Bus Route 27 on Blossom Hill Road. The bus stop closest to the project site is located on the project frontage on Blossom Hill Road. The bus stop serves eastbound Route 27. Continuous pedestrian facilities provide access to the bus stop for westbound Route 27, which is located 0.1 mile from the project site.

Recommendation: The project should coordinate with VTA regarding improvements, such as a rebuilt bus pad or a new metal bench, to the bus stop on its frontage on Blossom Hill Road.

Due to the project site's proximity to transit stops, it is reasonable to assume that some employees and customers would utilize the existing transit services. It is estimated that the increased transit demand generated by the proposed project could be accommodated by the current available ridership capacities of the transit services in the study area.

Parking

Vehicle Parking

The vehicle parking requirements for the office and retail components of the project are described below.

Retail Vehicle Parking Requirement

According to Section 20.90.220.C of the City's Zoning Code, ground floor commercial uses located in a designated urban village have a vehicle parking requirement of 1 space per 400 s.f. of floor area, where floor area is calculated as 85 percent of the gross floor area. The project would be located within the Blossom Hill/Cahalan Urban Village and the gross floor area would be 12,650 square feet. Therefore, the proposed retail space of the project would be required to provide a total of 27 vehicle parking spaces. The retail parking requirement for the project is calculated as follows:

$$12,650 \text{ s.f.} \times 0.85 = 10,753 \text{ s.f.} / 400 = 27 \text{ retail parking spaces}$$

Office Vehicle Parking Requirement

According to the City of San Jose's off-street parking requirements (Chapter 20.90, Table 20-190 of the City's Zoning Code), the vehicle parking requirement for the office component of the project is 1 space per 250 s.f. of floor area, where floor area is calculated as 85 percent of the gross floor area. Based on the proposed office space of the project, the project would be required to provide a total of 38 vehicle parking spaces. The office parking requirement for the project is calculated as follows:

$$10,999 \text{ s.f.} \times 0.85 = 9,349 \text{ s.f.} / 250 = 38 \text{ office parking spaces}$$

Clean Air Vehicle Parking Requirement

Based on Table 20-215 of the City's Zoning Code, projects that are required to provide 51-75 parking spaces are required to provide 6 clean air vehicle parking spaces. The project would be required to provide 27 retail parking spaces and 38 office parking spaces, for a total of 65 parking spaces. Therefore, the project would be required to provide 6 clean air vehicle parking spaces.

Accessible Parking Requirement

Based on the *2019 California Building Code* (Table 11B-208.2), projects that would provide a total of 51-75 parking spaces, would be required to provide a minimum of 3 accessible parking spaces. Since the project would be required to provide 65 parking spaces, 3 accessible parking spaces are required.

Vehicle Parking Supply

The site plan shows 14 off-street vehicle parking spaces, which is 51 fewer spaces than the 65 vehicle parking spaces that are required. However, the project would have a Covenant of Easement that would allow parking, access, ingress and egress for the 696 Blossom Hill site with the Sunrise Plaza shopping center site and support a shared parking arrangement between the sites. The existing buildings at the Sunrise Plaza shopping center site are required to provide 265 parking spaces ($124,540 \text{ s.f.} \times 0.85 / 400 = 265$). Therefore, the total required parking spaces would be 330. The entire site currently provides 606 parking spaces, and the project would provide 14 new parking spaces, for a total of 620 parking spaces. Therefore, the shared parking supply would meet the City parking requirement for the overall site area.

The site plan shows two clean air vehicle spaces, four electric vehicle (EV) charging spaces, and three accessible spaces, of which one parking space would be an accessible EV charging space. Therefore, the project would meet all City vehicle parking requirements.

Motorcycle and Bicycle Parking

The motorcycle and bicycle parking requirements for the retail and office components of the project are described below.

Motorcycle Parking Requirement

The City requires one motorcycle space per 20 code-required auto parking spaces for commercial uses and one motorcycle parking space for every 50 code-required vehicle parking spaces for office uses (per Chapter 20.90, Table 20-250 of the City's Zoning Code). Thus, the project would be required to provide a total of three motorcycle spaces.

Bicycle Parking Requirement

The City requires one bicycle parking space for every 3,000 s.f. of retail floor area and one bicycle parking space for every 4,000 s.f. of office floor area (per Chapter 20.90, Table 20-190 of the City's Zoning Code). Thus, the project is required to provide seven bicycle spaces. Note 6 of Table 20.190 states that at least 80 percent of bicycle parking spaces should be provided in short-term facilities and at most 20 percent should be provided in long-term facilities.

Motorcycle and Bicycle Parking Supply

The project proposes to provide four motorcycle parking spaces, which would meet the City's motorcycle parking requirement. The project proposes to provide eight bicycle parking spaces, which would meet the City's bicycle parking requirement. The site plan does not show any long-term bicycle parking facilities.

Recommendation: The project should consider adding up to two long-term bicycle parking spaces to serve employee needs.

Conclusions

The proposed retail space would meet the City's screening criteria for VMT analysis exemption. Therefore, the retail use would be expected to result in a less-than-significant VMT impact. Furthermore, the City has determined that a VMT analysis is not required for the proposed office space since the project application was submitted in 2017 before Council Policy 5-1 was adopted. The project is also expected to generate minimal net new trips on the roadway network.

Site access and on-site circulation are expected to be generally adequate at the project site. Hexagon recommends the following regarding the project site plan:

- Prior to final design, the driveway should be shown to have a width of 26 feet.
- Prior to final design, the project applicant should ensure that all accessible parking spaces meet the ADA requirements.
- The project applicant should coordinate with City staff to determine if any loading spaces would be required to serve the project.

- Garbage trucks should enter the site via the Sunrise Plaza Shopping Center parking lot to minimize disruptions to eastbound traffic flow in the drive aisle. Garbage trucks should pick up garbage along the drive aisle and exit the site towards Cahalan Avenue.
- Per the San Jose Better Bike Plan 2025, the project should provide a voluntary monetary contribution toward the cost of the planned Class IV protected bike lanes along its project frontage on Blossom Hill Road.
- The project should coordinate with VTA regarding improvements, such as a rebuilt bus pad or a new metal bench, to the bus stop on its frontage on Blossom Hill Road.
- The project should consider adding up to two long-term bicycle parking spaces to serve employee needs.