Appendix H

Multi-Modal Transportation Analysis

Multi-Modal Transportation Analysis

1265 Montecito Avenue

Final

July 2022

TJKM

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1. INTRODUCTION

This report presents the results of the Multi-Modal Transportation Analysis (MTA) for the proposed multifamily development project located at 1265 Montecito Avenue in the City of Mountain View, California. The purpose of this MTA is to assess operational effects of the proposed project for all modes of transportation and to identify adverse effects and potential transportation improvements to address the adverse effects. The reporting requirements of this MTA are based on the MTA Checklist provided in **Appendix A**. **Figure 1** shows the location of the proposed project site in the City of Mountain View.

Figure 1: Project Location

LEGEND

Project Location

X Study Intersection

1.1 Project Description and Surrounding Areas

The proposed development is a 1.04-acre site comprising one parcel, 1265 Montecito Avenue (APN: 150-26-004). The site is located at the southwest corner of Montecito Avenue and North Shoreline Boulevard. The proposed project is a multifamily residential development consisting of one five-story, 85-unit building with 84 affordable units for households with incomes at or below 60% of the area median income (AMI) and a three-bedroom manager's unit. The project will be four stories of wood-framed Type V-A residential apartments on a concrete podium over a one-story Type I-A parking structure with common areas and utility spaces on the ground floor.

The current General Plan Land Use Designation is Neighborhood Commercial and the project applicant is requesting a General Plan Amendment to High Density Residential, and a Zoning Map Amendment from Commercial Neighborhood (CN) Zone to High Density (R4) Zone, which would allow a density of up to 80 dwelling units per acre or 83.18 base units. The project conforms with the minimum "minimum 1 acre site, 160 ft. lot width, and 70 ft. maximum building height limit. The project requests a 1.19 % density bonus to allow one additional unit beyond the base density of 84 dwelling units allowed under the proposed R4 zoning (85 units total) The project is also within 0.5 miles of a major transit stop and eligible for a 0.5 spaces/unit parking ratio per State Density Bonus Law in California Government Code Section 65915. The applicant is also requesting a development standard waiver to provide no personal storage space, which is required to be 80 square feet or 164 cubic feet per unit in the R4 Zone.

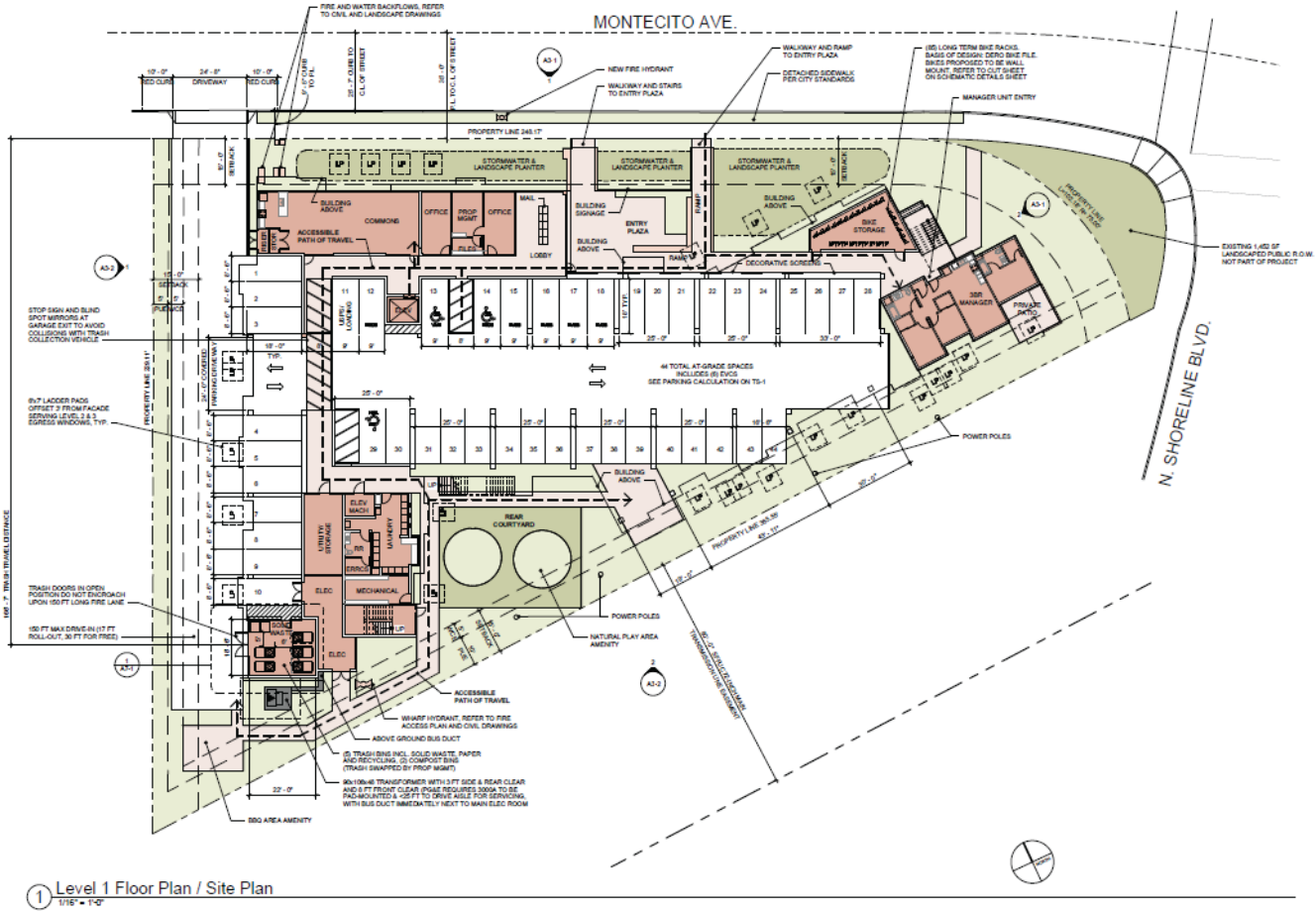
An existing 12,300 square foot office building on the site will be demolished. A proposed at-grade parking garage will be accessed from behind and obscured by common rooms, lobbies, bike storage rooms, and a landscaped entry plaza that will activate the primary frontage along Montecito Avenue. The proposed project provides a total of 45 parking spaces on site, including four accessible parking stalls, one van accessible parking stall, and one loading space. The proposed project will also provide eight short-term bicycle racks for guests and 85 long-term racks in secured bike storage rooms. The proposed project has a single driveway that provides ingress and egress at Montecito Avenue for all modes of traffic. In addition to this, emergency vehicles will have access to the site via Montecito Avenue. **Figure 2** shows the project site plan.

The proposed project is located along Montecito Avenue and is surrounded by commercial and residential land uses.

1.2 Study Area

The study area is generally bounded by North Shoreline Boulevard and Montecito Avenue. The study area boundaries were selected based on the anticipated extent of project impacts. The study area, its' surrounding areas and street network are illustrated in **Figure 1**.

Figure 2: Project Site Plan



1 Level 1 Floor Plan / Site Plan
1/16" = 1'-0"

2. EXISTING CONDITIONS

This chapter describes existing conditions in the immediate vicinity of the proposed project, including roadway facilities, bicycle and pedestrian facilities, and available transit services.

2.1 Planning Context: Mountain View City Code Chapter 36. Zoning

The Zoning Ordinance is contained in Chapter 36 of the City Code and it includes R4 zone development standards, based on policies of the General Plan.

The current General Plan Land Use Designation is Neighborhood Commercial and the project is requesting a General Plan Amendment to High Density Multifamily which would allow a density of up to 80 dwelling units per acre or 83.18 base units on the 1.04 acre site. The project meets the transportation related requirements of the Mountain View City Code and conforms with the requirement of the California density bonus law.

2.2 Existing Setting and Roadway System

Regional roadway facilities near the development site includes US 101, State Route (SR) 237, SR 85, and SR 82. Local access to the proposed project is provided generally via North Shoreline Boulevard, Montecito Avenue, West Middlefield Road, and Stierlin Road. Descriptions of the existing roadways are provided as follows:

US 101 is a north-south, eight-lane freeway with three mixed-flow lanes and one High Occupancy Vehicle (HOV) lane in each direction in the vicinity of the project. HOV Lanes, also known as diamond or carpool lanes, are restricted for use by vehicles occupied by two or more persons or motorcycles between 5-9 a.m. and between 3-7 p.m. HOV includes carpools, vanpools, and buses. US 101 is located north of the project site and provides regional freeway access between the City of San Francisco to the north and the City of San Jose to the south. Near the project site, US 101 is oriented in an east-west direction. Access from US 101 to the project site is provided via interchanges at North Shoreline Boulevard, SR 85, and SR 237.

SR 85 is a north-south, six-lane freeway with two mixed-flow lanes per direction and one HOV lane in each direction during peak periods in the vicinity of the project site. SR 85 extends from the SR 85/US 101 interchange in Mountain View to the SR 85/US 101 interchange in south San Jose. Access from SR 85 to the project site is provided via interchanges at Moffett Boulevard, Central Expressway/Evelyn Avenue, SR 237, and El Camino Real.

SR 237 is an east-west freeway extending between the City of Mountain View (El Camino Real/SR 85) and the City of Milpitas (I-680). SR 237 includes two mixed flow lanes in the City of Mountain View. Access from SR 237 to the project site is provided via an interchange at West Middlefield Road.

SR 82 (El Camino Real) provides regional access between the City of San Francisco to the north and the City of San Jose to the south. It is a regionally significant east-west (in the project vicinity) arterial with

three mixed-flow lanes in each direction. The roadway provides local connections to the project site via North Shoreline Boulevard.

North Shoreline Boulevard is a four-lane and six-lane roadway aligned in a mostly north-south orientation in the vicinity of the site. North Shoreline Boulevard extends from SR 82 (El Camino Real) to Shoreline Park. Access from North Shoreline Boulevard to the project site is provided via Montecito Avenue.

Montecito Avenue is a two-lane roadway aligned in an east-west orientation in the vicinity of the site. It runs between North Shoreline Boulevard and Burgoyne Street. Montecito Avenue would provide direct access to the project site.

West Middlefield Road is a four-lane roadway that begins at Veterans Boulevard in Redwood City, extends south to Winslow Street, and continues eastward until it terminates at Central Expressway in Sunnyvale.

Stierlin Road is a two-lane east-west roadway that begins at North Shoreline Boulevard and ends at Washington Street.

2.3 Existing Pedestrian Facilities

Pedestrian facilities are comprised of crosswalks, sidewalks, pedestrian signals, and off-street paths which provide safe and convenient routes for pedestrians to access the destinations such as institutions, businesses, public transportation, and recreation facilities. Sidewalks are available in front of the project site on Montecito Avenue.

In the project vicinity, signalized study intersections are equipped with countdown pedestrian signal heads. A continuous pedestrian network is available crossing northbound and southbound over US 101. Overall, the existing network of sidewalks and crosswalks provides pedestrians with safe routes to bus stops and other points of interest within the area. The existing pedestrian facilities in the study area are shown in **Figure 3**.

2.4 Existing Bicycle Facilities

Existing bicycle facilities[1] are described below and shown in **Figure 4**. The City of Mountain View 2015 Bicycle Transportation Plan Update[2] describes the four bikeway classifications in the City.

- **Class I Bikeways/Multi-Use Paths**: Class I bikeways are also referred to as multi-use or shared-use paths. They provide completely separated, exclusive right of way for people to walk and bike.

[1] Access MV (Comprehensive Modal Plan), City of Mountain View, March 2021
[2] Bicycle Transportation Plan Update, City of Mountain View, November 17, 2015, Page 14-18

Stevens Creek Trail located approximately one mile east of the Project is a Class I bikeway providing north-south intercity connections.

- **Class II Bikeways/On-Street Bike Lanes**: Class II bikeways are striped lanes on roadways for one-way bicycle travel. Class II bikeways can also have painted buffers that add a few feet of separation between the bike lane and the traffic lane.
- **Class III Bikeways/Bike Routes**: Class III bikeways are signed bike routes where bicyclists share a travel lane with motorists. Class III bike routes are appropriate for low-volume streets with slow travel speeds, especially those on which vehicular traffic volumes are low enough that passing maneuvers can use the full street width, on roadways with bicycle demand but without adequate space for Class II striped bike lanes, and as "gap fillers" where there are short breaks in Class II lanes due to right-of-way constraints.
- **Class III Bicycle Boulevards:** Bicycle Boulevards are a type of Class III bikeway with additional treatments that prioritize bicycle use. Bike Boulevards are signed, shared roadways with low motor vehicle volume, such that motorists passing bicyclists can use the full width of the roadway. Bicycle Boulevards prioritize convenient and safe bicycle travel through traffic calming strategies, wayfinding signage, and other measures.
- **Class IV Bikeways/Protected On-Street Bike Lane/Cycle tracks:** A Class IV bikeway, known as a cycle track or protected bike lane, is an on-street bike lane that is physically separated from motor-vehicle traffic by a vertical separation, such as a raised curb, bollard, or car parking.

The Stevens Creek Trail is a Class I bicycle path that extends from the intersection of Heatherstone Way/Dale Avenue in the south to the Bay Trail network in the North Bayshore area north of US 101. The trail can be accessed from West Middlefield Road, Moffett Boulevard, and La Avenida Street, which are all about a one-mile biking distance from the project site.

North Shoreline Boulevard has striped Class II bicycle lanes from El Camino Real in the south to Charleston Road in the north. North Shoreline Boulevard provides bicycle access from the project site to the Bailey Park Plaza Shopping Center and the North Bayshore area.

Montecito Avenue has Class II bicycle lanes from North Shoreline Boulevard in the east to Bailey Park Plaza Shopping Center in the west.

West Middlefield Road has Class II bicycle lanes across the City of Mountain View, from Old Middlefield Way in the west to Bernardo Avenue in the east. West Middlefield Road provides bicycle access to the Stevens Creek Trail.

La Avenida Street has Class II bicycle lanes from Inigo Way in the west to a cul-de-sac in the east that provides access to the Stevens Creek Trail. The VTA Bikeways Map and the City of Mountain View Bike

Map show a Class III bicycle route on La Avenida Street between North Shoreline Boulevard and Inigo Way. However, there is no signage on the roadway to suggest that this segment is a bicycle route.

Inigo Way has Class II bicycle lanes along its entirety from La Avenida Street to Pear Avenue.

2.5 Existing Transit Services and Facilities

Mountain View has a variety of transit options that provide access to regional destinations as well as intercity travel, including Caltrain, VTA Light Rail Transit (LRT), VTA bus, MVgo Shuttle, and Mountain View Community Shuttle services. The existing transit services and facilities in the study area are shown in **Figure 5**. VTA services are based on the VTA 2019 New Transit Service Plan[3], which reflects what baseline conditions were prior to the temporary service changes associated with the COVID-19 pandemic.

Caltrain. Caltrain provides commuter rail service along the San Francisco Bay Area Peninsula from Gilroy, through the south bay in San Jose, to San Francisco. Mountain View has two stations: San Antonio Station located at 190 Showers Drive and the Mountain View Station located at 600 West Evelyn Avenue. The Caltrain Mountain View Station is an integral part of the Mountain View Transit Center, which has connections to VTA buses and light rail, community shuttles, bicycle share, and parking facilities. This station offers the Baby Bullet Express service which travels between San Francisco and San Jose in about an hour, stopping at a few popular stations.

The Caltrain Mountain View Station is about 0.5 miles from the proposed project site.

VTA Light Rail Transit and Bus Services. The VTA operates bus and light rail transit (LRT) services in the City of Mountain View, feeding into the entire Santa Clara County system. There are three VTA bus stops within 750 feet of the project site on North Shoreline Boulevard. Based on a regular service plan adopted in 2019, Route 40 at these three stops provides regional and local service.

Mountain View Community Shuttle. The Mountain View Community Shuttle provides free connections between residential neighborhoods and points of interest, such as city offices, libraries, parks, medical offices, shopping centers, and entertainment venues, throughout Mountain View. The Red Route, traveling westbound on West Middlefield Road, and the Gray Route, traveling eastbound on West Middlefield Road, stop at two bus stops at the intersection of North Shoreline Boulevard and West Middlefield Road, which are both less than 0.5 mile walking distance from the project site.

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[3] 2019 new transit service plan. Retrieved March 26, 2021, from https://www.vta.org/projects/2019-new-transit-service-plan

Mountain View Transportation Management Association (MTMA) Shuttle. The MTMA operates the MVgo shuttle system. This shuttle system is provided through the collection of MTMA member dues. MVgo operates four shuttle routes that provide service to employment areas from the Mountain View Transit Center during the peak commute hours. Route B provides service along North Shoreline Boulevard, Pear Avenue, and at Google offices in the North Bayshore area. The closest stops are located at the intersection of North Shoreline Boulevard and Terra Bella Avenue, which are both less than 0.5 mile walking distance from the project site. The shuttles are fare-free and open to the public. MVgo shuttle service resumed with reduced service levels following the pandemic.

Table 1 shows the existing and shuttle services within the project site.

Table 1. Existing Bus and Shuttle Services

Route	Route Description	Weekday Hours of Operation	Headways[1] (minutes)	Nearby Bus Stop	Walking Distance from Nearest Stop to Project Site (feet)
VTA Local Route 40	Foothill College - Mountain View Transit Center	6:15 AM - 8:30 PM	30	Shoreline Boulevard and Stierlin Road	700
Mountain View Community Shuttle[2]	Throughout Mountain View (via Middlefield Rd)	10:00 AM - 6:00 PM	30	Shoreline Boulevard and Middlefield Road	1,900
MVgo Route B[3]	Shoreline, Pear, Crittenden	N/A	N/A	Shoreline Boulevard and Terra Bella Avenue	2,500

Notes:

1. Headways during weekday peak periods in the project area.
2. Operated by the City of Mountain View and Google. It provides free transportation connections between many residential neighborhoods, senior residences and services, city offices, library, park and recreational facilities, medical offices, shopping centers, and entertainment venues throughout Mountain View.
3. Due to lingering effects of the COVID-19 pandemic, all MVgo Routes have been resumed with reduced service levels.

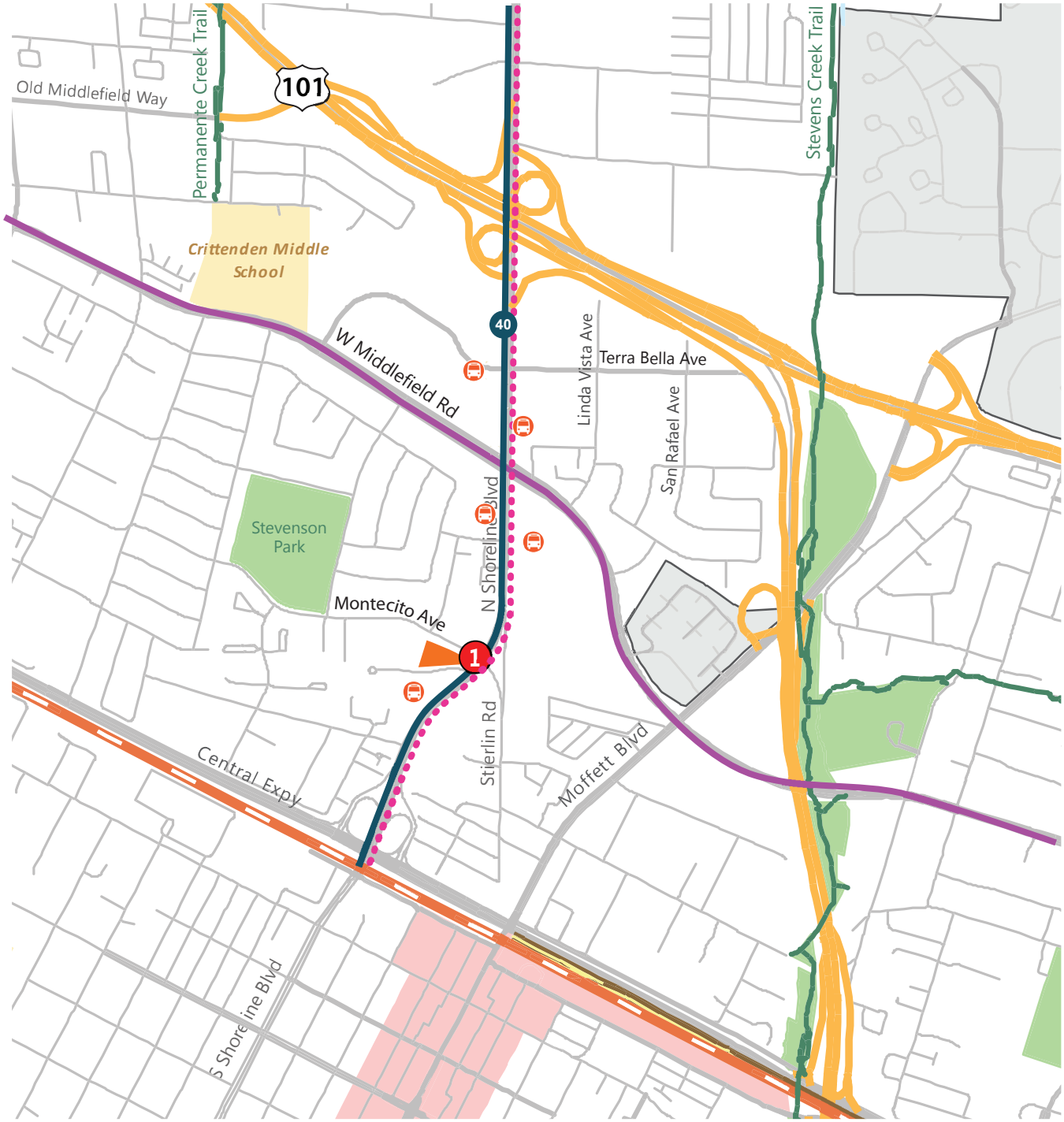
Figure 3: Existing Pedestrian Facilities

LEGEND

- Project Location
- Study Intersection
- Sidewalk
- Marked Crosswalk

Figure 4. Existing Bicycle Facilities

Figure 5. Existing Transit Facilities



LEGEND

- Project Location
- Study Intersection
- Bus Stop
- 40 — VTA Local Route 40
- Mountain View Community Shuttle (Weekend/Holiday Service)
- Mountain View Community Shuttle

3. CITY POLICY CONFORMANCE

The proposed project is in conformance with Mountain View City Code Chapter 36.12.10 R4 zoning transportation-related development standards[4].

4. SITE ACCESS AND CIRCULATION

This chapter describes an evaluation of site access and circulation and identifies potential conflicts and proposed solutions for each mode of transportation.

4.1 Pedestrian Access and Circulation

Pedestrian access to the project site will be facilitated by existing sidewalks on Montecito Avenue, North Shoreline Boulevard, and Stierlin Road, as well as proposed internal pedestrian circulation facilities within the project site. The proposed project will provide walkways and stairs to an entry plaza along Montecito Avenue.

Open Space

The project proposes to provide landscaping, an entry plaza, and a linear accent planting garden.

Street-Oriented Entrances

The main entrance of the building is located on the Montecito Avenue side at the northeast corner of the building. The building's street frontage will create an inviting pedestrian space. The proposed project's multiple windows also allow clear view into and out of the building facing Montecito Avenue.

Crossing Conditions

All existing marked crosswalks in the vicinity of the proposed project will be retained.

4.2 Bicycle Access and Circulation

The project proposes to have eight short-term bicycle parking racks located on the first floor. In addition, the project will have 85 long-term bike racks located near the parking lot. These bicycle lockers can be accessed from the proposed driveway.

4.3 Vehicle Access and Circulation

In terms of external access, the project site plan (dated October 25, 2021) shows a single driveway that the proposed project would use. The driveway on Montecito Avenue serves vehicle ingress and egress which is approximately 300 feet east of the North Shoreline Boulevard/Montecito Avenue-Stierlin Road intersection. Vehicle access for the project is shown in **Figure 2**. The Montecito Avenue driveway is

[4] Mountain View City Code Chapter 36. Zoning

proposed to be 24 feet and eight inches wide, and accommodates inbound and outbound project traffic. This driveway would provide access to the surface level parking.

The driveway facilitates left and right turn movements to and from Montecito Avenue. Vehicles exiting the driveway and turning left onto Montecito Avenue would need to cross one parking lane, one bike lane, and one vehicular lane, and have a clear line of sight to oncoming vehicles travelling westbound on Montecito Avenue. Another driveway exists on the north side of Montecito Avenue, approximately 15 feet east of the project driveway. This driveway provides access to a retail center and accommodates left and right turns to and from Montecito Avenue. Vehicles exiting each driveway have a clear line of sight to each other, however, conflicts may occur between vehicles exiting the driveways in the same direction. TJKM recommends the addition of a stop sign at the project driveway to ensure vehicles exiting the project site come to a complete stop and yield to all conflicting traffic.

It is anticipated that this driveway would accommodate 17 a.m. peak hour trips, and 23 p.m. peak hour trips. TJKM conducted a vehicle queuing and level of service (LOS analysis) at the project driveway on Montecito Avenue. The 95th percentile (maximum) queues were analyzed using the HCM 2000 Queue methodology contained in TRAFFIX software for the project driveways. Table 2 summarizes the 95th percentile queue lengths and LOS at the project driveways under all scenarios. Based on the level of service (LOS) analysis as shown in Table 2, this driveway would operate at LOS B during a.m., and p.m. peak hours under project conditions. In addition, the 95th percentile queueing at the outbound approach of project driveways is expected to be minimal.

Table 2. 95th Percentile Queues and Level of Service Analysis at Project Driveways

#	Study Intersection	Control	Peak Hour	Existing plus Project Conditions			Background plus Project Conditions			Cumulative plus Project Conditions		
				Delay[1]	LOS[2]	95th Percentile Queue	Delay[1]	LOS[2]	95th Percentile Queue	Delay[1]	LOS[2]	95th Percentile Queue
1	Montecito Avenue/Project Driveway	One Way Stop	AM	10.5	B	<25	10.5	B	<25	10.8	B	<25
			PM	10.1	B	<25	10.0	B	<25	10.4	B	<25

Notes:
AM – morning peak hour, PM – evening peak hour
1. Delay –Total control delay for the worst movement is presented for side-street stop – controlled intersections.
2. LOS – Level of Service
95th percentile queue length is expressed in feet per lane
Reported values of 95th percentile Queues are for the outbound movements at the project driveways

The driveway provides access to a loading zone and trash area on the west side of the building. The trash enclosures can be accessed by garbage trucks via Montecito Avenue. The internal circulation for the

proposed surface parking lot was reviewed for issues related to queuing, safety, dead-end aisles, and parking spaces with difficult maneuvers. All of the circulation aisles will adequately accommodate two-way travel.

Service vehicles have access to the proposed development via the proposed driveway on Montecito Avenue for the loading and trash enclosure. These vehicles will circulate to the trash enclosures and the service entrance via Montecito Avenue, and exit via Montecito Avenue. The internal circulation including entrance and exit paths for vehicles is illustrated in the **Figure 6**.

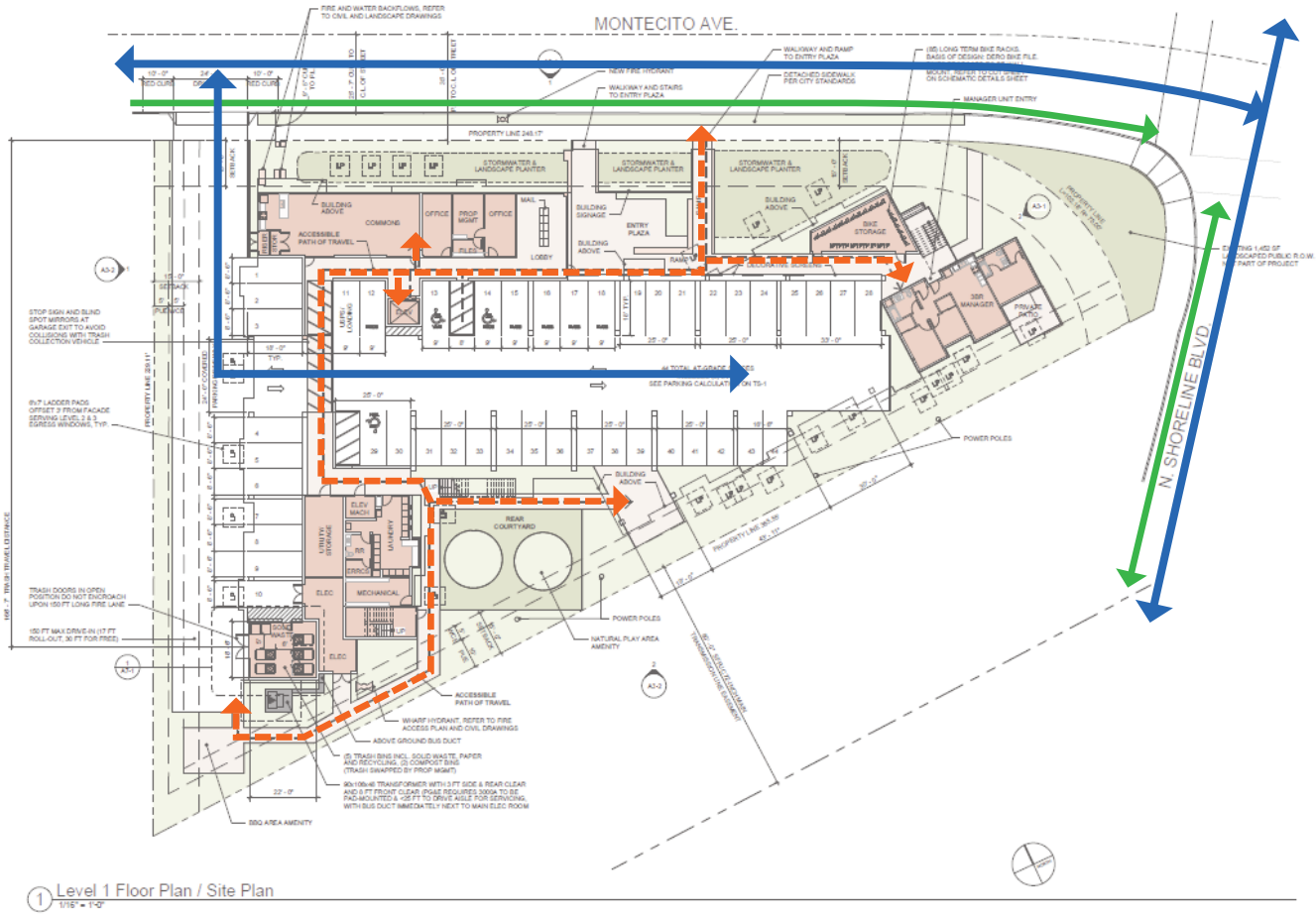
From the site plan, it appears that fire trucks would serve the site from the public street frontages, and there will be onsite fire suppression systems, wharves hydrants, etc. to provide service to the buildings and site interior per the Municipal Fire Code.

According to American Association of State Highway and Transportation Officials (AASHTO)[5], the required minimum stopping sight distance for right turn vehicles with a design speed of 25 mph is 155 feet. The project driveway at Montecito Avenue has a sight distance of 300 feet to see passenger cars coming from the North Shoreline Boulevard/Montecito Avenue – Stierlin Road intersection. Sight distance for a right turn maneuver at the driveway is adequate.

The nearest intersection at North Shoreline Boulevard and Montecito Avenue – Stierlin Road is Case D1; which indicates intersections with traffic signal control ("Geometric Design of Highways and Streets, (The Green Book) 2018 7th Edition" from the American Association of State Highway and Transportation Officials (AASHTO), Section 9.5.3.4). At signalized intersections, the first vehicle stopped on one approach should be visible to the driver of the first vehicle stopped on each of the other approaches. Left-turning vehicles should have sufficient sight distance to select gaps in oncoming traffic and complete left turns. Apart from these sight distance conditions, there are generally no other approach or departure sight triangle evaluations are needed for signalized intersections. The sight distance requirements are met at the intersection of North Shoreline Boulevard and Montecito Avenue-Stierlin Road.

[5] A Policy on Geometric Design of Highways and Streets, American Association of State Highway and Transportation Officials, 2018, Table 9-9.

Figure 6. Site Circulation Diagram



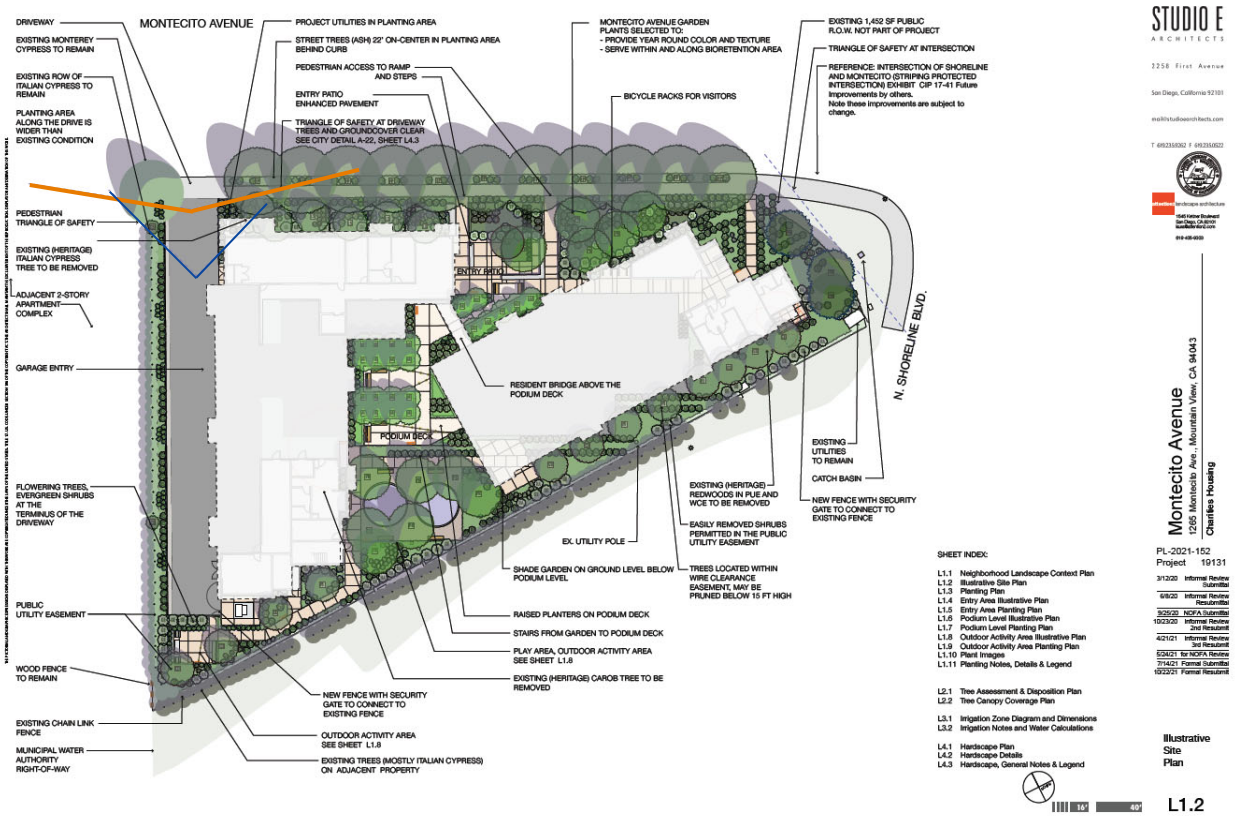
LEGEND

- Project Location
- Study Intersection
- Vehicular Circulation
- Accessible Pedestrian Circulation
- Bicycle Lane

4.4 Driveway Pedestrian and Vehicular Triangle of Safety

Sight lines to the pedestrian and vehicular triangle of safety was also evaluated for the proposed driveway at Montecito Avenue using the City of Mountain View's Public Works Department Standard Detail. The pedestrian triangle of safety extends 25 feet from both sides of the driveway at Montecito Avenue and 25 feet from the back of sidewalk. In addition to the pedestrian triangle of safety, the vehicular triangle of safety extends 15 feet from the back of sidewalk to 90 feet west and 65 feet east. In these areas fences, shrubs, bushes or hedges shall be a maximum height of 3 feet and tree canopy must be a minimum of 6 feet off the ground. Pedestrian and vehicular triangle of safety are shown in **Figure 7.**

Figure 7. Safety Triangle Diagram



4.5 Emergency and Service Vehicle Access

The project site plan review is subject to final review by the City of Mountain View Public Works Department and the Mountain View Fire Department to ensure the project site includes adequate vehicular access for emergency vehicles and that all existing and/or newly constructed emergency facilities (e.g., hydrants) are clearly marked, unobstructed, and accessible for emergency responders. The project has incorporated an emergency and service vehicle access to the project via Montecito Avenue. In addition, the project must comply with all regulations set forth in the City's Fire Code and applicable emergency design measures (e.g., Standard Details and Specifications for Fire Apparatus Turnaround Access). The project does not conflict with existing and planned emergency access therefore there are no adverse effects to emergency and service vehicle access. Emergency vehicle access is shown in **Figure 6**.

4.6 Loading Areas

Service vehicles and passenger loading vehicles have access to the proposed development via the proposed driveway on Montecito Avenue for the loading and trash enclosure. One designated loading space is provided. These vehicles will circulate to the trash enclosures and the service entrance via Montecito Avenue, and exit via Montecito Avenue. The loading area is shown in **Figure 6**.

5. MOTOR VEHICLE OPERATIONS

5.1 Signalized Intersection Level of Service (LOS)

Level of Service Analysis Methodology

LOS is a qualitative measure that describes operational conditions as they relate to the traffic stream and perceptions by motorists and passengers. The LOS generally describes these conditions in terms of such factors as speed and travel time, delays, freedom to maneuver, traffic interruptions, comfort and convenience, and safety. The operational LOS are given letter designations from A to F, with A representing the best operating conditions (free-flow) and F the worst (severely-congested flow with high delays). Intersections generally are the capacity-controlling locations with respect to traffic operations on arterial and collector streets. The LOS methodologies for roadway segments, signalized and unsignalized intersections are described in detail in **Appendix B**.

Signalized Intersections

The study intersections under traffic signal control were analyzed using the 2000 Highway Capacity Manual (HCM) Operations Methodology for signalized intersections described in Chapter 16 (HCM 2000). This methodology determines LOS based on average control delay per vehicle for the overall intersection during peak-hour intersection operating conditions. The LOS methodology is approved by VTA and adopted by the City. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Unsignalized Intersections

The study intersections under stop control (Unsignalized) were analyzed using the 2000 HCM Operations Methodology for unsignalized intersections described in Chapter 17 (HCM 2000). LOS ratings for stop-sign controlled intersections are based on the average control delay expressed in seconds per vehicle. At the side street, controlled intersections or two-way stop sign intersections, the control delay is calculated for each movement, not for the intersection as a whole. For approaches composed of a single lane, the control delay is computed as the average of all movements in that lane. The weighted average delay for the entire intersections is presented for all-way stop controlled intersections.

The average control delay for both signalized and unsignalized intersections were calculated using TRAFFIX 8.0 analysis software and were correlated to a LOS designation as shown in **Appendix B**.

5.2 Adverse Intersection Operation Effects

According to the City of Mountain View[6], an adverse effect on intersection operations occurs when the analysis demonstrates that a project would cause the operational conditions at a study intersection to fall

[6] Multi-Modal Transportation Analysis Handbook Version 1.0 (February 2021)

below LOS D with the addition of project vehicle trips when comparing either existing conditions (baseline) to project conditions or background conditions (baseline) to project conditions.
For Congestion Management Program (CMP) intersections, an adverse effect on intersection operations occurs when the analysis demonstrates that a project would cause the operations at a CMP intersection to degrade to LOS F; or the addition of traffic causes increases in critical delay by four or more seconds and critical volume/capacity to increase 0.010 (one percent) or more.
For an intersection operating at LOS E or F under baseline conditions, an adverse effect is defined as:

- An increase in average critical delay by 4.0 seconds or more AND an increase in the critical volume-to-capacity (V/C) ratio of 0.010 or more; OR
- A decrease in average critical delay AND an increase in the critical V/C ratio of 0.010 or more.

Addressing Adverse Effects on Intersection Operations

There are three possible approaches to address adverse effects at signalized intersections:

- Reduce project vehicle-trips to eliminate the adverse effect and bring the intersection back to the background or baseline condition. The Santa Clara Countywide VMT Evaluation Tool (VMT Tool) can be used to select measures that would achieve the reduction of vehicle-trips.
- Construct improvements to the affected intersection or other roadway segments of the citywide transportation system to improve operations provided the proposed improvements are consistent with Mountain View plans and policies and do not result in other impacts or adverse effects.
- Construct multi-modal improvements to increase transportation capacity for pedestrian, bicycle, and transit modes, and/or improve access to transit.

5.3 Existing Conditions

Study Intersections

TJKM evaluated traffic conditions at one study intersection during the a.m., and p.m. peak hours for a typical weekday. The study intersection was selected in consultation with the City of Mountain View staff. The peak periods observed were between 7:00 a.m.-10:00 a.m., and 4:00 p.m.-7:00 p.m. The study intersection and associated traffic controls are as follows:

1. North Shoreline Boulevard/Montecito Avenue-Stierlin Road (Signal)

Analysis Scenarios

This study addresses the following six traffic scenarios:

- **Existing Conditions** – This scenario evaluates the study intersections based on existing traffic volumes, existing lane geometry, and traffic controls.

- **Existing plus Project Conditions** – This scenario is identical to Existing Conditions, but with the addition of traffic from the proposed project.
- **Background (Existing plus Approved and Planned Development Projects) Conditions** – This scenario is similar to Existing Conditions, but with the addition of traffic from approved and planned developments within the vicinity of the proposed project.
- **Background plus Project Conditions** – This scenario is identical to Background Conditions, but with the addition of traffic from the proposed project.
- **Cumulative Conditions** – This scenario is similar to the Background Conditions but with the projected growth rate of two percent per year for five years, which was applied to Existing traffic volumes, and then background project trips were added, in accordance with standard City of Mountain View procedures.
- **Cumulative plus Project Conditions** – This scenario is identical to Cumulative Conditions, but with the addition of traffic from the proposed project.

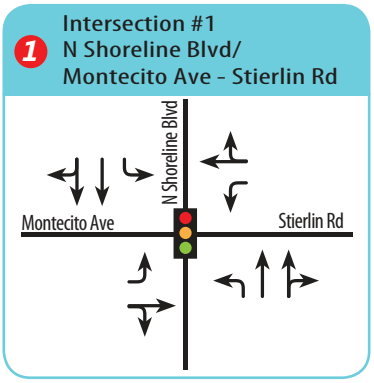
Data Collection

The existing operations of the study intersections were evaluated for the highest one-hour traffic volumes during weekday morning and evening peak periods. The pre-COVID intersection counts are available for the study intersection. Vehicles, bicycles, and pedestrians counts were collected in 2017 and will be used for conducting level of service (LOS) analysis. TJKM applied an annual growth factor of 2.5 percent per year for 2017 counts to reflect 2022 conditions.

1. North Shoreline Boulevard/Montecito Avenue-Stierlin Road

Figure 8 illustrates the existing lane geometry, and traffic controls at the study intersections. **Figure 9** illustrates the existing a.m., and p.m. peak hour vehicle turning movement volumes at the study intersections.

Figure 8. Existing Conditions Lane Geometry and Traffic Controls

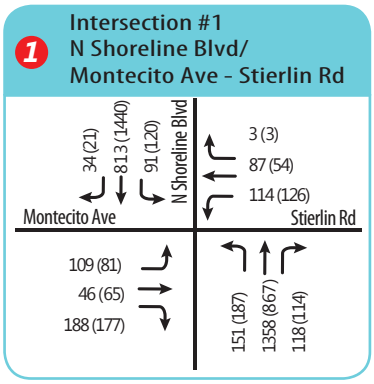


LEGEND

Traffic Signal

N

Figure 9. Existing Conditions Peak Hour Traffic Volumes



LEGEND

XX(XX) AM[PM] Peak Hour Traffic Volumes

Intersection Level of Service Analysis – Existing Conditions

Existing intersection lane configurations, signal timings, and existing turning movement volumes are used to calculate the level of service for the study intersections during each peak hour. The peak hour factor of 1.00 was used at the study intersections for the existing conditions analysis. The results of the LOS analysis using the TRAFFIX software program for Existing Conditions are summarized in **Table 3**.

The Existing Conditions LOS analysis for purpose of this MTA is based on an isolated intersection analysis of traffic volumes, rather than analysis of the corridor as a whole. The standalone LOS results sometimes can be misleading if a corridor operates under forced flow, or congested, traffic conditions. Forced flow traffic operations can reduce overall vehicle throughput per hour at intersections, leading to LOS analysis results that suggest there is less corridor congestion than is actually occurring under existing field conditions. Where there is known congestion, additional analysis of field conditions becomes necessary in order to review and evaluate the extent of forced flow operations. Under the Existing Conditions scenario, the study intersection operates at acceptable service levels (LOS D or better for non-CMP intersections) during a.m., and p.m. peak hours. LOS worksheets are provided in **Appendix C**.

Table 3. Intersection Level of Service Analysis – Existing Conditions

#	Study Intersections	Control	Peak Hour	Existing Conditions			
				Delay[1]	LOS[2]	Critical V/C[3]	Critical Delay[4]
1	North Shoreline Boulevard/Montecito Avenue-Stierlin Road	Signalized	AM	26.4	C	0.692	23.4
			PM	29.5	C	0.755	30.8

Notes:
AM – morning peak hour, PM – evening peak hour
1. Delay – Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections.
2. LOS – Level of Service
3. Critical volume to capacity ratio
4. Critical movement delay
The study intersection is not a CMP intersection so the LOS threshold is LOS D.

5.4 Background Conditions

This scenario is similar to Existing Conditions, but with the addition of traffic from approved and planned developments located within the immediate vicinity of the project. City staff provided the list of approved but not constructed projects. Approved trip inventory (ATI) volumes were added to the Existing Conditions volumes to forecast peak hour turning movements at the study intersections under Background Conditions. The ATI sheets are included in **Appendix C**.

Approved Projects and Planned Developments

Approved and planned developments located within the immediate vicinity of the project are:

Approved developments located within the immediate vicinity of the project which are not completed are:

- 555 West Middlefield Road – 341 residential units
- 730 Central Avenue – 21 residential units
- 1155 & 1185 Terra Bella Avenue – 20,000 sq.ft. office building
- 1020 Terra Bella Avenue – 110 affordable rental units
- 1040 Terra Bella Avenue – 177,383 sf of public storage building
- 777 West Middlefield Road – 716 residential units
- 870 Leong Drive – 74 room hotel
- 1555 West Middlefield Road – 115 row house residential units
- 1001 North Shoreline Boulevard – 303 residential units

Figure 10 shows projected turning movement volumes at all of the study intersections under Background Conditions for a.m. and p.m. peak hours.

Intersections Level of Service Analysis – Background Conditions

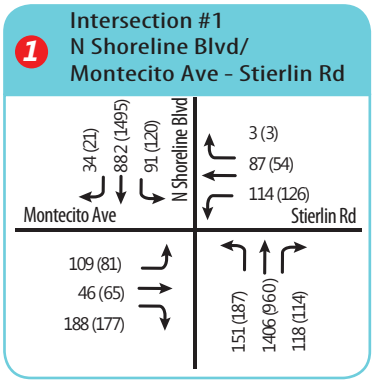
The intersection LOS analysis results for Background Conditions are summarized in **Table 4**. Detailed calculation sheets for Background Conditions (Existing plus Approved and Planned Development Projects) are contained in **Appendix C**. The study intersection operates at acceptable service levels (LOS D or better for non-CMP intersections) during a.m. and p.m. peak hours under this scenario.

Table 4. Intersection Level of Service Analysis – Background Conditions

#	Study Intersections	Control	Peak Hour	Background Conditions			
				Delay[1]	LOS[2]	Critical V/C[3]	Critical Delay[4]
1	North Shoreline Boulevard/Montecito Avenue-Stierlin Road	Signalized	AM	26.4	C	0.709	23.7
			PM	29.6	C	0.775	31.3

Notes:
AM – morning peak hour, PM – evening peak hour
1. Delay – Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections.
2. LOS – Level of Service
3. Critical volume to capacity ratio
4. Critical movement delay
The study intersection is not a CMP intersection so the LOS threshold is LOS D.

Figure 10. Background Conditions Peak Hour Traffic Volumes



LEGEND

XX(XX) AM[PM] Peak Hour Traffic Volumes

5.5 Project Conditions

The impacts of the proposed project on the transportation system are discussed in this chapter. First, the method used to estimate the amount of traffic generated by the project is described. Then, the results of the level of service calculations for Existing plus Project Conditions are presented. (Existing plus Project Conditions are defined as Existing conditions plus traffic generated by the proposed project). A comparison of intersections under Existing plus Project Conditions and Existing Conditions is presented and the impacts of the project on the study intersections are discussed.

The amount of traffic added to the roadway system by the proposed development is estimated using a three-step process.

- Trip Generation – Estimates the amount of traffic added to the roadway network,
- Trip Distribution – Estimates the direction of travel to and from the project site,
- Trip Assignment – The new trips are assigned to specific street segments and intersection turning movements.

Project Trip Generation

TJKM developed estimated project trip generation for the proposed project based on published trip generation rates from the Institute of Transportation Engineers' (ITE) publication *Trip Generation (10th Edition)*.

TJKM used published trip rates for Multifamily Housing (ITE Code 221) for this project. **Table 5** shows the trips expected to be generated by the proposed project, as well as the net increase in trips in comparison to the existing land use. The proposed project is expected to generate approximately 31 weekday a.m. peak hour trips (8 inbound trips, 23 outbound trips) and 37 weekday p.m. peak hour trips (23 inbound trips, 14 outbound trips).

At the existing site, traffic volumes were not collected due to COVID-19 pandemic-induced changes in traffic conditions. Alternatively, General Office Building (ITE Code 710) was used for estimation based on the existing 12,300 square foot building footprint. As shown in Table 5, the existing land use was estimated to generate 146 weekday daily trips, 14 a.m. peak hour trips, and 14 weekday p.m. peak hour trips. The project would result in a net increase in trips to and from the site after accounting for a reduction due to demolition of the office building that presently occupies the site.

Table 5. Project Trip Generation

Proposed Land Uses (ITE Code)	Building Area	Units	Daily		AM Peak						PM Peak					
			Rate	Trips	Rate	In %	Out %	In	Out	Total	Rate	In %	Out %	In	Out	Total
Multifamily Housing (Mid-Rise) (ITE Code 221)	85.0	D.U	5.44	462	0.36	26	74	8	23	31	0.44	61	39	23	14	37
Proposed Trips (A)				**462**				**8**	**23**	**31**				**23**	**14**	**37**
Existing Facility																
General Office Building (ITE Code 710)	12.3	k.s.f	11.90	146	1.16	86	14	12	2	14	1.15	16	84	2	12	14
Existing Sub Total Trips				***146***				***12***	***2***	***14***				***2***	***12***	***14***
Total Trips				**316**				**-4**	**21**	**17**				**21**	**2**	**23**

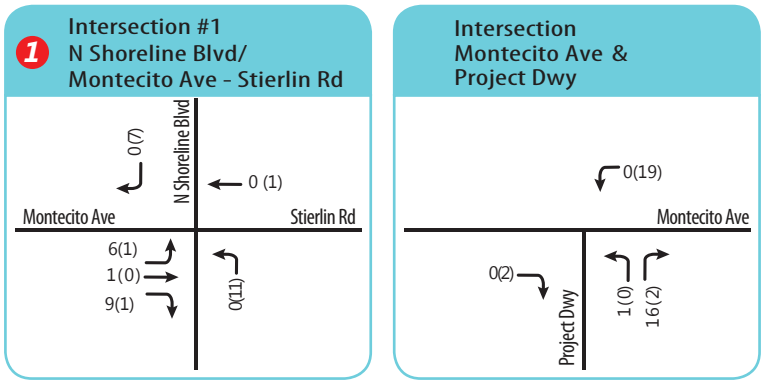
Notes:
Source - ITE Trip Generation Manual, 10th Edition (2017).
D.U = Dwelling Units
K.S.F=Thousand Square Feet

Project Trip Distribution and Assignment

Trip distribution is a process of developing study assumptions that estimate the direction of travel vehicular trips will arrive from and depart to. It also estimates the specific streets and turning movements at study intersections for project-related or site traffic. Trip distribution assumptions for the proposed project are developed based on existing travel patterns and knowledge of the study area.

Figure 11 illustrates the trip distribution percentages developed for the proposed development project and the trip assignment project volumes developed for the proposed project. The assigned project trips were then added to traffic volumes under baseline conditions to generate Existing plus Project Conditions traffic volumes.

Figure 11. Project Trip Distribution and Trip Assignment



LEGEND

- Project Location
- Study Intersection
- XX% Trip Distribution
- XX(XX) AM[PM] Peak Hour Traffic Volumes

Intersection Level of Service Analysis – Existing plus Project Conditions

The intersection LOS analysis results for Existing plus Project Conditions are summarized in **Table 6**. Detailed calculation sheets for Existing plus Project Conditions are contained in **Appendix C**. The study intersection operates at acceptable service levels (LOS D or better for non-CMP intersections) during a.m., and p.m. peak hours under this scenario.

Based on the City of Mountain View LOS standards, the project would not have any adverse effects at the study intersection evaluated in this MTA.

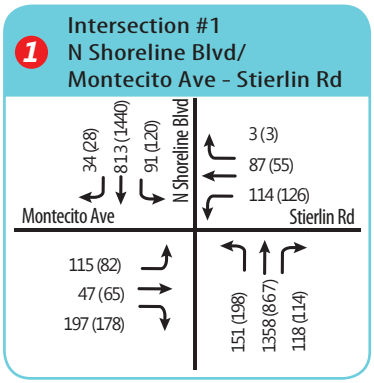
Figure 12 displays projected peak hour turning movement volumes at the study intersection for Existing plus Project Conditions. The results for Existing Conditions are included for comparison purposes, along with the projected increases in critical delay and critical V/C ratios.

Table 6. Intersection Level of Service Analysis – Existing plus Project Conditions

#	Study Intersections	Control	Peak Hour	Existing Conditions		Existing plus Project Conditions		*Change in*	
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Critical V/C[3]	Critical Delay[4]
1	North Shoreline Boulevard/Montecito Avenue-Stierlin Road	Signalized	AM	26.4	C	26.8	C	0.005	0.4
			PM	29.5	C	30.1	C	0.012	0.9

Notes:
AM – morning peak hour, PM – evening peak hour
1. Delay – Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections.
2. LOS – Level of Service
3. Change in critical volume to capacity ratio between Existing and Existing plus Project Conditions
4. Change in average critical movement delay between Existing and Existing plus Project Conditions
The study intersection is not a CMP intersection so the LOS threshold is LOS D.

Figure 12. Existing plus Project Conditions Peak Hour Traffic Volumes



LEGEND

Project Location

Study Intersection

XX(XX) AM[PM] Peak Hour Traffic Volumes

Background plus Project Conditions

This scenario is identical to Background Conditions, but with the addition of projected traffic from the proposed development project.

Intersection Level of Service Analysis – Background plus Project Conditions

The intersection LOS analysis results for Background plus Project Conditions are summarized in **Table 7.** Detailed calculation sheets for Background plus Project Conditions are contained in **Appendix C**. The study intersection operates at acceptable service levels (LOS D or better for non-CMP intersections) during a.m., and p.m. peak hours under this scenario. There will be an increase in average critical delay by 0.9 seconds and an increase in the critical volume-to-capacity (V/C) ratio of 0.011.

Based on the City of Mountain View LOS standards, the project would not have any adverse effects at the study intersection evaluated in this MTA.

Figure 13 displays projected peak hour turning movement volumes at the study intersections for Background plus Project Conditions.

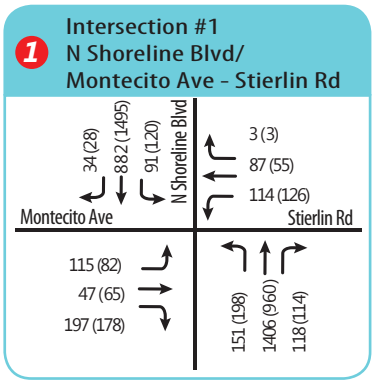
The results for Background Conditions are included for comparison purposes, along with the projected increases in critical delay and critical V/C ratios.

Table 7. Intersection Level of Service Analysis – Background plus Project Conditions

#	Study Intersections	Control	Peak Hour	Background Conditions		Background plus Project Conditions		*Change in*	
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Critical V/C[3]	Critical Delay[4]
1	North Shoreline Boulevard/Montecito Avenue-Stierlin Road	Signalized	AM	26.4	C	26.7	C	0.006	0.4
			PM	29.6	C	30.1	C	0.011	0.9

Notes:
AM – morning peak hour, PM – evening peak hour
1. Delay – Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections.
2. LOS – Level of Service
3. Change in critical volume to capacity ratio between Background and Background plus Project Conditions
4. Change in average critical movement delay between Background and Background plus Project Conditions
The study intersection is not a CMP intersection so the LOS threshold is LOS D.

Figure 13. Background plus Project Conditions Peak Hour Traffic Volumes



LEGEND

XX(XX) AM[PM] Peak Hour Traffic Volumes

5.6 Cumulative Conditions

This section details expected traffic conditions at the study intersections under Cumulative (No Project) Conditions. The Cumulative conditions reflect a five years from now. The cumulative baseline traffic volumes were estimated based on the assumption of a 2.5 percent annual growth factor, compounded annually for 5 years, or a factor of 1.131, applied to the baseline traffic volumes plus traffic expected to be generated by approved and pending developments in the study area that are not yet built or occupied.

Intersection Level of Service Analysis – Cumulative Conditions

The intersection LOS analysis results for Cumulative Conditions are summarized in **Table 8**. Detailed calculation sheets for Cumulative Conditions are contained in **Appendix C**. The study intersection operates at acceptable service levels (LOS D or better for non-CMP intersections) during a.m., and p.m. peak hours under this scenario.

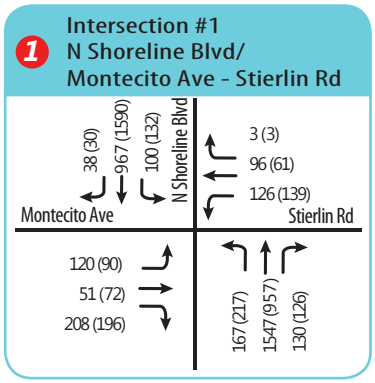
Figure 14 shows projected peak hour turning movement volumes at all of the study intersections for Cumulative Conditions.

Table 8. Intersection Level of Service Analysis – Cumulative Conditions

#	Study Intersections	Control	Peak Hour	Cumulative Conditions			
				Delay[1]	LOS[2]	Critical V/C[3]	Critical Delay[4]
1	North Shoreline Boulevard/Montecito Avenue-Stierlin Road	Signalized	AM	30.2	C	0.820	29.7
			PM	35.7	D	0.889	41.3

Notes:
AM – morning peak hour, PM – evening peak hour
1. Delay – Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections.
2. LOS – Level of Service
3. Critical volume to capacity ratio
4. Critical movement delay
The study intersection is not a CMP intersection so the LOS threshold is LOS D.

Figure 14. Cumulative Conditions Peak Hour Traffic Volumes



LEGEND

XX(XX) AM[PM] Peak Hour Traffic Volumes

Cumulative plus Project Conditions

This scenario is identical to Cumulative Conditions, but with the addition of projected traffic from the proposed office development project. Trip generation and distribution for the proposed project are identical to that assumed under Existing plus Project Conditions.

Intersection Level of Service Analysis – Cumulative plus Project Conditions

The intersection LOS analysis results for Cumulative plus Project Conditions are summarized in **Table 9**. Detailed calculation sheets for Cumulative plus Project Conditions are contained in **Appendix C**. The study intersection operates at acceptable service levels (LOS D or better for non-CMP intersections) during a.m., and p.m. peak hours under this scenario.

Based on the City of Mountain View LOS standards, the project would not have any adverse effects at the study intersection evaluated in this MTA.

Figure 15 displays projected peak hour turning movement volumes at the study intersection for Cumulative plus Project Conditions.

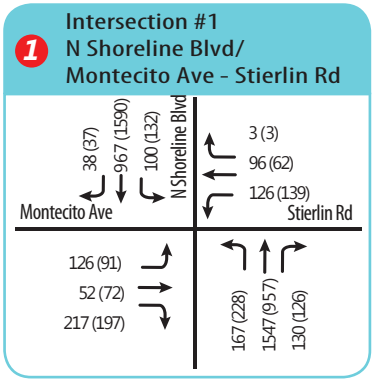
The results for Cumulative Conditions are included for comparison purposes, along with the projected increases in critical delay and critical V/C ratios.

Table 9. Intersection Level of Service Analysis – Cumulative plus Project Conditions

#	Study Intersections	Control	Peak Hour	Cumulative Conditions		Cumulative plus Project Conditions		*Change in*	
				Delay[1]	LOS[2]	Delay[1]	LOS[2]	Critical V/C[3]	Critical Delay[4]
1	North Shoreline Boulevard/Montecito Avenue-Stierlin Road	Signalized	AM	30.2	C	30.7	C	0.006	0.6
			PM	35.7	D	36.6	D	0.011	1.6

Notes:
AM – morning peak hour, PM – evening peak hour
1. Delay – Whole intersection weighted average control delay expressed in seconds per vehicle for signalized intersections.
2. LOS – Level of Service
3. Change in critical volume to capacity ratio between Cumulative and Cumulative plus Project Conditions
4. Change in average critical movement delay between Cumulative and Cumulative plus Project The study intersection is not a CMP intersection so the LOS threshold is LOS D.

Figure 15. Cumulative plus Project Conditions Peak Hour Traffic Volumes



LEGEND

XX(XX) AM[PM] Peak Hour Traffic Volumes

5.7 CMP Conformance Requirements

As per the MTA Handbook (CMP Conformance Requirements, Page 28), a CMP analysis is required for land use projects that generate 100 peak hour trips or more. Studies should assess the effects of Project traffic on the designated CMP roadway system using the current version of the VTA Transportation Impact Analysis (TIA) Guidelines, the VTA Traffic Level of Service Analysis Guidelines and MTA Handbook. The following are the CMP conformance requirements:

Intersections:

A CMP intersection shall be included in a TIA if it meets any one of the following conditions:

1. The proposed development project is expected to add 10 or more peak hour vehicles per lane to any intersection movement, or
2. The intersection is adjacent to the project, or
3. Based on engineering judgement, Lead Agency staff determines that the intersection should be included in the analysis. Study intersection should be selected without consideration for jurisdictional boundaries. The 10 or more vehicles per lane requirement applies to any intersection movement (left turn, through, or right turn).

For the 1265 Montecito Avenue study, there are no CMP intersections within the vicinity of the project. The project does not meet any of the intersection requirements. Hence, this MTA does not include the CMP intersection analysis.

Freeway Segments:

As per the MTA Handbook, a freeway segment shall be included in a TIA if it meets any one of the following conditions:

1. The proposed development project is expected to add traffic equal to or greater than 1 percent of the freeway segment's capacity, or
2. The proposed development project is adjacent to one of the freeway segment's access or egress points, or
3. Based on engineering judgment, Lead Agency staff determines that the freeway segment should be included in the analysis.

The project does not meet any of the freeway segments requirements. Hence, this MTA does not include the freeway segment analysis.

5.8 Queuing Analysis

Left-Turn and Right-Turn Storage Analysis

TJKM conducted a vehicle queuing and storage analysis for all exclusive left and right turn storage lanes (pockets) at the signalized study intersection where the proposed project would add measurable traffic under Existing plus Project Conditions. The 95th percentile (maximum) queues were analyzed using the HCM 2000 Queue methodology contained in TRAFFIX software. Detailed calculations are included in the LOS appendices corresponding to each analysis scenario. **Table 10** summarizes the 95th percentile queue lengths at the selected study intersection under Existing and Existing plus Project Conditions scenarios.

At North Shoreline Boulevard/Montecito Avenue – Stierlin Road, the queue lengths for northbound left-turn, northbound shared lane, eastbound left-turn, and eastbound shared lane would overflow the available storage length in the dedicated lane or lanes during one or more peak hours under Existing and Existing plus Project Conditions. However, the overflows exist under Existing conditions and the project would add a maximum of one vehicle (1 vehicle = 25 feet) to the average queue length. Queues will be cleared within a few cycles at the intersection.

Table 10. 95th Percentile Queues at Turn Pockets Affected by Project Traffic

#	Study Intersections	Lane Group	Storage Length (ft.)	Existing Conditions		Existing plus Project Conditions		Change	
				95th Percentile Queue (ft.)		95th Percentile Queue (ft.)			
				AM	PM	AM	PM	AM	PM
1	North Shoreline Boulevard/Montecito Avenue-Stierlin Road	NBL	145	**265**	**390**	**265**	**410**	0	20
		NBT	840	**855**	570	**865**	570	10	0
		NBTR	840	**855**	570	**865**	570	10	0
		SBL	280	215	220	215	220	0	0
		SBT	980	480	945	485	960	5	15
		SBTR	980	480	945	485	960	5	15
		EBL	90	**185**	**130**	**195**	**130**	10	0
		EBTR	90	**405**	**415**	**425**	**415**	20	0
		WBL	315	260	295	265	300	5	5
		WBTR	315	140	85	140	85	0	0

Notes:
Storage length and 95th percentile queue is expressed in feet per lane
AM – Morning Peak Hour, PM – Evening Peak Hour

6. TRAFFIC CALMING AND NEIGHBORHOOD INTRUSION

6.1 Pedestrian Operations

Pedestrian access to the project site will be facilitated by existing sidewalks on Montecito Avenue, North Shoreline Boulevard, and Stierlin Road, as well as proposed internal pedestrian circulation facilities on the project site. The following section describes an evaluation of ADA access, consistency with current City plans, proposed or needed improvements, and pedestrian quality of service.

ADA Compliance

The proposed improvements will comply with ADA requirements and provide adequate and appropriate facilities for safe non-motorized mobility. An accessible walkway will be provided through the site per ADA guidelines as well as provide two accessible parking spaces.

Consistency with Current City Adopted Plans and Policies

An impact to pedestrians occurs if the proposed project disrupts existing pedestrian facilities; or creates inconsistencies with planned pedestrian facilities or adopted pedestrian system plans, guidelines, policies, or standards. The proposed project will not result in any impacts to existing or planned pedestrian facilities in the immediate vicinity of the project. The project will improve pedestrian quality in the project vicinity with enhanced landscaping, lighting and a proposed entry plaza.

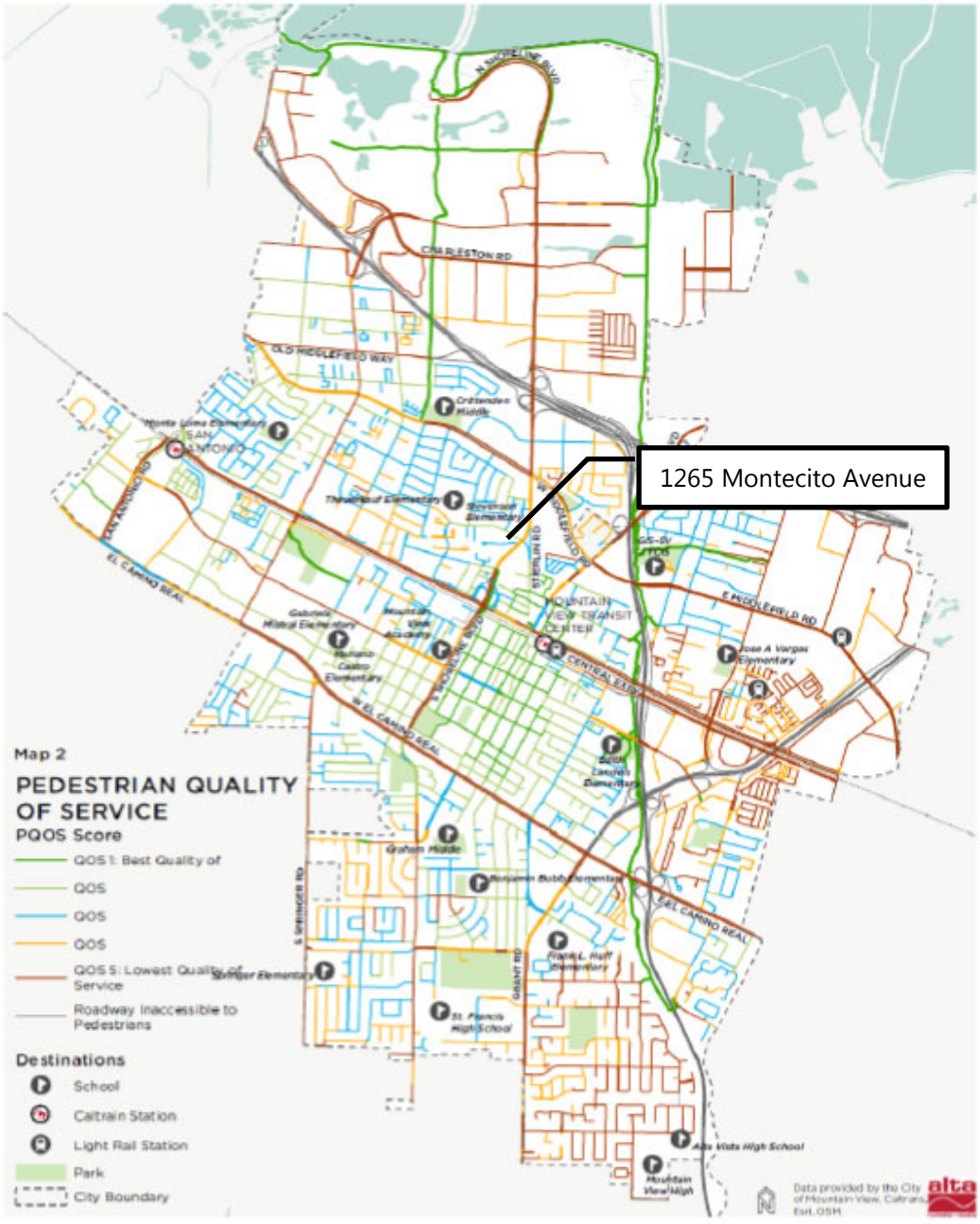
Pedestrian Network Facilities

The location of fire hydrants, streetlight poles, and landscaping do not have an adverse effect on the pedestrian travel paths. The proposed project would not have any adverse effect in relation to the City's Vision Zero policy. Within the project vicinity pedestrians are able to easily access bus stops, restaurants, and retail stores. There are three bus stops in the immediate vicinity of the project site. The bus stops are located within 700 feet distance of the project site. All bus stops are accessible via existing sidewalks. The project site is in close proximity, about a five minute walk, to the Bailey Park shopping center, which has a grocery store, other amenities and is accessible via existing sidewalks.

PQOS Evaluation

The proposed project is required to meet a pedestrian quality of service (PQOS) and therefore a PQOS assessment is included in this study. Because the proposed project is not anticipated to drastically affect speed and motor vehicle traffic volume, crossing conditions and the number of motor vehicle travel lanes, the assessment uses the PQOS map in Appendix F of Mountain View's Multi-modal Transportation Analysis Handbook to evaluate PQOS scores for Mountain View streets. Montecito Avenue adjacent to the project area has a PQOS score of 2, and North Shoreline Boulevard has a PQOS score of 4 which corresponds to the medium pedestrian quality of service. No adverse conditions are anticipated related to an increase in vehicle trips.

Figure 16. Mountain View PQOS Maps (2020)



6.1.5 Proposed or Needed Pedestrian Improvements

The project proposes multiple pedestrian improvements to the site including lighting, wider sidewalks within the site, improved landscaping and pedestrian amenities. Adequate street lighting will be provided by adding more street lighting and internal lighting on the project site. The project's site plan shows 5 foot wide sidewalks at the project frontages along Montecito Avenue as well as additional landscaping.

The Stierlin Road Improvement Project (City Project) is proposing a mid-block pedestrian and bike crossing across N Shoreline Boulevard in front of the Safeway.

6.2 Bicycle Operations

Consistency with Adopted Plans and Policies

An impact to bicycling occurs if the proposed project disrupts existing bicycle facilities; or creates an inconsistency with planned bicycle facilities, adopted City standards, or VTA Bicycle Technical Guidelines. The proposed project will not result in any impacts to existing or planned bicycle facilities in the immediate vicinity of the project. The project will improve bicycle access in the project vicinity with additional bicycle parking on the project site.

Bicycle Network Facilities

Bicycle access to and from the project site will be facilitated by nearby existing bicycle routes. According to the Valley Transportation Agency (VTA) Santa Clara Valley Bikeways Map and the City of Mountain View Interactive Bike Map (2020), there are a few designated bikeways in the vicinity of the project site.

- The Stevens Creek Trail is a Class I bicycle path that extends from the intersection of Heatherstone Way/Dale Avenue in the south to the Bay Trail network in the North Bayshore area north of US 101. The trail can be accessed from West Middlefield Road, Moffett Boulevard, and La Avenida Street, which are all about a one-mile biking distance from the project site.
- North Shoreline Boulevard has striped Class II bicycle lanes from El Camino Real in the south to Charleston Road in the north. North Shoreline Boulevard provides bicycle access from the project site to the Bailey Park Plaza Shopping Center and the North Bayshore area.
- Montecito Avenue has Class II bicycle lanes from North Shoreline Boulevard in the east to Bailey Park Plaza Shopping Center in the west.
- West Middlefield Road has Class II bicycle lanes across the City of Mountain View, from Old Middlefield Way in the west to Bernardo Avenue in the east. West Middlefield Road provides bicycle access to the Stevens Creek Trail.
- La Avenida Street has Class II bicycle lanes from Inigo Way in the west to a cul-de-sac in the east that provides access to the Stevens Creek Trail. The VTA Bikeways Map and the City of Mountain View Bike Map show a Class III bicycle route on La Avenida Street between North Shoreline Boulevard and Inigo Way. However, there is no signage on the roadway to suggest that this

segment is a bicycle route, but there is a 15 foot wide multi-use path for cyclists to share with pedestrians.

- Inigo Way has Class II bicycle lanes along its entirety from La Avenida Street to Pear Avenue.

Bicycle Level of Traffic Stress (BLTS) Map Evaluation

An evaluation of Bicycle Level of Traffic Stress (BLTS) is required. BLTS refers to the perceived comfort and safety of roads and bikeway facilities that scores facilities from 1 to 4, with LTS 1 and 2 being "low stress", LTS 3 being "medium stress", and LTS 4 being "high stress." Because the proposed project is not anticipated to drastically affect speed and motor vehicle traffic and the number of motor vehicle travel lanes, the Mountain View BLTS Map (2020) in Appendix G of the MTA Handbook was used to evaluate BLTS in the vicinity of the proposed project. Montecito Avenue adjacent to the project area has a BLTS score of 1.0, which corresponds to low bicycle level of traffic stress, which is suitable for all ages and abilities. No adverse conditions are anticipated related to an increase in vehicle trips.

Figure 17. Mountain View BLTS Maps (2020)

North Shoreline Boulevard directly adjacent to the proposed project site is at BLTS 3, which corresponds to a medium stress bikeway due to a high volume of fast moving traffic, which suggests only confident adult cyclists are likely to ride on this facility.

Adverse Bicycle Effects

An impact to bicyclists occurs if the proposed project disrupts existing bicycle facilities, conflicts or creates inconsistencies with adopted bicycle system plans, guidelines, policies, or standards as per the City of Mountain View bicycle impact criteria. No adverse bicycle effects are anticipated from the project. The project's bicycle parking should enhance bicycle access in the project vicinity. The project does not conflict with existing and planned bicycle facilities; therefore, the impact on bicycle facilities is less than significant.

Proposed Bicycle Improvements

The Stierlin Road Improvement Project (City Project) is proposing a mid-block pedestrian and bike crossing across N Shoreline Boulevard in front of the Safeway. Additionally, the City Project will add green painting to the existing Class II bike lanes on N Shoreline Boulevard approaching the crossing, where conflicting traffic exists. The proposed mid-block crossing would provide bicyclists with a protected movement to access both sides of N Shoreline Boulevard.

6.3 Transit Operations

Existing Conditions

Transit services with route schedules are described in detail in the Existing Conditions section. The existing transit services and facilities in the study area include Santa Clara Valley Transportation Authority (VTA) and the Mountain View Transportation Management Association (MTMA). The bus and shuttle stops are within walking distance of the proposed project site.

Project Conditions

The project is accessible to transit, as there is one route within 700 feet of the project and one within a third of a mile. These routes each have a headway of 30 minutes and connect the project area with destinations throughout Mountain View such as the Mountain View Transit Center. They also serve destinations along North Shoreline Boulevard and West Middlefield Road.

The potential delay on transit operations is aligned with the delay on vehicular traffic at the study intersections. No adverse transit effects are anticipated from the project. The project density, diversity of uses, design and distance to transit stops are expected to increase transit ridership.

The proposed project will increase land use density and diversity in comparison to the existing building on the site which has been demolished. The proposed project is a five-story residential building of approximately 45,000 sf size on the Montecito Avenue frontage, and associated surface parking lot

adjacent to the new building. A plaza connecting Montecito Avenue with the new building entrance is proposed and the entire street frontage is designed to create a pedestrian-friendly experience. Last-mile travel between the project site and transit nodes can be completed on foot as pedestrian infrastructure is well-maintained.

Transit Travel Time (Transit Delay)

The potential change in delay to transit is aligned with the delay for vehicular traffic at the study intersection.

Adverse Transit Effects

No adverse transit effects are anticipated from the project. The project density, in-fill nature of the project, design and distance to transit stops are expected to increase transit ridership.

Proposed Improvements

No additional transit improvements are anticipated in the project vicinity.

6.4 Parking Analysis

This section discusses vehicle parking for the proposed project and includes an assessment of whether the proposed parking supply is adequate. The amount of parking needed for residential development is based on a number of factors including dwelling units, the availability of transit services near the site, and the location of the site relative to other uses and destinations.

Density Bonus Parking Standards – Transit Oriented (Government Code 65915 (p)(2))

- Rental or ownership housing development with:
  - ✓ At least 11% very-low income or 20% low income units; and
  - ✓ Within one-half mile of a major transit stop; and
  - ✓ Unobstructed access to the major transit stop ("natural or constructed impediments" but not residential structures, shopping centers, parking lots, or rails for transit per AB 2345; 09/28/2020)
  - ✓ 0.5 parking space per unit (inclusive of parking for persons with disabilities and guests)

The proposed project provides a total of 44 vehicle parking spaces on site, including two accessible parking stalls, one van accessible parking stall, and one loading space. The proposed project will provide eight short-term bicycle rack and 85 long-term racks in secured bike storage rooms. The project meets the parking requirement.

7. VEHICLE MILES TRAVELED (VMT)

TJKM conducted a VMT (Vehicle Miles Traveled) analysis for the proposed 1265 Montecito Avenue residential project. The project is located in the city of Mountain View near the North Shoreline Boulevard interchange of US 101 and consists of a five-story 84 unit affordable housing project with one additional unit for the on-site manager. The new building would replace an existing 12,300 sq.ft. office building on the 1.04 acre site. The existing office building is to be demolished for this project. 44 vehicle parking spaces along with eight short-term and 85 long-term bicycle parking spots will be provided.

For VMT forecasting, the Mountain View Multi-Modal Transportation Analysis Handbook was consulted. The City of Mountain View adopted a new transportation policy on June 30, 2020 (Resolution No. 18484, Series 2020) establishing Vehicle Miles Traveled (VMT) as the methodology for evaluating transportation impacts of new developments.

A screening of the need for conducting a CEQA VMT analysis as part of this MTA is based on the City adopted VMT policy (Resolution No. 18484, Series 2020) with detailed screening criteria outlined in Appendix A and Appendix B of the MTA Handbook. The Affordable Housing Screening and Transit Screening were used for this purpose.

- ✓ Affordable Housing Screening: Projects with 100 percent affordable housing.
- ✓ Transit Screening: All projects located within one-half mile of a major transit stop, or a stop along a high-quality transit corridor, pursuant to State definitions for such facilities, unless any of the following factors are exhibited by the project:
    - *Floor Area Ratio (FAR) of less than 0.75;*
    - *Inconsistent with the applicable Sustainable Communities Strategy (SCS);*
    - *Provides more parking than required by the jurisdiction; or*
    - *Replaces affordable housing with a fewer number of moderate or high-income residential units.*

Since the proposed project has an FAR of 2.3 and 100 percent affordable housing and located within one-half mile of a bus stop on North Shoreline Boulevard, a CEQA VMT analysis is not required.

8. CONCLUSIONS

The potential impacts of the project were evaluated in accordance with the standards set forth in the MTA Handbook by the City of Mountain View. A California Environmental Quality Act Vehicle-Miles Traveled Analysis is not required.

City Policy Conformance

The proposed project meets all transportation-related requirements set forth in the Mountain View City Code Chapter 36.12.10 Zoning.

Multi-Modal Impacts

Motor Vehicle Intersection LOS

The study intersection operates at acceptable levels of service under all six scenarios.

Queuing Analysis for Left-Turn and Right-Turn Movements

The proposed project does not create significant impact by itself on the expected left-turn and right-turn queues at the study intersection under Existing and Existing plus Project Conditions.

Impact on Pedestrian and Bicycle Infrastructure and Operations

The proposed project does not disrupt existing pedestrian or bicycle facilities. There is no adverse pedestrian or bicycle effects anticipated from the proposed project. The proposed project will not result in any impact to or inconsistencies with existing or planned pedestrian or bicycle polices, guidelines, or standards in the immediate vicinity of the project.

Impact on Transit Operations

Transit operational delay was considered the same as motor vehicle operational delay at the study intersections. There is no adverse effect on transit operations under any of the scenarios.

Parking

The proposed project provides a total of 44 vehicle parking spaces on site, including two accessible parking stalls, one van accessible parking stall, and one loading space. The proposed project will provide eight short-term bicycle rack and 85 long-term racks in secured bike storage rooms.

Appendix A – Multi-Modal Transportation Analysis Requirement Checklist

Multimodal Transportation Analysis Checklist **7/20/2021** **MTA Required**

Project Description (proposed square footage, unit, including any existing use): Existing one story commercial office building with at-grade parking zoned CN, with proposed general plan amendment to rezone to R-4 for high density multifamily housing. 85 affordable housing units on 1.04 acres

Project Location: 1265 Montecito Avenue, Mountain View

Trip Generation Rates:

Project Description	ITE Code	Unit/ SF(Ksf)	AM TGR	AM PHT	PM TGR	PM PHT
multifamily attached	221	85 units	.36	31	.44	37
				0		0
				0		0
Existing Uses				0		0
Commercial bldg	710	12.30	1.16	14	1.15	14
Net New Trips				17		23

Estimated Project Trips: 17 am and 23 pm net new peak hour trips

Does the project propose:	Check all that apply
20 net new peak hour trips?	X
Medium, large projects that generate 50 or more peak hour trips?	
Change land use?	X
Special Circumstances? (As determined by PW director or designee)	
Located in the Downtown or Precise Plan area?	X
Misc.	

MTA Determination: MTA Required

Minimum Transportation Components to be addressed in an MTA: Circle the selected size

Small 20 to~ 49 PHT	Medium 50 - 99 PHT	Large 100 - 399 PHT	Land Use Plan 400+ PHT
1. Existing Conditions	1. Existing Conditions	1. Existing Conditions	1. Existing Conditions
2. City Policy Conformance	2. City Policy Conformance	2. City Policy Conformance	2. City Policy Conformance
3. Intersection LOS	3. Intersection LOS	3. Intersection LOS	3. Intersection LOS
a. existing conditions	a. existing conditions	a. existing conditions	a. existing conditions
b. background conditions	b. background conditions	b. background conditions	b. background conditions
c. project conditions	c. project conditions	c. project conditions	c. project conditions
4.PQOS map evaluation	4.PQOS map evaluation	d. cumulative conditions	d. cumulative conditions
5.BLTS map evaluation	5.BLTS map evaluation	4. CMP Conformance	4. CMP Conformance
6. Transit density	6. Transit density	5. PQOS evaluation	5. PQOS evaluation
7. Site Access and Circulation	7. Site Access and Circulation	6. BLTS evaluation and	6. BLTS evaluation and
8. Parking	8. Parking	7. Access to low BLTS streets	7. Access to low BLTS streets
9. Traffic calming	9. Traffic calming	8. Transit delay (travel time)	8.Transit delay (travel time)
		7. Site Access and Circulation	9. Site Access and Circulation
		10. Parking Study	10. Parking Study
		11. Traffic calming	11. Traffic calming

Comments: MTA Components:

1. Existing Conditions
    a. Existing non residential

2. City Policy Conformance
    a. Outside of precise plan area
3. Intersection LOS operations
    a. Montecito/Stierlin and N. Shoreline Blvd.
        i. Existing los, background, and project
        ii. Intersection master plan
4. PQOS map – project frontages
    a. Montecito Ave, Shoreline Blvd
5. BLTS map – project frontages
    a. Montecito Ave., Shoreline Blvd.
6. Transit density
    a. Closest transit stop
7. Site Access and Circulation
    a. Single Driveway along Montecito Frontage
        i. Left-turns into/out of driveway
        ii. Driveway across street
    b. Potential Drop off along Montecito frontage (entry plaza)
    c. Loading, garbage, moving vans, delivery
    d. Nearest schools and parks
8. Parking
    a. Project proposing 44 parking spaces – potential parking spillover
    b. No parking along Montecito frontage?
9. Traffic Calming
    a. Enhanced pedestrian crossings at Shoreline/Montecito

VMT Screening Checklist **7/20/2021** **No VMT required**

Project Description (proposed square footage, number of residential units, any existing uses: Proposed 5-story 84 unit affordable housing project with one managers unit with at grade parking to replace an existing 12,300 sf commercial building on a 1.04 acre site.

Project Location: Southwest corner of Shoreline Blvd and Montecito Ave., 1265 Montecito Ave.

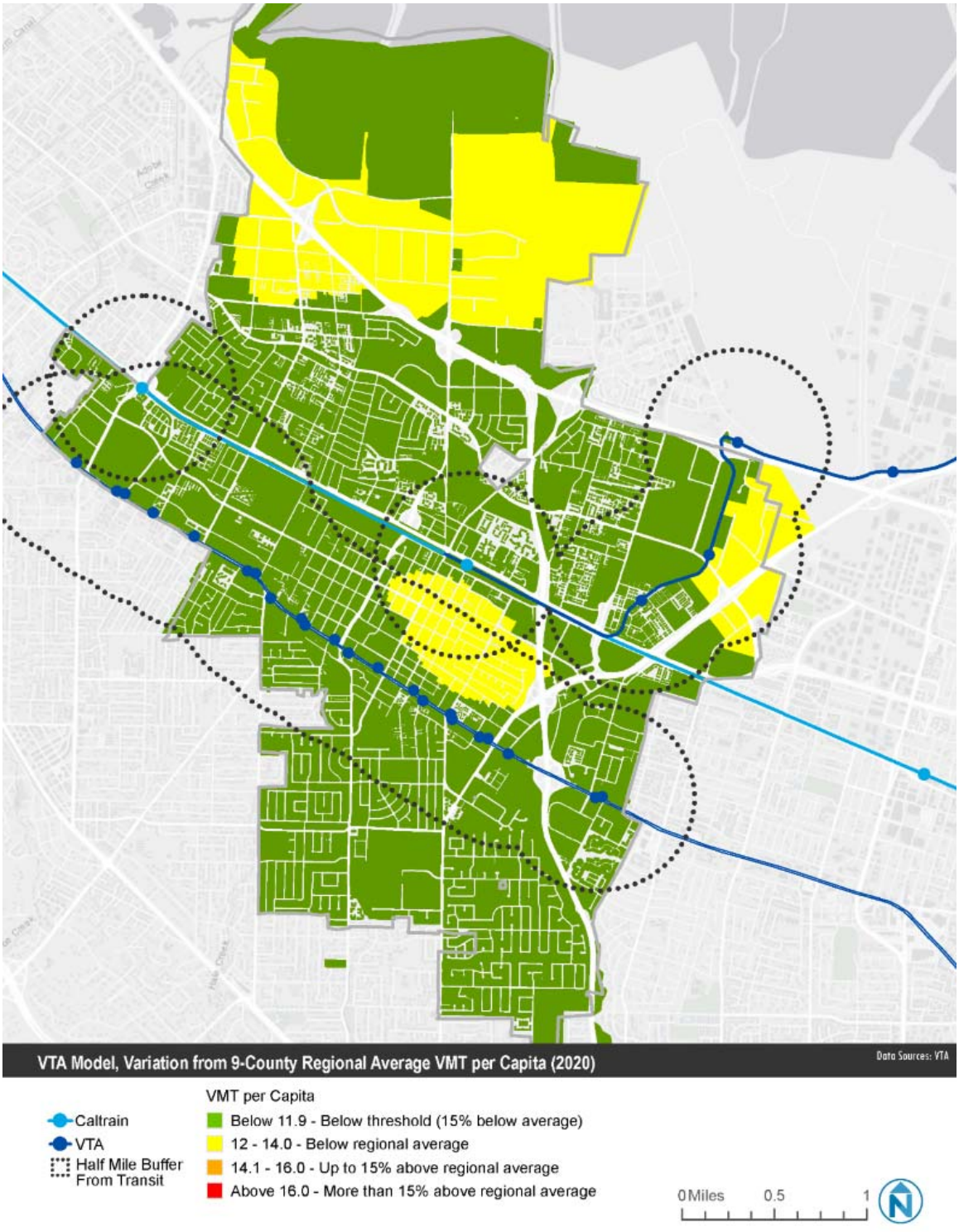
VMT Analysis Requirement Checklist: Project does not require VMT if it meets one of the following screening criteria:

Screening Criteria	Land Use 1		Land Use 2		Land Use 3	
1.Small Project Screening (defined as generating 110 or less daily trips): Project screened if answer yes to any of the following:	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
SFR 12 units or fewer?						
MFR 20 units or fewer?						
Office developments 10,000sf or less?						
Other land uses generating 110 daily trips or less?						
2.Local Serving Retail Screening: Project screened if answer yes.						
Commercial Retail 50K or less?						
3.Location Based Screening - Reference heat maps for both Transit and Map-based screenings.						
Transit Screening Boundaries - Is the project located within Transit boundary? If yes, then project must meet all the following, if applicable.						
Floor Area Ratio (FAR) of less than 0.75;						
Consistent with Sustainable Communities Strategy (SCS);						
Meets but does not exceed parking required by Mountain View code, (always applicable).						
Does not replace affordable housing with a fewer number of moderate or high-income residential units. (Res. Only)						
4.Proposes 100 percent affordable housing.	X					
5.Map Based Screening: Project screened if answer yes to all the following :						
Is the project located in areas of low VMT(Already 15% below baseline?)						
Compatible with surrounding development and does not require significant new utility improvements and						
Does not lead to residential displacement, defined as having a fewer number of moderate- or high-income residential units replaced a higher number of naturally affordable units.						

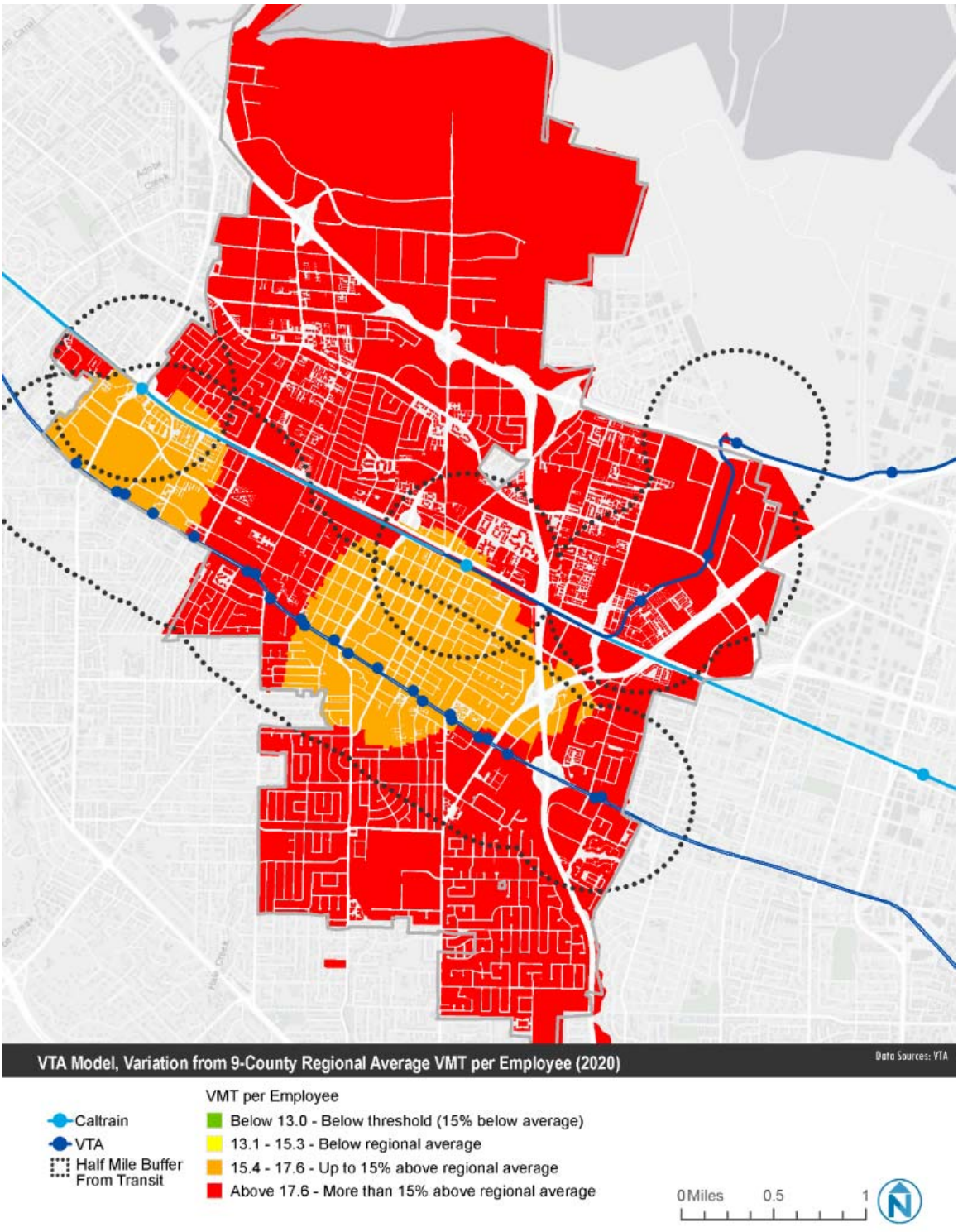
VMT Determination: No VMT required, 100% affordable residential

The Heat Maps with Transit Screening Boundary below. Use to determine if project is withing Transit screening boundary or qualifies for the Map-based screening.

Residential VMT Heat Map with Transit Screening Boundary



Employment VMT Heat Map with Transit Screening Boundary



Appendix B – Level of Service Methodology

APPENDIX B

LEVEL OF SERVICE

The description and procedures for calculating capacity and level of service are found in Transportation Research Board, *Highway Capacity Manual 2000*. *Highway Capacity Manual 2000* represents the latest research on capacity and quality of service for transportation facilities.

Quality of service requires quantitative measures to characterize operational conditions within a traffic stream. Level of service is a quality measure describing operational conditions within a traffic stream, generally in terms of such service measures as speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience.

Six levels of service are defined for each type of facility that has analysis procedures available. Letters designate each level, from A to F, with level-of-service A representing the best operating conditions and level-of-service F the worst. Each level of service represents a range of operating conditions and the driver's perception of these conditions. Safety is not included in the measures that establish service levels.

A general description of service levels for various types of facilities is shown in Table A-I.

Table A-I

Level of Service Description

Facility Type	**Uninterrupted Flow**	**Interrupted Flow**
	Freeways Multi-lane Highways Two-lane Highways Urban Streets	Signalized Intersections Unsignalized Intersections Two-way Stop Control All-way Stop Control
LOS		
A	Free-flow	Very low delay.
B	Stable flow. Presence of other users noticeable.	Low delay.
C	Stable flow. Comfort and convenience starts to decline.	Acceptable delay.
D	High density stable flow.	Tolerable delay.
E	Unstable flow.	Limit of acceptable delay.
F	Forced or breakdown flow.	Unacceptable delay

Source: *Highway Capacity Manual 2000*

Urban Streets

The term "urban streets" refers to urban arterials and collectors, including those in downtown areas.

Arterial streets are roads that primarily serve longer through trips. However, providing access to abutting commercial and residential land uses is also an important function of arterials.

Collector streets provide both land access and traffic circulation within residential, commercial and industrial areas. Their access function is more important than that of arterials, and unlike arterials their operation is not always dominated by traffic signals.

Downtown streets are signalized facilities that often resemble arterials. They not only move through traffic but also provide access to local businesses for passenger cars, transit buses, and trucks. Pedestrian conflicts and lane obstructions created by stopping or standing buses, trucks and parking vehicles that cause turbulence in the traffic flow are typical of downtown streets.

The speed of vehicles on urban streets is influenced by three main factors, street environment, interaction among vehicles and traffic control. As a result, these factors also affect quality of service.

The street environment includes the geometric characteristics of the facility, the character of roadside activity and adjacent land uses. Thus, the environment reflects the number and width of lanes, type of median, driveway density, spacing between signalized intersections, existence of parking, level of pedestrian activity and speed limit.

The interaction among vehicles is determined by traffic density, the proportion of trucks and buses, and turning movements. This interaction affects the operation of vehicles at intersections and, to a lesser extent, between signals.

Traffic control (including signals and signs) forces a portion of all vehicles to slow or stop. The delays and speed changes caused by traffic control devices reduce vehicle speeds, however, such controls are needed to establish right-of-way.

The average travel speed for through vehicles along an urban street is the determinant of the operating level of service. The travel speed along a segment, section or entire length of an urban street is dependent on the running speed between signalized intersections and the amount of control delay incurred at signalized intersections.

Level-of-service A describes primarily free-flow operations. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at signalized intersections is minimal.

Level-of-service B describes reasonably unimpeded operations. The ability to maneuver within the traffic stream is only slightly restricted, and control delays at signalized intersections are not significant.

Level-of-service C describes stable operations, however, ability to maneuver and change lanes in midblock location may be more restricted than at level-of-service B. Longer queues, adverse signal coordination, or both may contribute to lower travel speeds.

Level-of-service D borders on a range in which in which small increases in flow may cause substantial increases in delay and decreases in travel speed. Level-of-service D may be due to adverse signal progression, inappropriate signal timing, high volumes, or a combination of these factors.

Level-of-service E is characterized by significant delays and lower travel speeds. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.

Level-of-service F is characterized by urban street flow at extremely low speeds. Intersection congestion is likely at critical signalized locations, with high delays, high volumes, and extensive queuing.

The methodology to determine level of service stratifies urban streets into four classifications. The classifications are complex, and are related to functional and design categories. Table A-II describes the functional and design categories, while Table A-III relates these to the urban street classification.

Once classified, the urban street is divided into segments for analysis. An urban street segment is a one-way section of street encompassing a series of blocks or links terminating at a signalized intersection. Adjacent segments of urban streets may be combined to form larger street sections, provided that the segments have similar demand flows and characteristics.

Levels of service are related to the average travel speed of vehicles along the urban street segment or section.

Travel times for existing conditions are obtained by field measurements. The maximum-car technique is used. The vehicle is driven at the posted speed limit unless impeded by actual traffic conditions. In the maximum-car technique, a safe level of vehicular operation is maintained by observing proper following distances and by changing speeds at reasonable rates of acceleration and deceleration. The maximum-car technique provides the best base for measuring traffic performance.

An observer records the travel time and locations and duration of delay. The beginning and ending points are the centers of intersections. Delays include times waiting in queues at signalized intersections. The travel speed is determined by dividing the length of the segment by the travel time. Once the travel speed on the arterial is determined, the level of service is found by comparing the speed to the criteria in Table A-IV. Level-of-service criteria vary for the different classifications of urban street, reflecting differences in driver expectations.

Table A-II

Functional and Design Categories for Urban Streets

Criterion	Functional Category	
	Principal Arterial	**Minor Arterial**
Mobility function	Very important	Important
Access function	Very minor	Substantial
Points connected	Freeways, important activity centers, major traffic generators	Principal arterials
Predominant trips served	Relatively long trips between major points and through trips entering, leaving, and passing through city	Trips of moderate length within relatively small geographical areas

Criterion	Design Category			
	High-Speed	**Suburban**	**Intermediate**	**Urban**
Driveway access density	Very low density	Low density	Moderate density	High density
Arterial type	Multilane divided; undivided or two-lane with shoulders	Multilane divided: undivided or two-lane with shoulders	Multilane divided or undivided; one way, two lane	Undivided one way; two way, two or more lanes
Parking	No	No	Some	Usually
Separate left-turn lanes	Yes	Yes	Usually	Some
Signals per mile	0.5 to 2	1 to 5	4 to 10	6 to 12
Speed limits	45 to 55 mph	40 to 45 mph	30 to 40 mph	25 to 35 mph
Pedestrian activity	Very little	Little	Some	Usually
Roadside development	Low density	Low to medium density	Medium to moderate density	High density

Source: *Highway Capacity Manual 2000*

Table A-III

Urban Street Class based on Function and Design Categories

Design Category	Functional Category	
	Principal Arterial	**Minor Arterial**
High-Speed	I	Not applicable
Suburban	II	II
Intermediate	II	III or IV
Urban	III or IV	IV

Source: *Highway Capacity Manual 2000*

Table A-IV

Urban Street Levels of Service by Class

Urban Street Class	I	II	III	IV
Range of Free Flow Speeds (mph)	45 to 55	35 to 45	30 to 35	25 to 35
Typical Free Flow Speed (mph)	50	40	33	30
Level of Service	**Average Travel Speed (mph)**			
A	>42	>35	>30	>25
B	>34	>28	>24	>19
C	>27	>22	>18	>13
D	>21	>17	>14	>9
E	>16	>13	>10	>7
F	≤16	≤13	≤10	≤7

Source: *Highway Capacity Manual 2000*

Interrupted Flow

One of the more important elements limiting, and often interrupting the flow of traffic on a highway is the intersection. Flow on an interrupted facility is usually dominated by points of fixed operation such as traffic signals, stop and yield signs. These all operate quite differently and have differing impacts on overall flow.

Signalized Intersections

The capacity of a highway is related primarily to the geometric characteristics of the facility, as well as to the composition of the traffic stream on the facility. Geometrics are a fixed, or non-varying, characteristic of a facility.

At the signalized intersection, an additional element is introduced into the concept of capacity: time allocation. A traffic signal essentially allocates time among conflicting traffic movements seeking use of the same physical space. The way in which time is allocated has a significant impact on the operation of the intersection and on the capacity of the intersection and its approaches.

Level of service for signalized intersections is defined in terms of control delay, which is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, *i. e.,* in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Specifically, level of service criteria for traffic signals are stated in terms of average control delay per vehicle, typically for a 15-minute analysis period. Delay is a complex measure and depends on a number of variables, including the quality of progression, the cycle length, the ratio of green time to cycle length and the volume to capacity ratio for the lane group.

For each intersection analyzed the average control delay per vehicle per approach is determined for the peak hour. A weighted average of control delay per vehicle is then determined for the intersection. A level of service designation is given to the control delay to better describe the level of operation. A

description of levels of service for signalized intersections can be found in Table A-V.

Table A-V

Description of Level of Service for Signalized Intersections

Level of Service	Description
A	Very low control delay, up to 10 seconds per vehicle. Progression is extremely favorable, and most vehicles arrive during the green phase. Many vehicles do not stop at all. Short cycle lengths may tend to contribute to low delay values.
B	Control delay greater than 10 and up to 20 seconds per vehicle. There is good progression or short cycle lengths or both. More vehicles stop causing higher levels of delay.
C	Control delay greater than 20 and up to 35 seconds per vehicle. Higher delays are caused by fair progression or longer cycle lengths or both. Individual cycle failures may begin to appear. Cycle failure occurs when a given green phase doe not serve queued vehicles, and overflow occurs. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.
D	Control delay greater than 35 and up to 55 seconds per vehicle. The influence of congestions becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volumes. Many vehicles stop, the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Control delay greater than 55 and up to 80 seconds per vehicle. The limit of acceptable delay. High delays usually indicate poor progression, long cycle lengths, and high volumes. Individual cycle failures are frequent.
F	Control delay in excess of 80 seconds per vehicle. Unacceptable to most drivers. Oversaturation, arrival flow rates exceed the capacity of the intersection. Many individual cycle failures. Poor progression and long cycle lengths may also be contributing factors to higher delay.

Source: *Highway Capacity Manual 2000*

The use of control delay, which may also be referred to as signal delay, was introduced in the 1997 update to the *Highway Capacity Manual*, and represents a departure from previous updates. In the third edition, published in 1985 and the 1994 update to the third edition, delay only included stopped delay. Thus, the level of service criteria listed in Table A-V differs from earlier criteria.

Unsignalized Intersections

The current procedures on unsignalized intersections were first introduced in the 1997 update to the *Highway Capacity Manual* and represent a revision of the methodology published in the 1994 update to the 1985 *Highway Capacity Manual*. The revised procedures use control delay as a measure of effectiveness to determine level of service. Delay is a measure of driver discomfort, frustration, fuel consumption, and increased travel time. The delay experienced by a motorist is made up of a number of factors that relate to control, traffic and incidents. Total delay is the difference between the travel time actually experienced and the reference travel time that would result during base conditions, *i. e.,* in the absence of traffic control, geometric delay, any incidents, and any other vehicles. Control delay is the increased time of travel for a vehicle approaching and passing through an unsignalized intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection.

Two-Way Stop Controlled Intersections

Two-way stop controlled intersections in which stop signs are used to assign the right-of-way, are the most prevalent type of intersection in the United States. At two-way stop-controlled intersections the stop-controlled approaches are referred as the minor street approaches and can be either public streets or private driveways. The approaches that are not controlled by stop signs are referred to as the major street approaches.

The capacity of movements subject to delay are determined using the "critical gap" method of capacity analysis. Expected average control delay based on movement volume and movement capacity is calculated. A level of service designation is given to the expected control delay for each minor movement. Level of service is not defined for the intersection as a whole. Control delay is the increased time of travel for a vehicle approaching and passing through a stop-controlled intersection, compared with a free-flow vehicle if it were not required to slow or stop at the intersection. A description of levels of service for two-way stop-controlled intersections is found in Table A-VI.

Table A-VI

Description of Level of Service for Two-Way Stop Controlled Intersections

Level of Service	Description
A	Very low control delay less than 10 seconds per vehicle for each movement subject to delay.
B	Low control delay greater than 10 and up to 15 seconds per vehicle for each movement subject to delay.
C	Acceptable control delay greater than 15 and up to 25 seconds per vehicle for each movement subject to delay.
D	Tolerable control delay greater than 25 and up to 35 seconds per vehicle for each movement subject to delay.
E	Limit of tolerable control delay greater than 35 and up to 50 seconds per vehicle for each movement subject to delay.
F	Unacceptable control delay in excess of 50 seconds per vehicle for each movement subject to delay.

Source: *Highway Capacity Manual 2000*

Table IV.C-2: Qualitative Description of Level of Service

Level of Service	Driver's Perception
A/B	LOS A/B are characterized by light congestion. Motorists are generally able to maintain desired speeds on two and four lane roads and make lane changes on four lane roads. Motorists are still able to pass through traffic-controlled intersections in one green phase. Stop-controlled approach motorists begin to notice absence of available gaps.
C	LOS C represents moderate traffic congestion. Average vehicle speeds continue to be near the motorist's desired speed for two and four lane roads. Lane change maneuvers on four lane roads increase to maintain desired speed. Turning traffic and slow vehicles begin to have an adverse impact on traffic flows. Occasionally, motorists do not clear the intersection on the first green phase.
D	LOS D is characterized by congestion with average vehicle speeds decreasing below the motorist's desired level for two and four lane roads. Lane change maneuvers on four lane roads are difficult to make and adversely affect traffic flow like turning traffic and slow vehicles. Multiple cars must wait through more than one green phase at a traffic signal. Stop-controlled approach motorists experience queuing due to a reduction in available gaps.
E	LOS E is the lowest grade possible without stop-and-go operations. Driving speeds are substantially reduced and brief periods of stop-and-go conditions can occur on two and four lane roads and lane changes are minimal. At signalized intersections, long vehicle queues can form waiting to be served by the signal's green phase. Insufficient gaps on the major streets cause extensive queuing on the stop-controlled approaches.
F	LOS F represents stop-and-go conditions for two and four lane roads. Traffic flow is constrained and lane changes minimal. Drivers at signalized intersections may wait several green phases prior to being served. Motorists on stop-controlled approaches experience insufficient gaps of suitable size to cross safely through a major traffic stream.

Source: Fehr & Peers and Highway Capacity Manual, Transportation Research Board, 2000.

This LOS method does not consider the potential impact on walking, bicycling, and transit. Pedestrians, bicyclists, and transit riders are all users of the roadway system but may not be fully recognized in the traffic operations analysis and the calculation of LOS. Identifying the need for roadway improvements based on the resulting roadway LOS, while necessary at times, can also have unintended impacts to other modes, such as increasing the walking time for pedestrians. In evaluating the roadway system, a lower vehicle LOS may be desired when balanced against other community values related to resource protection, social equity, economic development, and consideration of pedestrians, bicyclists, and transit users.

The City of Mountain View has historically used LOS to evaluate morning and evening peak hour traffic operations for individual development projects. The City also uses LOS to help determine roadway infrastructure needs based on the defined level of service standard in the 1992 General Plan Circulation Element during peak periods.

(5) Daily Roadway and Freeway Segment Forecasts and Operations. Roadway segment forecasts were developed using guidelines published in National Cooperative Highway Research Program (NCHRP) Report 255[3] for converting raw model results into forecasted volumes. The difference forecast method is based on existing counts and the difference between the model's

[3] National Cooperative Highway Research Program (NCHRP). *Report 255: Highway Traffic Data for Urbanized Area Project Planning and Design.* Washington, D.C.: National Academy Press, 1982.

baseline and future volumes. This method normalizes the model projections based on the accuracy of the model validation and the existing roadway conditions.

Roadways were analyzed by comparing the daily volume to threshold volumes based on roadway type as presented in Table IV.C-3. Daily roadway capacity is an indicator used to evaluate roadway segment operations at the General Plan planning-level. This daily analysis approach is consistent with the level of planning detail addressed in a General Plan where specific development details and locations are not typically known. This approach helps to evaluate and determine the roadway cross-sections (e.g., two, four or six travel lanes) rather than detailed operational issues at the intersection level, which are dependent on the number of turn lanes, signal timing, adjacent driveway operations, and development details and locations that are not typically known at the time of a program level general plan analysis. In addition to being the most feasible level of analysis for program level general plan environmental evaluation, daily operations better indicate the use of a roadway over a longer period of time outside the traditional peak hours and account for the non-peak times when roadways are substantially underutilized.

It is important to note that daily volume thresholds are used for General Plan and traffic during peak periods may result in worse operations than illustrated by the daily LOS. Thus, the City of Mountain View has traditionally used peak hour intersection operations during the morning and evening peak hours to evaluate the effect individual projects have on the transportation system. Therefore, the daily volume thresholds are used for the General Plan, with the understanding that traffic during peak periods may result in worse operations than illustrated by the daily LOS. As specific development details and locations are known (e.g., precise plans or development projects) a project level analysis will evaluate the transportation system (e.g., vehicle, transit, bicycle, and pedestrian systems) including traffic operations along roadway segments to ensure that the roadway system is optimized for steady, safe, and orderly traffic flow operations, and balances the need of all users of the transportation system.

Currently, the City has adopted LOS D as the minimum overall performance measure for City-controlled roadways, except those roadways within the Downtown and San Antonio Center areas for which the adopted standard is LOS E. The City has also adopted LOS E as the minimum overall performance measure for Congestion Management Program (CMP) monitored roadways (e.g., Central Expressway, El Camino Real, and San Antonio Road).

The Congestion Management Program is discussed in greater detail later in the Regulatory Setting section, under the Valley Transportation Authority (VTA).

Table IV.C-3: Daily Roadway Capacity Summary

	Maximum Daily Volume[1,2] (both directions except freeway segments)				
Roadway Type	**LOS A**	**LOS B**	**LOS C**	**LOS D**	**LOS E**
2-Lane Freeway	13,320	24,120	34,560	42,840	48,120
3-Lane Freeway	20,400	36,960	52,800	64,920	72,720
4-Lane Freeway	27,840	50,400	71,400	87,360	97,680
5-Lane Freeway	39,360	64,440	90,600	110,040	122,760
2-Lane Undivided Arterial[3]			10,920	20,040	21,240
2-Lane Divided Arterial[3]			11,640	21,120	22,440
3-Lane Arterial (2 lanes in one direction)[3]			15,720	24,720	26,040
4-Lane Undivided Arterial[3]			21,000	32,880	34,680
4-Lane Divided Arterial[3]			23,040	42,480	44,880
5-Lane Divided Arterial[3]			27,120	53,160	56,040
6-Lane Divided Arterial[3]			32,520	63,840	67,200
8-Lane Divided Arterial[3]			44,640	85,320	89,640
2-Lane Collector[4]	3,120	6,240	9,360	13,200	15,480

[1] The LOS capacity thresholds are based on HCM 2000 method and are generally appropriate for suburban communities.

[2] Based on available roadway counts, non-directional peak hour traffic volumes are $1/12^{th}$ (~8%) of the daily traffic volume. All volumes are approximate and assume ideal roadway characteristics.

[3] LOS A and B are not achievable for arterial roadways using the HCM 2000 methods.

[4] For collector roadway segments, the capacity limitation is related to neighborhood quality of life rather than the physical carrying capacity of the road. This assumes a standard suburban neighborhood, 40-foot roadway width, and 25 mile per hour speed limit with normal speed violation rates.

Source: *Highway Capacity Manual*, Transportation Research Board, 2000.

Freeway Segments. Freeway segments were also evaluated using daily planning thresholds delineated in Table IV.C-3. Although freeway analysis is typically conducted using density, it is not possible to accurately project future travel speeds on freeway segments in 2030. Thus, planning volume thresholds were used to identify operations on freeway segments within the City of Mountain View. The Congestion Management Program (CMP) maintains an LOS E standard for CMP-monitored roadways, which include US 101, I-280, SR 237 and SR 85. Caltrans strives to maintain facilities at the LOS C/D cusp per its *Guide for the Preparation of Traffic Impact Studies* (December 2002).

Roadway Segments Outside the City. Operations of roadway segments outside the City of Mountain View boundaries and in adjacent jurisdictions were also reviewed to determine potential impacts of the Draft General Plan. A roadway segment within an adjacent jurisdiction is considered to be deficient if the future volume-to-capacity (V/C) ratio is 1.0 or greater during the AM and PM peak one-hour periods under existing and future conditions. Given the large population and employment projected to reside in the region, and the complex travel patterns, only a portion of trips on any roadway segment in adjacent jurisdictions are expected to have originated from a resident or job within the City of Mountain View. The adjacent jurisdiction roadway segment impact thresholds were selected because the thresholds are identical to the criteria developed and used by the City of San Jose recent General Plan update and therefore provides a consistent approach to evaluate adjacent jurisdiction analysis. The 25 percent threshold represents a level of increase that would be a noticeable change in traffic due to the proposed Mountain View General Plan land use changes.

Freeway facilities operated by Caltrans and expressways operated by the County of Santa Clara are regarded as adjacent jurisdictions. Operations of these facilities, which include facilities that are part of VTA's Congestion Management Program, are evaluated according to the adjacent jurisdiction impact criteria.

c. Existing Transportation Setting. The following section generally describes the transportation system in the area, including key facilities of the roadway, transit, bicycle, and pedestrian networks.

(1) Travel Characteristics. Transportation in Mountain View includes an array of components. These range from shared-use bicycle and pedestrian paths meandering along the Stevens Creek Trail to tree-lined streets in the Downtown neighborhood to Caltrain service and the VTA light rail lines extending from Castro Street to the cities of Campbell, San Jose and Milpitas. This section examines historical trends and current characteristics of travel in Mountain View.

Table IV.C-4 compares the commute characteristics of Mountain View residents to those of Santa Clara County, the State of California, and the United States (U.S.) as a whole based on 2000 Census data (or the data available at the time this Draft EIR was prepared as noted in the "source" of the information presented in a table). Approximately 87 percent of Mountain View residents commute by automobile, which is slightly lower compared to Santa Clara County (90 percent) but consistent with the State and national trends of 87 and 88 percent, respectively. Mountain View commuters tend to carpool less compared to the rest of the County, the State, and the nation as whole.

Table IV.C-4: Existing Conditions: Mountain View Residents Journey to Work Travel Characteristics

Travel Characteristics	Mountain View	Santa Clara County	California	United States
Commute Mode Choice				
Single-Occupant Automobile	78.3%	77.4%	71.9%	75.8%
Carpool	8.4%	12.3%	14.6%	12.2%
Commute by Automobile[1]	*86.7%*	*89.7%*	*86.5%*	*88.0%*
Public Transit	4.8%	3.6%	5.2%	4.7%
Bicycle	2.0%	1.2%	0.8%	0.4%
Walk	2.2%	1.8%	2.9%	2.9%
Other Means	0.9%	0.6%	0.8%	0.7%
Work at Home	3.4%	3.1%	3.8%	3.3%
Other Commute Related Data				
Percentage who work outside county of residence	18%	12%	17%	23%
Percentage who leave for work between midnight and 7:00 am	15%	25%	32%	31%
Percentage who leave for work between 7:00 am and 9:00 am	57%	50%	45%	47%
Average Travel Time to Work	23.4 minutes	28.1 minutes	29.3 minutes	27.0 minutes

[1] Commute by Automobile is subtotal including Single-Occupant Automobile and Carpool mode choice.

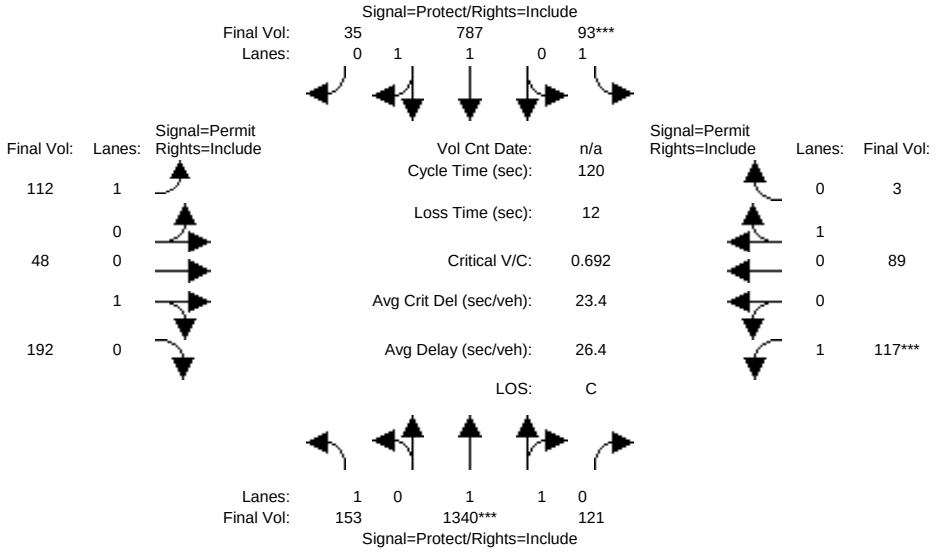
Source: Census 2000, Summary File 3. Based on available Census information as of September 2011.

Appendix C – Level of Service Worksheets

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing AM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



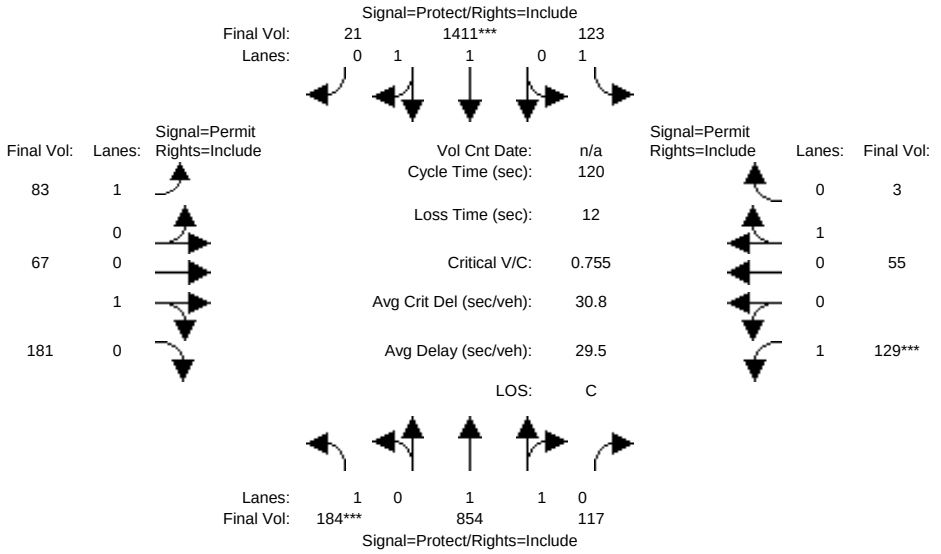
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:7:00-10:00 AM												
Base Vol:	153	1340	121	93	787	35	112	48	192	117	89	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	153	1340	121	93	787	35	112	48	192	117	89	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	153	1340	121	93	787	35	112	48	192	117	89	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	153	1340	121	93	787	35	112	48	192	117	89	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	153	1340	121	93	787	35	112	48	192	117	89	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.67	0.88	0.88	0.38	1.00	1.00
Lanes:	1.00	1.83	0.17	1.00	1.91	0.09	1.00	0.20	0.80	1.00	0.97	0.03
Final Sat.:	1805	3271	295	1805	3436	153	1275	334	1338	724	1829	62
Capacity Analysis Module:												
Vol/Sat:	0.08	0.41	0.41	0.05	0.23	0.23	0.09	0.14	0.14	0.16	0.05	0.05
Crit Moves:		****			****						****	
Green/Cycle:	0.18	0.59	0.59	0.08	0.49	0.49	0.23	0.23	0.23	0.23	0.23	0.23
Volume/Cap:	0.47	0.70	0.70	0.62	0.47	0.47	0.38	0.62	0.62	0.70	0.21	0.21
Delay/Veh:	45.1	18.5	18.5	60.8	20.6	20.6	39.7	44.5	44.5	54.7	37.5	37.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.1	18.5	18.5	60.8	20.6	20.6	39.7	44.5	44.5	54.7	37.5	37.5
LOS by Move:	D	B	B	E	C	C	D	D	D	D	D	D
HCM2k95thQ:	263	856	856	215	479	479	186	407	407	262	138	138

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Existing PM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



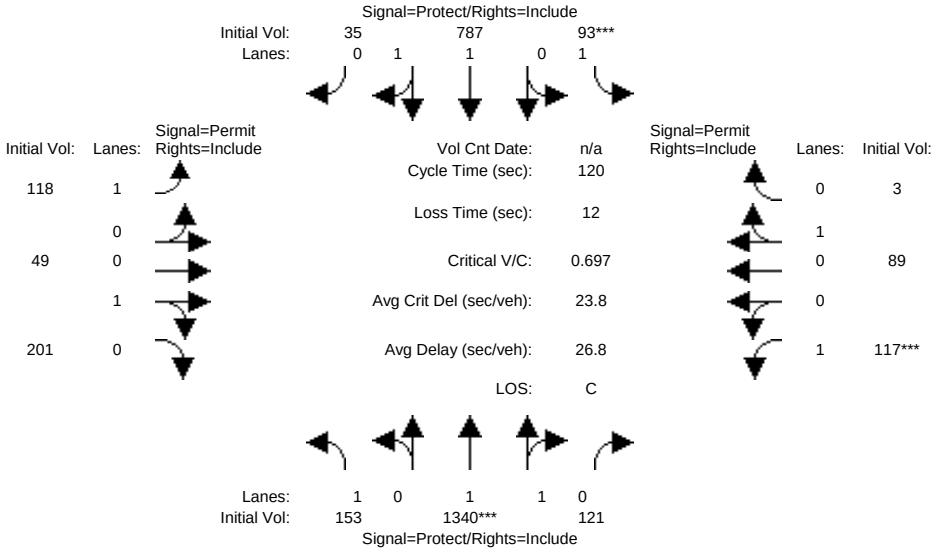
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:4:00-7:00 PM												
Base Vol:	184	854	117	123	1411	21	83	67	181	129	55	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	184	854	117	123	1411	21	83	67	181	129	55	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	184	854	117	123	1411	21	83	67	181	129	55	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	184	854	117	123	1411	21	83	67	181	129	55	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	184	854	117	123	1411	21	83	67	181	129	55	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.95	0.72	0.89	0.89	0.38	0.99	0.99
Lanes:	1.00	1.76	0.24	1.00	1.97	0.03	1.00	0.27	0.73	1.00	0.95	0.05
Final Sat.:	1805	3118	427	1805	3550	53	1370	457	1236	716	1787	97
Capacity Analysis Module:												
Vol/Sat:	0.10	0.27	0.27	0.07	0.40	0.40	0.06	0.15	0.15	0.18	0.03	0.03
Crit Moves:	****				****					****		
Green/Cycle:	0.14	0.51	0.51	0.15	0.53	0.53	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.76	0.54	0.54	0.44	0.76	0.76	0.25	0.61	0.61	0.76	0.13	0.13
Uniform Del:	50.0	20.1	20.1	46.1	22.3	22.3	37.0	40.8	40.8	42.4	35.9	35.9
IncremntDel:	12.6	0.3	0.3	1.1	1.8	1.8	0.4	2.8	2.8	17.3	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	62.6	20.4	20.4	47.2	24.1	24.1	37.4	43.6	43.6	59.7	36.0	36.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.6	20.4	20.4	47.2	24.1	24.1	37.4	43.6	43.6	59.7	36.0	36.0
LOS by Move:	E	C	C	D	C	C	D	D	D	E	D	D
HCM2k95thQ:	388	571	571	220	943	943	130	413	413	297	85	85

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Project AM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



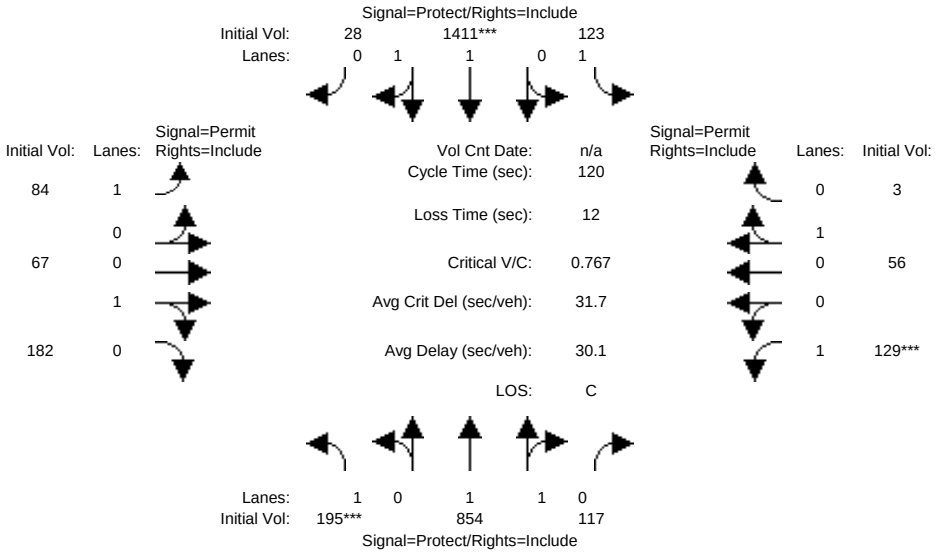
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:7:00-10:00 AM												
Base Vol:	153	1340	121	93	787	35	112	48	192	117	89	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	153	1340	121	93	787	35	112	48	192	117	89	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	0	0	0	0	0	0	6	1	9	0	0	0
Initial Fut:	153	1340	121	93	787	35	118	49	201	117	89	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	153	1340	121	93	787	35	118	49	201	117	89	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	153	1340	121	93	787	35	118	49	201	117	89	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	153	1340	121	93	787	35	118	49	201	117	89	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.67	0.88	0.88	0.37	1.00	1.00
Lanes:	1.00	1.83	0.17	1.00	1.91	0.09	1.00	0.20	0.80	1.00	0.97	0.03
Final Sat.:	1805	3271	295	1805	3436	153	1277	327	1343	703	1829	62
Capacity Analysis Module:												
Vol/Sat:	0.08	0.41	0.41	0.05	0.23	0.23	0.09	0.15	0.15	0.17	0.05	0.05
Crit Moves:		****			****					****		
Green/Cycle:	0.18	0.58	0.58	0.08	0.48	0.48	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.47	0.71	0.71	0.62	0.47	0.47	0.39	0.63	0.63	0.71	0.21	0.21
Uniform Del:	44.1	17.9	17.9	53.2	20.7	20.7	38.6	41.2	41.2	42.0	36.8	36.8
IncremntDel:	1.1	1.1	1.1	7.6	0.2	0.2	0.8	3.4	3.4	13.0	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	45.2	19.0	19.0	60.8	20.9	20.9	39.4	44.6	44.6	55.0	37.0	37.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.2	19.0	19.0	60.8	20.9	20.9	39.4	44.6	44.6	55.0	37.0	37.0
LOS by Move:	D	B	B	E	C	C	D	D	D	D	D	D
HCM2k95thQ:	264	866	866	215	483	483	195	423	423	263	137	137

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Existing plus Project PM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



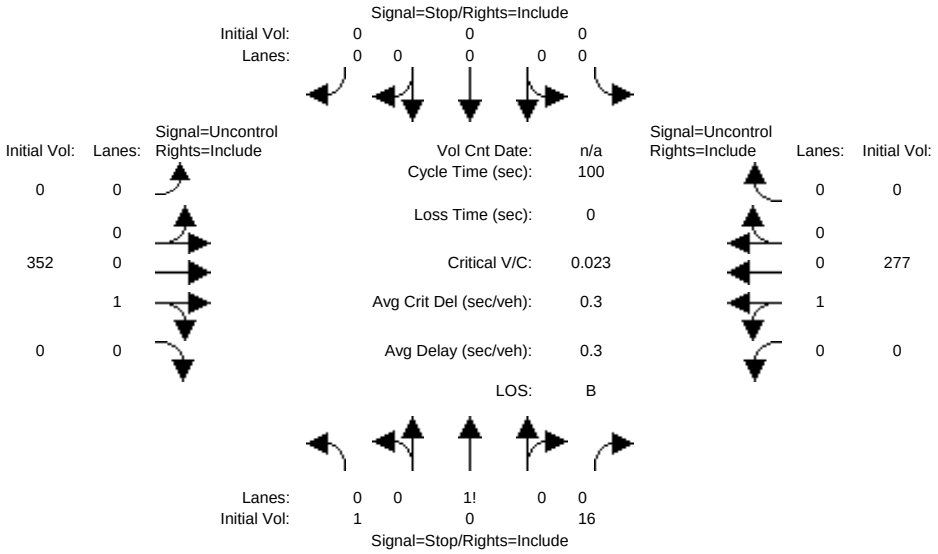
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:4:00-7:00 PM												
Base Vol:	184	854	117	123	1411	21	83	67	181	129	55	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	184	854	117	123	1411	21	83	67	181	129	55	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	11	0	0	0	0	7	1	0	1	0	1	0
Initial Fut:	195	854	117	123	1411	28	84	67	182	129	56	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	195	854	117	123	1411	28	84	67	182	129	56	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	195	854	117	123	1411	28	84	67	182	129	56	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	195	854	117	123	1411	28	84	67	182	129	56	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.95	0.72	0.89	0.89	0.37	0.99	0.99
Lanes:	1.00	1.76	0.24	1.00	1.96	0.04	1.00	0.27	0.73	1.00	0.95	0.05
Final Sat.:	1805	3118	427	1805	3529	70	1368	455	1236	709	1789	96
Capacity Analysis Module:												
Vol/Sat:	0.11	0.27	0.27	0.07	0.40	0.40	0.06	0.15	0.15	0.18	0.03	0.03
Crit Moves:	****				****					****		
Green/Cycle:	0.14	0.51	0.51	0.15	0.52	0.52	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.77	0.54	0.54	0.44	0.77	0.77	0.26	0.62	0.62	0.77	0.13	0.13
Uniform Del:	49.6	20.0	20.0	46.0	22.9	22.9	37.2	40.9	40.9	42.7	36.0	36.0
IncremntDel:	13.1	0.3	0.3	1.1	2.0	2.0	0.4	3.0	3.0	18.9	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	62.7	20.3	20.3	47.1	24.8	24.8	37.6	43.9	43.9	61.5	36.1	36.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	62.7	20.3	20.3	47.1	24.8	24.8	37.6	43.9	43.9	61.5	36.1	36.1
LOS by Move:	E	C	C	D	C	C	D	D	D	E	D	D
HCM2k95thQ:	408	570	570	220	962	962	132	417	417	301	87	87

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project AM

Intersection #2: Montecito Avenue/Project Driveway




```
Street Name:         Project Driveway                  Montecito Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     0     0  352     0     0  277     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0     0  352     0     0  277     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Project Tri:    1    0    16     0    0     0     0    0     0     0    0     0
Initial Fut:    1    0    16     0    0     0     0  352     0     0  277     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1    0    16     0    0     0     0  352     0     0  277     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    1    0    16     0    0     0     0  352     0     0  277     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4  6.5   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  629  629   352  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.:  449  402   696  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:    449  402   696  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.00 0.00  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  674 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 10.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    B     *     *    *     *     *    *     *     *    *     *
ApproachDel:       10.5           xxxxxx            xxxxxx            xxxxxx
ApproachLOS:         B                *                 *                 *
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Montecito Avenue/Project Driveway
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	1	0	16	0	0	0	0	352	0	0	277	0
ApproachDel:	10.5			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=17]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=646]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Montecito Avenue/Project Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	1	0	16	0	0	0	0	352	0	0	277	0

Major Street Volume: 629
Minor Approach Volume: 17
Minor Approach Volume Threshold: 343

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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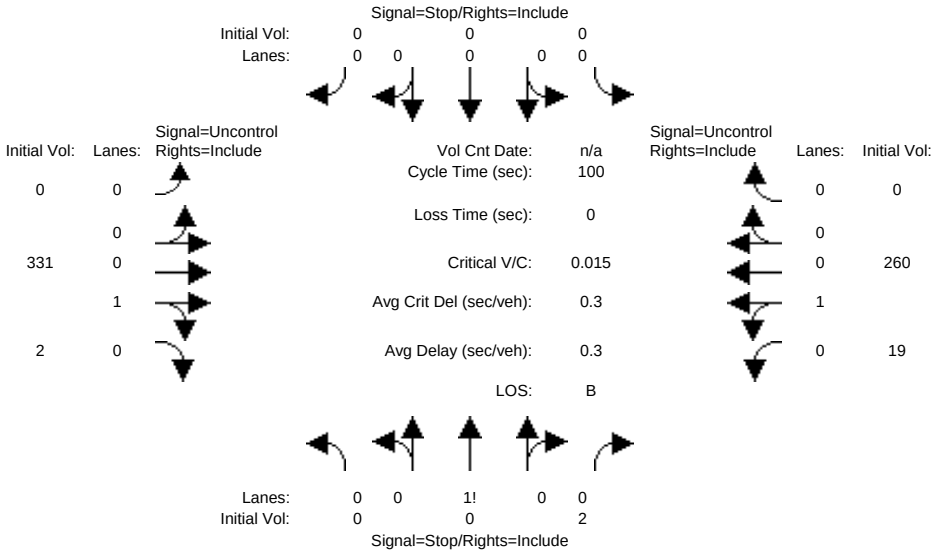
1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing plus Project PM

Intersection #2: Montecito Avenue/Project Driveway




```
Street Name:         Project Driveway                  Montecito Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     0     0  331     0     0  260     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0     0  331     0     0  260     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Project Tri:    0    0     2     0    0     0     0    0     2    19    0     0
Initial Fut:    0    0     2     0    0     0     0  331     2    19  260     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     0    0     2     0    0     0     0  331     2    19  260     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0    0     2     0    0     0     0  331     2    19  260     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   4.1 xxxx xxxxx
FollowUpTim:xxxxx xxxx   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   2.2 xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx   332  xxxx xxxx xxxxx  xxxx xxxx xxxxx   333 xxxx xxxxx
Potent Cap.: xxxx xxxx   714  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1238 xxxx xxxxx
Move Cap.:   xxxx xxxx   714  xxxx xxxx xxxxx  xxxx xxxx xxxxx  1238 xxxx xxxxx
Volume/Cap:  xxxx xxxx  0.00  xxxx xxxx  xxxx  xxxx xxxx  xxxx  0.02 xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx   0.2  xxxx xxxx xxxxx  xxxx xxxx xxxxx   1.2 xxxx xxxxx
Control Del:xxxxx xxxx  10.1 xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.0 xxxx xxxxx
LOS by Move:    *    *     B     *    *     *     *    *     *     A    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   0.0 xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx   8.0 xxxx xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     A    *     *
ApproachDel:      10.1           xxxxxx           xxxxxx           xxxxxx
ApproachLOS:         B              *                *                *
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Montecito Avenue/Project Driveway
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Initial Vol:	0	0	2	0	0	0	0	331	2	19	260	0
ApproachDel:	10.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=614]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #2 Montecito Avenue/Project Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

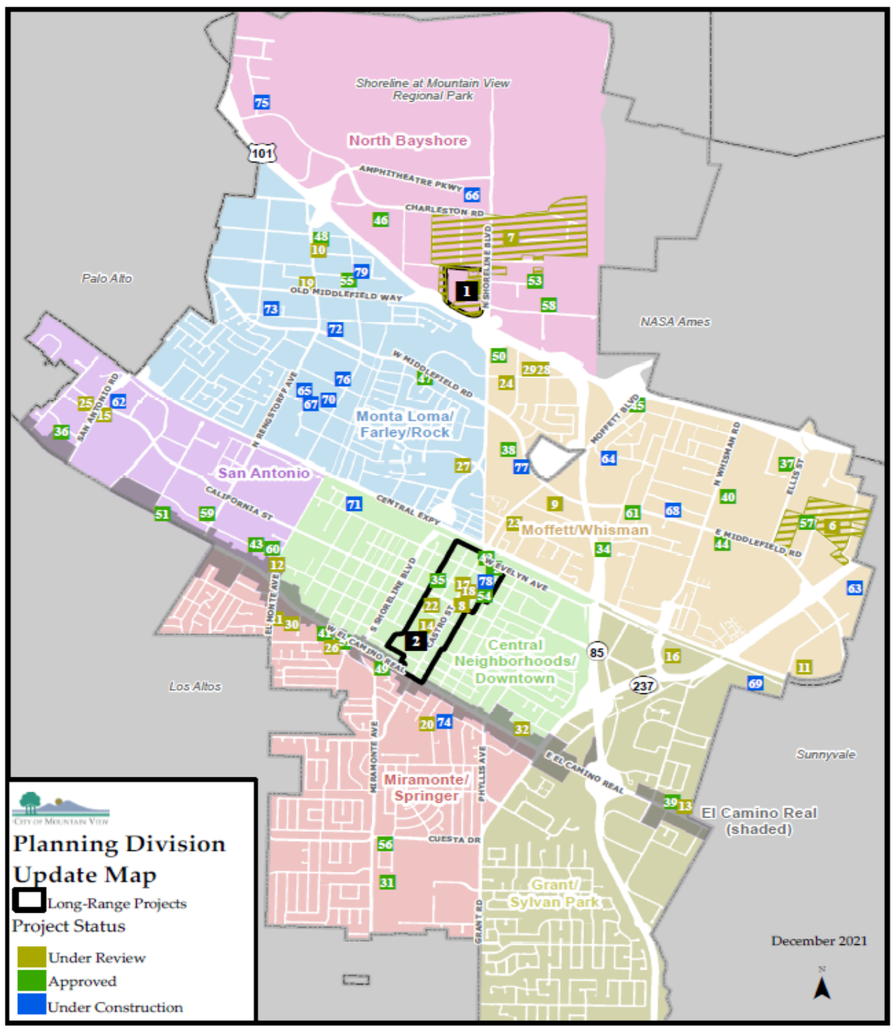
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Initial Vol:	0	0	2	0	0	0	0	331	2	19	260	0

Major Street Volume: 612
Minor Approach Volume: 2
Minor Approach Volume Threshold: 350

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

List of Background Projects to be considered for 1265 Montecito Avenue MTA Study				
#	Projects under review		Description of Project	Approved Trips Available (✓/x)
1	Project No.9	555 West Middlefield Road	To allow a 341-unit addition to an existing 402-unit residential apartment development with three new underground parking garages, a new leasing office, and a new 1.36-acre public park on a 14.5-acre project site; a Heritage Tree Removal Permit to remove 117 Heritage trees; and a Preliminary Parcel Map to subdivide the existing parcel into four parcels	✓
2	Project No.23	730 Central Avenue	To allow a 4-story, 21-unit apartment building, which includes a State Density Bonus with development waivers and parking at-grade, replacing an existing vacant auto repair shop on a 0.24-acre project site. This project is located on the north side of Central Avenue between Moffett Boulevard and Santa Rosa Avenue in the CRA (Commercial Residential-Arterial) district. Project is subject to SB 330.	
3	Project No.24	1155 and 1185 Terra Bella Avenue		
4	Project No.28	1020 Terra Bella Avenue	Request for a General Plan Map Amendment from General Industrial to High Density Residential; a Zoning Map Amendment from MM (General Industrial) district to P (Planned Community) district; a Planned Community Permit and Development Review Permit to construct a 6-story, 110-unit affordable apartments with a State Density Bonus with development waivers and a 2-story above-grade parking garage, replacing an existing commercial building; and a Heritage Tree Removal Permit to remove two Heritage trees on a 1.04-acre project site. This project is located at the northwest corner of Terra Bella Avenue and San Rafael Avenue.	
5	Project No.29	1040 Terra Bella Avenue	Request for a General Plan Text Amendment to increase allowable floor area ratio in the General Industrial Land Use Designation; a Zoning Map Amendment from MM (General Industrial) district to P (Planned Community) district; a Planned Community Permit and Development Review Permit to allow 6 and 4-story public storage buildings, replacing 16 existing public storage buildings, and a parking reduction to allow 75 parking spaces, in-lieu of 214 required spaces; a Heritage Tree Removal Permit to remove 5 Heritage trees; and a Lot Line Adjustment to relocate an existing lot line on a 3.7-acre project site. The project is located at the northwest corner of Terra Bella Avenue and San Rafael	
	Approved Projects			
6	Project No.38	777 West Middlefield Road	To allow demolition of 208 existing apartment units and construction of 716 new apartment units (including 144 affordable units); a Heritage Tree Removal Permit to remove 127 Heritage trees; and a Preliminary Parcel Map to create two parcels on a 9.84-acre project site.	✓
7	Project No.45	870 Leong Drive	On April 12, 2020, the Zoning Administrator approved a one-year permit extension of a previously approved Provisional Use Permit for a parking reduction for 70 parking spaces, in lieu of the required 75 spaces; Planned Community Permit and Development Review Permit to allow construction of a new 74-room hotel, replacing an existing commercial building; and a Heritage Tree Removal Permit to remove 4 Heritage trees on a 1.15-acre project site. The project is located on the west side of Leong Drive between Moffett Boulevard and Fairchild Drive in the P-32 (Evandale) Precise Plan.	
8	Project No.47	1555 West Middlefield Road	On May 19, 2020, the City Council approved a Planned Unit Development Permit and Development Review Permit for a 115-unit rowhouse development, replacing an existing 116-unit apartment complex; a Heritage Tree Removal Permit to remove 55 Heritage trees; and a Vesting Tentative Map to create 115 residential lots and one common lot on a 5.44-acre site. This project is located on the west side of Middlefield Road between Burgoyne Street and San Pierre Way in the R3-2 (Multiple-Family Residential) district.	
9	Project No.50	1001 North Shoreline Boulevard	On August 25, 2020, the City Council approved a General Plan Map Amendment from General Industrial to Mixed Use Center and related General Plan text amendments; a Zoning Map Amendment from ML (Limited Industrial) and MM (General Industrial) districts to P (Planned Community) district; a Planned Community Permit and Development Review Permit to construct a 7-story, 203 unit apartment building with two levels of podium parking, a 7-story, 100 condominium-unit building with two levels of podium parking, and a six-level parking structure to accommodate the existing 111,443 square foot office building to remain on a 7.8-acre project site; a Heritage Tree Removal Permit to remove 23 Heritage trees; and a Tentative Tract Map to subdivide one existing parcel into five parcels associated with an office building, parking garage, two residential buildings, and a common lot. The project is located on the northeast corner of North Shoreline Boulevard and Terra Bella Avenue in the ML (Limited Industrial) and MM (General Industrial) districts. Project is subject to SB 330.	



Approved Trip Inventory													
AM Peak													
#	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	N Shoreline Boulevard/Montecito Avenue-Stierlin Road	0	48	0	0	69	0	0	0	0	0	0	0

PM Peak													
#	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	N Shoreline Boulevard/Montecito Avenue-Stierlin Road	0	93	0	0	55	0	0	0	0	0	0	0

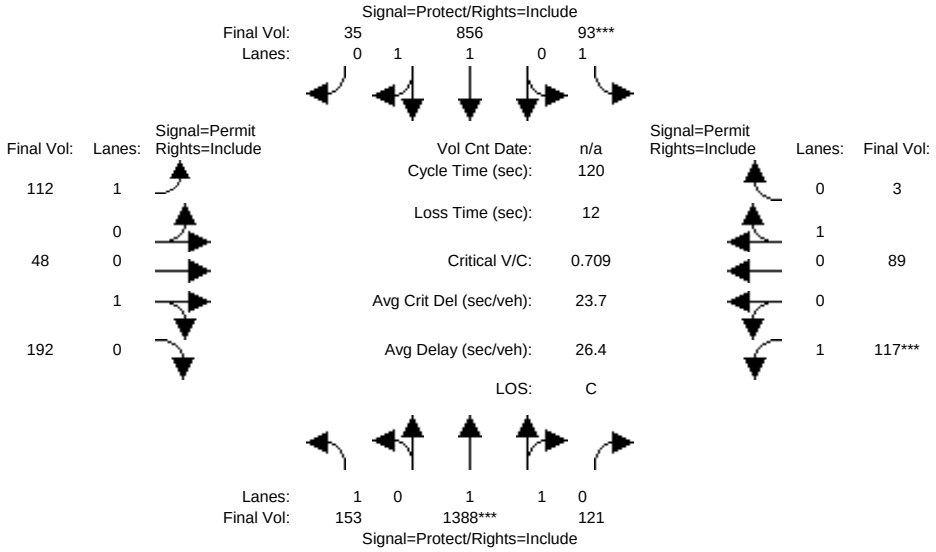
Background Volumes														
AM Peak														
#	Intersection	Scenario	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	N Shoreline Boulevard/Montecito Avenue-Stierlin Road	*Existing*	153	1340	121	93	787	35	112	48	192	117	89	3
		Approved Projects	0	48	0	0	69	0	0	0	0	0	0	0
		Background Volumes	**153**	**1388**	**121**	**93**	**856**	**35**	**112**	**48**	**192**	**117**	**89**	**3**

PM Peak														
#	Intersection	Scenario	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	N Shoreline Boulevard/Montecito Avenue-Stierlin Road	*Existing*	184	854	117	123	1411	21	83	67	181	129	55	3
		Approved Projects	0	93	0	0	55	0	0	0	0	0	0	0
		Background Volumes	**184**	**947**	**117**	**123**	**1466**	**21**	**83**	**67**	**181**	**129**	**55**	**3**

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Background AM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



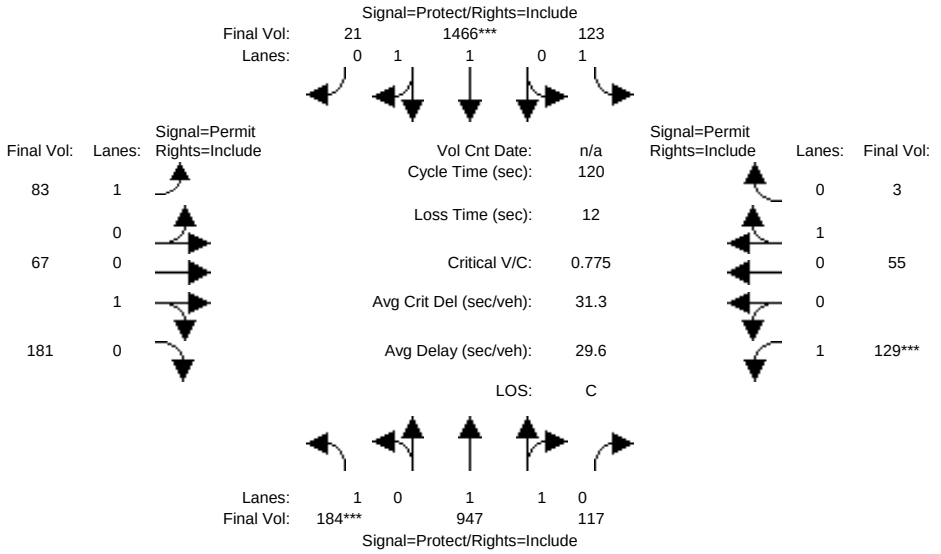
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:7:00-10:00 AM												
Base Vol:	153	1388	121	93	856	35	112	48	192	117	89	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	153	1388	121	93	856	35	112	48	192	117	89	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	153	1388	121	93	856	35	112	48	192	117	89	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	153	1388	121	93	856	35	112	48	192	117	89	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	153	1388	121	93	856	35	112	48	192	117	89	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.67	0.88	0.88	0.38	1.00	1.00
Lanes:	1.00	1.84	0.16	1.00	1.92	0.08	1.00	0.20	0.80	1.00	0.97	0.03
Final Sat.:	1805	3281	286	1805	3447	141	1273	334	1338	714	1829	62
Capacity Analysis Module:												
Vol/Sat:	0.08	0.42	0.42	0.05	0.25	0.25	0.09	0.14	0.14	0.16	0.05	0.05
Crit Moves:		****			****					****		
Green/Cycle:	0.17	0.59	0.59	0.08	0.50	0.50	0.23	0.23	0.23	0.23	0.23	0.23
Volume/Cap:	0.50	0.72	0.72	0.62	0.50	0.50	0.39	0.63	0.63	0.72	0.21	0.21
Uniform Del:	45.0	17.6	17.6	53.2	19.9	19.9	39.2	41.8	41.8	42.8	37.6	37.6
IncremntDel:	1.3	1.2	1.2	7.6	0.2	0.2	0.9	3.4	3.4	14.4	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.3	18.8	18.8	60.8	20.1	20.1	40.1	45.1	45.1	57.1	37.8	37.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.3	18.8	18.8	60.8	20.1	20.1	40.1	45.1	45.1	57.1	37.8	37.8
LOS by Move:	D	B	B	E	C	C	D	D	D	E	D	D
HCM2k95thQ:	270	896	896	215	516	516	187	410	410	268	139	139

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Background PM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



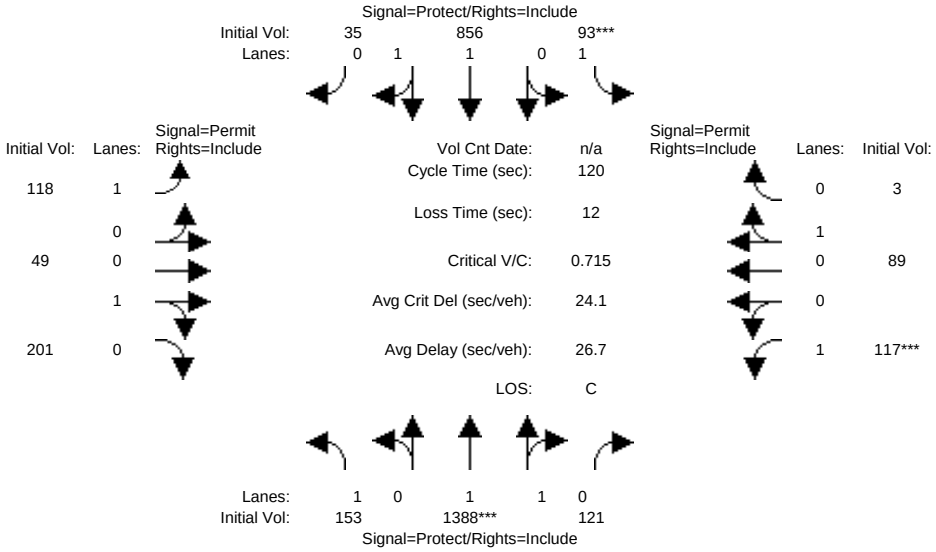
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:4:00-7:00 PM												
Base Vol:	184	947	117	123	1466	21	83	67	181	129	55	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	184	947	117	123	1466	21	83	67	181	129	55	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	184	947	117	123	1466	21	83	67	181	129	55	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	184	947	117	123	1466	21	83	67	181	129	55	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	184	947	117	123	1466	21	83	67	181	129	55	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.95	0.72	0.89	0.89	0.37	0.99	0.99
Lanes:	1.00	1.78	0.22	1.00	1.97	0.03	1.00	0.27	0.73	1.00	0.95	0.05
Final Sat.:	1805	3162	391	1805	3552	51	1370	457	1236	707	1787	97
Capacity Analysis Module:												
Vol/Sat:	0.10	0.30	0.30	0.07	0.41	0.41	0.06	0.15	0.15	0.18	0.03	0.03
Crit Moves:	****				****					****		
Green/Cycle:	0.13	0.52	0.52	0.14	0.53	0.53	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.77	0.58	0.58	0.47	0.77	0.77	0.26	0.62	0.62	0.77	0.13	0.13
Uniform Del:	50.4	19.8	19.8	47.1	22.3	22.3	37.3	41.1	41.1	42.9	36.2	36.2
IncremntDel:	14.7	0.5	0.5	1.3	2.0	2.0	0.4	3.0	3.0	20.0	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	65.1	20.2	20.2	48.5	24.3	24.3	37.7	44.1	44.1	62.9	36.3	36.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.1	20.2	20.2	48.5	24.3	24.3	37.7	44.1	44.1	62.9	36.3	36.3
LOS by Move:	E	C	C	D	C	C	D	D	D	E	D	D
HCM2k95thQ:	395	626	626	227	990	990	131	416	416	304	86	86

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project AM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



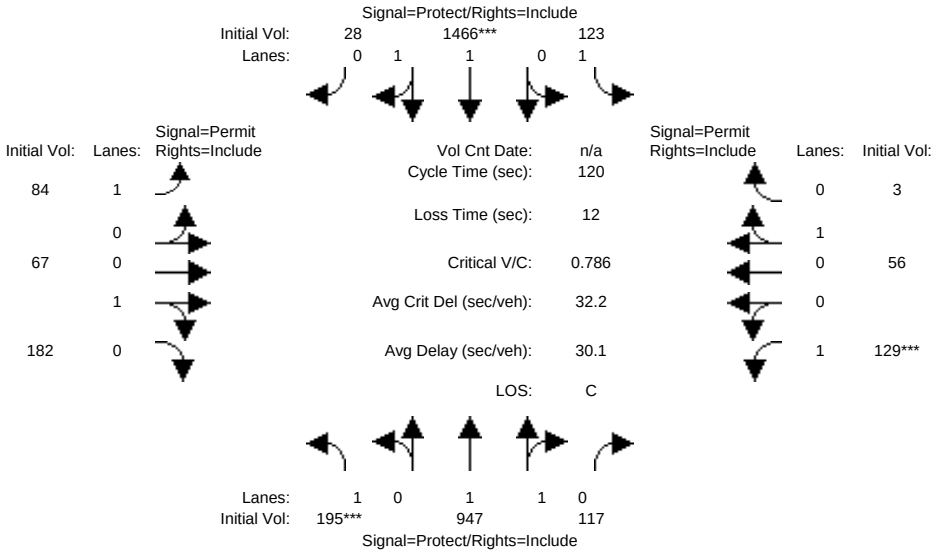
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:7:00-10:00 AM												
Base Vol:	153	1388	121	93	856	35	112	48	192	117	89	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	153	1388	121	93	856	35	112	48	192	117	89	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	0	0	0	0	0	0	6	1	9	0	0	0
Initial Fut:	153	1388	121	93	856	35	118	49	201	117	89	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	153	1388	121	93	856	35	118	49	201	117	89	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	153	1388	121	93	856	35	118	49	201	117	89	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	153	1388	121	93	856	35	118	49	201	117	89	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.67	0.88	0.88	0.37	1.00	1.00
Lanes:	1.00	1.84	0.16	1.00	1.92	0.08	1.00	0.20	0.80	1.00	0.97	0.03
Final Sat.:	1805	3281	286	1805	3447	141	1277	327	1343	694	1829	62
Capacity Analysis Module:												
Vol/Sat:	0.08	0.42	0.42	0.05	0.25	0.25	0.09	0.15	0.15	0.17	0.05	0.05
Crit Moves:		****		****						****		
Green/Cycle:	0.17	0.58	0.58	0.08	0.50	0.50	0.23	0.23	0.23	0.23	0.23	0.23
Volume/Cap:	0.50	0.72	0.72	0.62	0.50	0.50	0.40	0.64	0.64	0.72	0.21	0.21
Uniform Del:	45.2	18.0	18.0	53.2	20.2	20.2	38.9	41.5	41.5	42.5	37.1	37.1
IncremntDel:	1.3	1.3	1.3	7.6	0.2	0.2	0.9	3.7	3.7	15.0	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	46.5	19.3	19.3	60.8	20.4	20.4	39.8	45.2	45.2	57.5	37.4	37.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.5	19.3	19.3	60.8	20.4	20.4	39.8	45.2	45.2	57.5	37.4	37.4
LOS by Move:	D	B	B	E	C	C	D	D	D	E	D	D
HCM2k95thQ:	270	906	906	215	520	520	196	426	426	269	138	138

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Background plus Project PM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



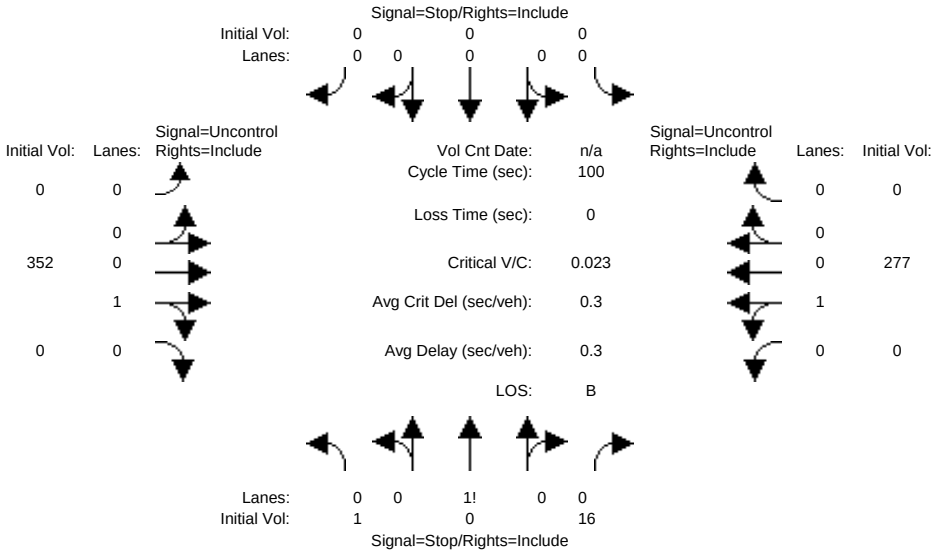
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:4:00-7:00 PM												
Base Vol:	184	947	117	123	1466	21	83	67	181	129	55	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	184	947	117	123	1466	21	83	67	181	129	55	3
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	11	0	0	0	0	7	1	0	1	0	1	0
Initial Fut:	195	947	117	123	1466	28	84	67	182	129	56	3
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	195	947	117	123	1466	28	84	67	182	129	56	3
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	195	947	117	123	1466	28	84	67	182	129	56	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	195	947	117	123	1466	28	84	67	182	129	56	3
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.95	0.72	0.89	0.89	0.37	0.99	0.99
Lanes:	1.00	1.78	0.22	1.00	1.96	0.04	1.00	0.27	0.73	1.00	0.95	0.05
Final Sat.:	1805	3162	391	1805	3532	67	1368	455	1236	701	1789	96
Capacity Analysis Module:												
Vol/Sat:	0.11	0.30	0.30	0.07	0.42	0.42	0.06	0.15	0.15	0.18	0.03	0.03
Crit Moves:	****				****					****		
Green/Cycle:	0.14	0.52	0.52	0.14	0.53	0.53	0.23	0.23	0.23	0.23	0.23	0.23
Volume/Cap:	0.79	0.58	0.58	0.47	0.79	0.79	0.26	0.63	0.63	0.79	0.13	0.13
Uniform Del:	50.0	19.7	19.7	47.1	22.8	22.8	37.5	41.3	41.3	43.1	36.3	36.3
IncremntDel:	15.2	0.4	0.4	1.3	2.2	2.2	0.4	3.2	3.2	21.7	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	65.2	20.1	20.1	48.4	25.1	25.1	37.9	44.5	44.5	64.8	36.5	36.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.2	20.1	20.1	48.4	25.1	25.1	37.9	44.5	44.5	64.8	36.5	36.5
LOS by Move:	E	C	C	D	C	C	D	D	D	E	D	D
HCM2k95thQ:	416	625	625	226	1010	1010	133	420	420	308	87	87

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background plus Project AM

Intersection #2: Montecito Avenue/Project Driveway




```
Street Name:         Project Driveway                  Montecito Avenue
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module:
Base Vol:       0    0     0     0    0     0     0  352     0     0  277     0
Growth Adj:  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
Initial Bse:    0    0     0     0    0     0     0  352     0     0  277     0
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Project Tri:    1    0    16     0    0     0     0    0     0     0    0     0
Initial Fut:    1    0    16     0    0     0     0  352     0     0  277     0
User Adj:    1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Adj:     1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00  1.00 1.00  1.00
PHF Volume:     1    0    16     0    0     0     0  352     0     0  277     0
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    1    0    16     0    0     0     0  352     0     0  277     0
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  6.4  6.5   6.2 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
FollowUpTim:  3.5  4.0   3.3 xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  629  629   352  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Potent Cap.:  449  402   696  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Move Cap.:    449  402   696  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Volume/Cap:  0.00 0.00  0.02  xxxx xxxx  xxxx  xxxx xxxx  xxxx  xxxx xxxx  xxxx
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     *    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx  674 xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx  0.1 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx 10.5 xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    B     *     *    *     *     *    *     *     *    *     *
ApproachDel:       10.5           xxxxxx            xxxxxx            xxxxxx
ApproachLOS:         B                *                 *                 *
Note: Queue reported is the distance per lane in feet.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Montecito Avenue/Project Driveway
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	1	0	16	0	0	0	0	352	0	0	277	0
ApproachDel:	10.5			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=17]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=646]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

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Intersection #2 Montecito Avenue/Project Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	1	0	16	0	0	0	0	352	0	0	277	0

Major Street Volume: 629
Minor Approach Volume: 17
Minor Approach Volume Threshold: 343

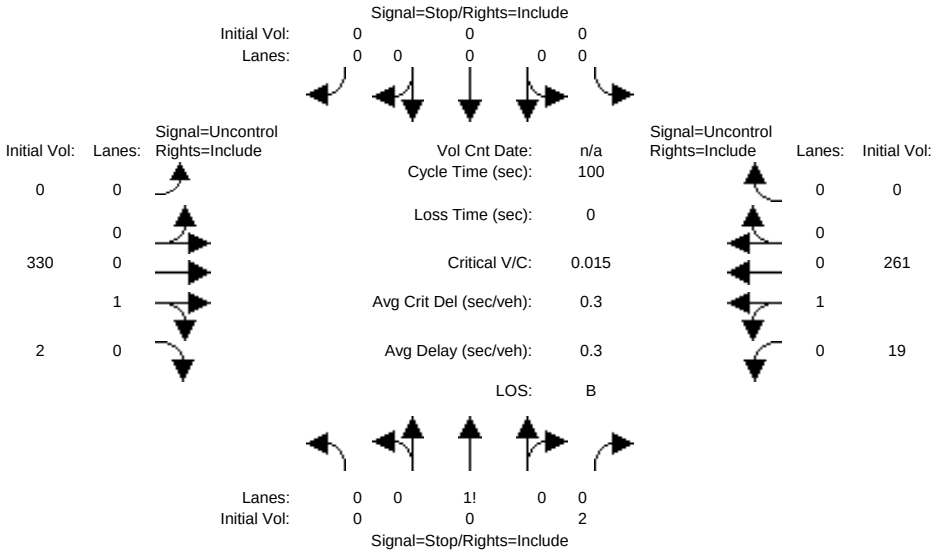
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Background plus Project PM

Intersection #2: Montecito Avenue/Project Driveway



Street Name:	Project Driveway						Montecito Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	330	0	0	261	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	330	0	0	261	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	0	0	2	0	0	0	0	0	2	19	0	0
Initial Fut:	0	0	2	0	0	0	0	330	2	19	261	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	2	0	0	0	0	330	2	19	261	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	2	0	0	0	0	330	2	19	261	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	331	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	332	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	715	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1239	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	715	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1239	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	10.0	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.0	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	10.0			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

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Intersection #2 Montecito Avenue/Project Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 1	0	0	0	0 0	0	0	0	1 0	0	1	0	0 0
Initial Vol:	0	0		2	0	0		0	0	330		2	19	261		0
ApproachDel:	10.0				xxxxxx				xxxxxx				xxxxxx			

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=614]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Montecito Avenue/Project Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Lanes:	0	0	0	0 1	0	0	0	0 0	0	0	0	1 0	0	1	0	0 0
Initial Vol:	0	0		2	0	0		0	0	330		2	19	261		0

Major Street Volume: 612
Minor Approach Volume: 2
Minor Approach Volume Threshold: 350

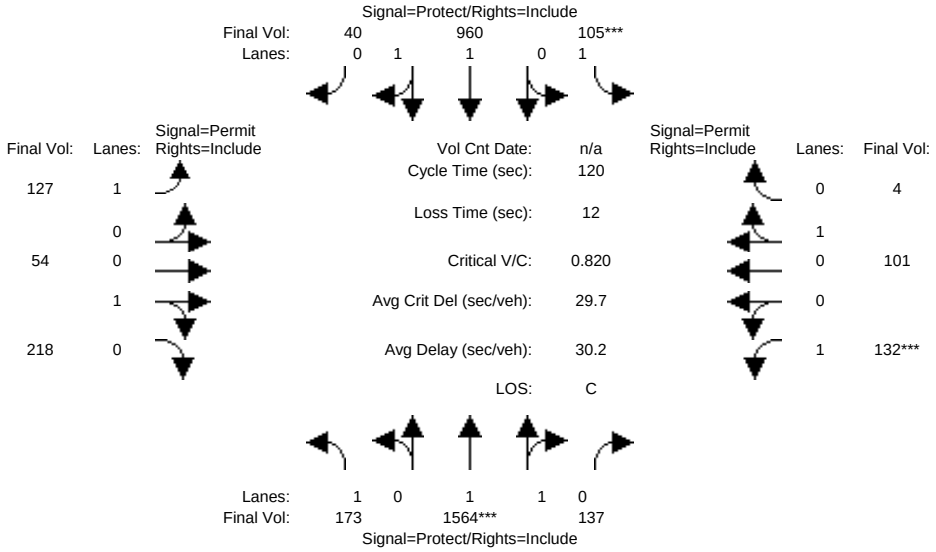
SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cumulative AM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



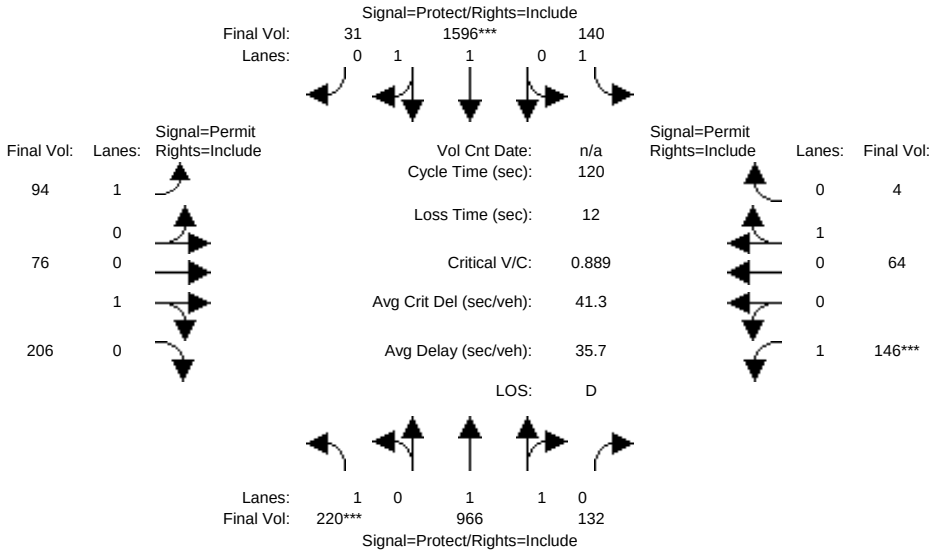
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:7:00-10:00 AM												
Base Vol:	173	1564	137	105	960	40	127	54	218	132	101	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	173	1564	137	105	960	40	127	54	218	132	101	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	173	1564	137	105	960	40	127	54	218	132	101	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	1564	137	105	960	40	127	54	218	132	101	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	173	1564	137	105	960	40	127	54	218	132	101	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.65	0.88	0.88	0.34	0.99	0.99
Lanes:	1.00	1.84	0.16	1.00	1.92	0.08	1.00	0.20	0.80	1.00	0.96	0.04
Final Sat.:	1805	3279	287	1805	3445	144	1231	332	1340	650	1817	72
Capacity Analysis Module:												
Vol/Sat:	0.10	0.48	0.48	0.06	0.28	0.28	0.10	0.16	0.16	0.20	0.06	0.06
Crit Moves:		****			****					****		
Green/Cycle:	0.17	0.57	0.57	0.08	0.49	0.49	0.24	0.24	0.24	0.24	0.24	0.24
Volume/Cap:	0.57	0.83	0.83	0.70	0.57	0.57	0.42	0.67	0.67	0.83	0.23	0.23
Uniform Del:	45.9	20.9	20.9	53.5	21.8	21.8	38.2	41.0	41.0	43.0	36.3	36.3
IncremntDel:	2.6	3.1	3.1	13.5	0.5	0.5	1.0	4.2	4.2	29.7	0.3	0.3
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.5	24.0	24.0	67.0	22.2	22.2	39.2	45.1	45.1	72.7	36.6	36.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.5	24.0	24.0	67.0	22.2	22.2	39.2	45.1	45.1	72.7	36.6	36.6
LOS by Move:	D	C	C	E	C	C	D	D	D	E	D	D
HCM2k95thQ:	314	1159	1159	252	612	612	211	461	461	329	155	155

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Base Volume Alternative)
Cumulative PM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



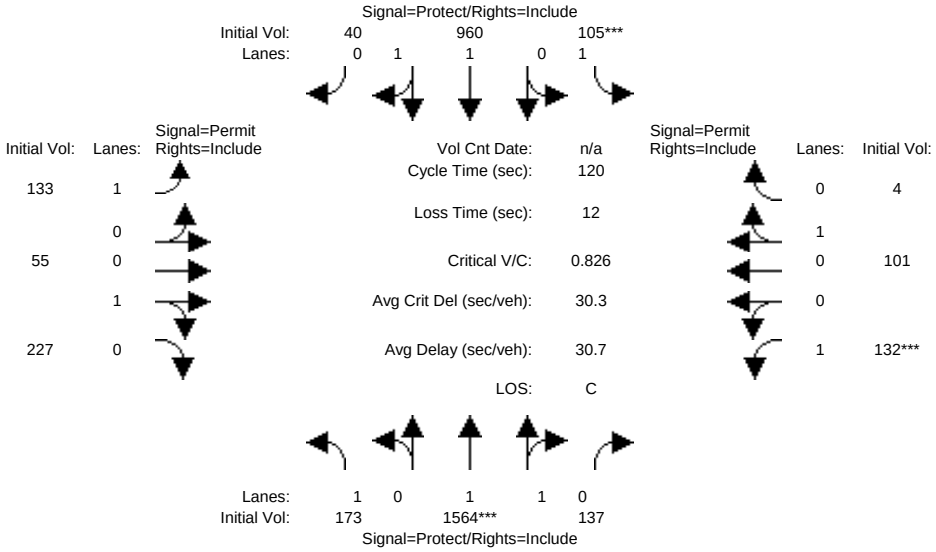
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:4:00-7:00 PM												
Base Vol:	220	966	132	140	1596	31	94	76	206	146	64	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	220	966	132	140	1596	31	94	76	206	146	64	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	220	966	132	140	1596	31	94	76	206	146	64	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	220	966	132	140	1596	31	94	76	206	146	64	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	220	966	132	140	1596	31	94	76	206	146	64	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.95	0.71	0.89	0.89	0.34	0.99	0.99
Lanes:	1.00	1.76	0.24	1.00	1.96	0.04	1.00	0.27	0.73	1.00	0.94	0.06
Final Sat.:	1805	3119	426	1805	3531	69	1355	456	1237	646	1772	111
Capacity Analysis Module:												
Vol/Sat:	0.12	0.31	0.31	0.08	0.45	0.45	0.07	0.17	0.17	0.23	0.04	0.04
Crit Moves:	****				****					****		
Green/Cycle:	0.14	0.51	0.51	0.14	0.51	0.51	0.25	0.25	0.25	0.25	0.25	0.25
Volume/Cap:	0.89	0.61	0.61	0.57	0.89	0.89	0.27	0.66	0.66	0.89	0.14	0.14
Uniform Del:	50.9	21.0	21.0	48.5	26.4	26.4	35.9	40.0	40.0	43.1	34.6	34.6
IncremntDel:	29.9	0.6	0.6	3.1	5.8	5.8	0.4	3.6	3.6	40.0	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	80.8	21.6	21.6	51.5	32.2	32.2	36.3	43.7	43.7	83.1	34.8	34.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	80.8	21.6	21.6	51.5	32.2	32.2	36.3	43.7	43.7	83.1	34.8	34.8
LOS by Move:	F	C	C	D	C	C	D	D	D	F	C	C
HCM2k95thQ:	502	669	669	270	1254	1254	145	467	467	376	98	98

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative plus Project AM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



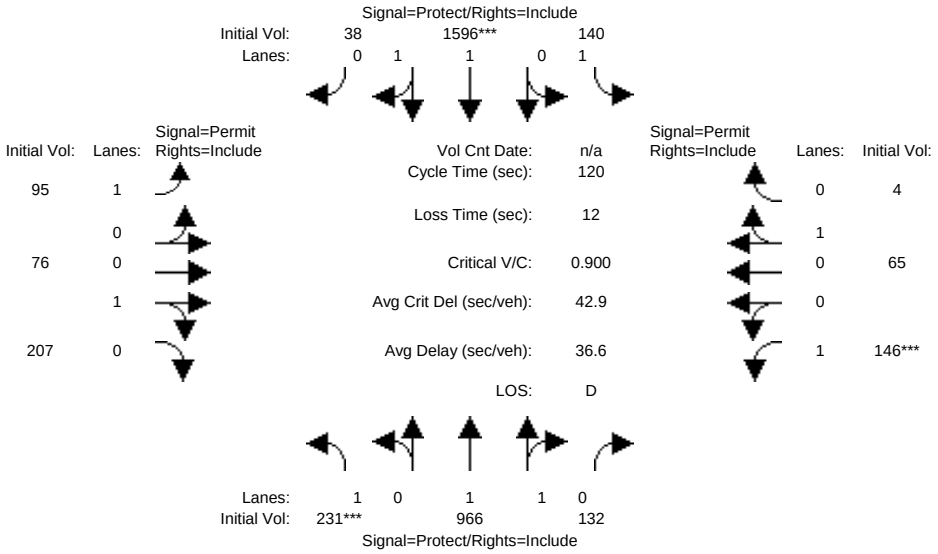
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L -	T -	R	L -	T -	R	L -	T -	R	L -	T -	R
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:7:00-10:00 AM												
Base Vol:	173	1564	137	105	960	40	127	54	218	132	101	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	173	1564	137	105	960	40	127	54	218	132	101	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	0	0	0	0	0	0	6	1	9	0	0	0
Initial Fut:	173	1564	137	105	960	40	133	55	227	132	101	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	173	1564	137	105	960	40	133	55	227	132	101	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	173	1564	137	105	960	40	133	55	227	132	101	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	173	1564	137	105	960	40	133	55	227	132	101	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.94	0.94	0.95	0.94	0.94	0.65	0.88	0.88	0.33	0.99	0.99
Lanes:	1.00	1.84	0.16	1.00	1.92	0.08	1.00	0.20	0.80	1.00	0.96	0.04
Final Sat.:	1805	3279	287	1805	3445	144	1235	326	1344	633	1817	72
Capacity Analysis Module:												
Vol/Sat:	0.10	0.48	0.48	0.06	0.28	0.28	0.11	0.17	0.17	0.21	0.06	0.06
Crit Moves:		****		****						****		
Green/Cycle:	0.17	0.57	0.57	0.08	0.48	0.48	0.25	0.25	0.25	0.25	0.25	0.25
Volume/Cap:	0.57	0.84	0.84	0.70	0.57	0.57	0.43	0.68	0.68	0.84	0.22	0.22
Uniform Del:	46.1	21.4	21.4	53.5	22.1	22.1	38.0	40.8	40.8	42.8	35.9	35.9
IncremntDel:	2.7	3.3	3.3	13.5	0.5	0.5	1.0	4.5	4.5	31.1	0.2	0.2
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	48.8	24.7	24.7	67.0	22.6	22.6	39.0	45.3	45.3	73.9	36.1	36.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.8	24.7	24.7	67.0	22.6	22.6	39.0	45.3	45.3	73.9	36.1	36.1
LOS by Move:	D	C	C	E	C	C	D	D	D	E	D	D
HCM2k95thQ:	315	1174	1174	252	616	616	220	478	478	332	154	154

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Operations (Future Volume Alternative)
Cumulative plus Project PM

Intersection #1: Shoreline Boulevard/Montecito Avenue-Stierlin Road



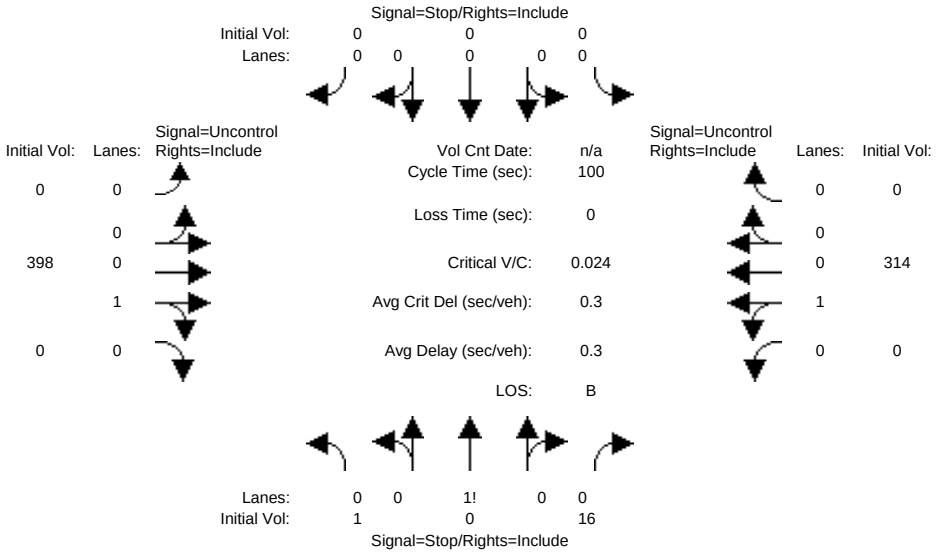
Street Name:	Shoreline Boulevard						Montecito Avenue-Stierlin Road					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L - T - R			L - T - R			L - T - R			L - T - R		
Min. Green:	10	10	10	10	10	10	10	10	10	10	10	10
Y+R:	4.0	4.1	4.1	4.0	4.1	4.1	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:4:00-7:00 PM												
Base Vol:	220	966	132	140	1596	31	94	76	206	146	64	4
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	220	966	132	140	1596	31	94	76	206	146	64	4
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	11	0	0	0	0	7	1	0	1	0	1	0
Initial Fut:	231	966	132	140	1596	38	95	76	207	146	65	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	231	966	132	140	1596	38	95	76	207	146	65	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	231	966	132	140	1596	38	95	76	207	146	65	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	231	966	132	140	1596	38	95	76	207	146	65	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.93	0.93	0.95	0.95	0.95	0.71	0.89	0.89	0.34	0.99	0.99
Lanes:	1.00	1.76	0.24	1.00	1.95	0.05	1.00	0.27	0.73	1.00	0.94	0.06
Final Sat.:	1805	3119	426	1805	3515	84	1355	454	1237	640	1774	109
Capacity Analysis Module:												
Vol/Sat:	0.13	0.31	0.31	0.08	0.45	0.45	0.07	0.17	0.17	0.23	0.04	0.04
Crit Moves:	****				****					****		
Green/Cycle:	0.14	0.51	0.51	0.14	0.50	0.50	0.25	0.25	0.25	0.25	0.25	0.25
Volume/Cap:	0.90	0.61	0.61	0.57	0.90	0.90	0.28	0.66	0.66	0.90	0.14	0.14
Uniform Del:	50.6	20.9	20.9	48.4	27.0	27.0	36.0	40.2	40.2	43.3	34.7	34.7
IncremntDel:	31.3	0.6	0.6	3.0	6.5	6.5	0.4	3.8	3.8	42.9	0.1	0.1
InitQueuDel:	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Delay/Veh:	81.9	21.5	21.5	51.5	33.5	33.5	36.4	44.0	44.0	86.3	34.9	34.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	81.9	21.5	21.5	51.5	33.5	33.5	36.4	44.0	44.0	86.3	34.9	34.9
LOS by Move:	F	C	C	D	C	C	D	D	D	F	C	C
HCM2k95thQ:	525	668	668	270	1282	1282	147	471	471	381	99	99

Note: Queue reported is the distance per lane in feet.

1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative plus Project AM

Intersection #2: Montecito Avenue/Project Driveway



Street Name:	Project Driveway						Montecito Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	398	0	0	314	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	398	0	0	314	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	1	0	16	0	0	0	0	0	0	0	0	0
Initial Fut:	1	0	16	0	0	0	0	398	0	0	314	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1	0	16	0	0	0	0	398	0	0	314	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	0	16	0	0	0	0	398	0	0	314	0
Critical Gap Module:												
Critical Gp:	6.4	6.5	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim:	3.5	4.0	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	712	712	398	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap.:	402	360	656	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap.:	402	360	656	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap:	0.00	0.00	0.02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	*	*	*	*	*	*	*	*	*	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	633	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	10.8	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel:	10.8			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Montecito Avenue/Project Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	1	0	16	0	0	0	0	398	0	0	314	0
ApproachDel:	10.8			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.1]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=17]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=729]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Montecito Avenue/Project Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	1 0	0	0 0	1 0	0
Initial Vol:	1	0	16	0	0	0	0	398	0	0	314	0

Major Street Volume: 712
Minor Approach Volume: 17
Minor Approach Volume Threshold: 310

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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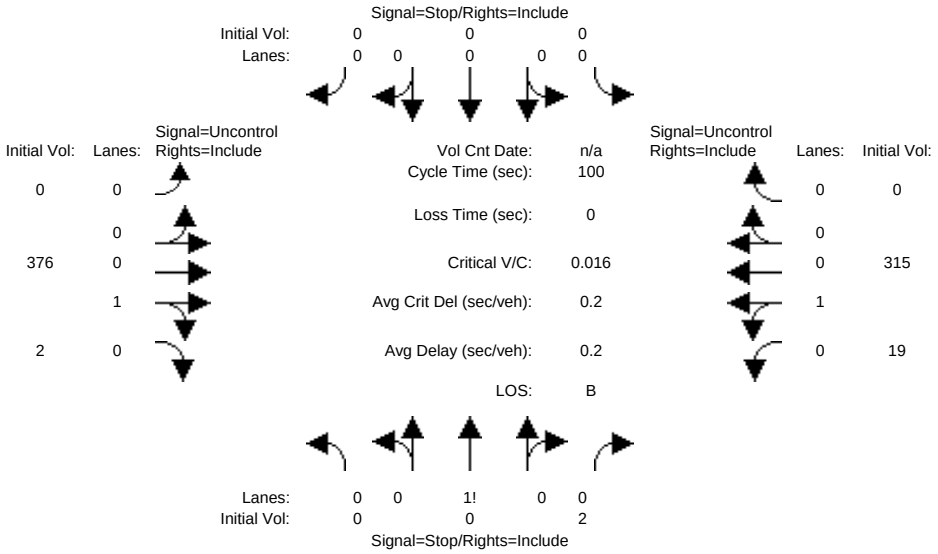
1265 Montecito Avenue Multi-Modal Transportation Analysis
City of Mountain View,CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Cumulative plus Project PM

Intersection #2: Montecito Avenue/Project Driveway



Street Name:	Project Driveway						Montecito Avenue					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:												
Base Vol:	0	0	0	0	0	0	0	376	0	0	315	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	0	0	0	0	0	0	376	0	0	315	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project Tri:	0	0	2	0	0	0	0	0	2	19	0	0
Initial Fut:	0	0	2	0	0	0	0	376	2	19	315	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	0	2	0	0	0	0	376	2	19	315	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	0	2	0	0	0	0	376	2	19	315	0
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	6.2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx
FollowUpTim:	xxxxx	xxxx	3.3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	377	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	378	xxxx	xxxxx
Potent Cap.:	xxxx	xxxx	674	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1192	xxxx	xxxxx
Move Cap.:	xxxx	xxxx	674	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1192	xxxx	xxxxx
Volume/Cap:	xxxx	xxxx	0.00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0.02	xxxx	xxxx
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	0.2	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1.2	xxxx	xxxxx
Control Del:	xxxxx	xxxx	10.4	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
LOS by Move:	*	*	B	*	*	*	*	*	*	A	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0.0	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8.1	xxxx	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel:	10.4			xxxxxx			xxxxxx			xxxxxx		
ApproachLOS:	B			*			*			*		

Note: Queue reported is the distance per lane in feet.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Montecito Avenue/Project Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Initial Vol:	0	0	2	0	0	0	0	376	2	19	315	0
ApproachDel:	10.4			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=2]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=714]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER
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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #2 Montecito Avenue/Project Driveway

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 0 0 1			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Initial Vol:	0	0	2	0	0	0	0	376	2	19	315	0

Major Street Volume: 712
Minor Approach Volume: 2
Minor Approach Volume Threshold: 310

SIGNAL WARRANT DISCLAIMER
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

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