Appendix D:
Transportation Data

TECHNICAL MEMORANDUM

Date: October 16, 2019

To: Dan Shaw

From: Chris D. Kinzel, P.E.
Vice President

Subject: ***10625 South Foothill Blvd. TIS Questions***

We understand the City of Cupertino has asked the following questions on this matter:

1. Vehicle miles traveled
2. Existing daily trips by land use
    a. Weekday
    b. Saturday
    c. Sunday
3. Project daily trips by land use
    a. Weekday
    b. Saturday
    c. Sunday

Vehicle Miles Traveled

In accordance with SB 743, daily VMT for projects in this area are presented based on the Metropolitan Transportation Commission (MTC) travel demand forecast model (https://github.com/BayAreaMetro/modeling-website/wiki/PlanBayArea). The Year 2020 Plan Bay Area model forecasted daily VMT of 27.92 miles per worker employed in this area while the San Francisco Bay Area average daily VMT is 21.8 miles per worker. For VMT per capita based on household location, the MTC model predicts a VMT of 19.55 miles per capita for households located in the project area in 2020. Using 19.55 miles per household, the residential VMT for the project is 18 homes x 19.55 = 352 VMT. Assuming two employees per thousand square feet, this 5,000 square foot project would have 10 employees. Using 27.92 miles per worker, the employee travel would generate 279 VMT. The total project VMT is estimated at 631.

Existing Daily Trips by Land use

For the purposes of developing a conservative traffic study, no trips from previous land uses were assumed; all trips were assumed to be new. However, using the previous land uses, which consisted of a 9,000 square foot multi-tenant retail building with a market and other tenants, a small residence, and a 1,500 square foot bike shop, the estimated daily trips are summarized in

Table 1. TJKM developed Saturday and Sunday trip factors using information contained in the ITE Trip Generation Manual, 9th Edition, the same reference as in the traffic study.

Project Daily Trips by Land Use

In this case, the proposed land uses were assumed – 13 residential condo townhomes, 5 apartments and 5,000 square feet of retail. Identical Saturday and Sunday factors were utilized.

Table 1 Daily Trip Generation by Land use

Land use	Weekday trip rate	Weekday trips	Saturday Factor	Saturday trips	Sunday Factor	Sunday Trips
Existing Conditions						
9 KSF retail	42.7	384	1.29	495	0.45	172
1 residence	5.81	6	1.04	6	0.91	5
1.5 KSF bike shop	42.7	64	1.29	82	0.45	28
Total Existing Trips	--	454	--	583	--	205
Proposed Project						
13 Condo/Townhomes	5.81	76	1.04	79	0.91	69
5 Apartments	6.65	33	1.04	34	0.91	30
5 KSF retail	42.7	214	1.29	276	0.45	96
Total Project Trips	--	322	--	389	--	195

Again, to be conservative, the traffic study TJKM did not apply credits for trips from previous land uses. It can be seen that the previous land uses may have generated more trips than the new project will generate. However, no records are available to verify this information.

Please contact me if there are any questions on this matter.

Traffic Impact Study Report

10625 South Foothill Boulevard, Cupertino, CA

City of Cupertino, California

November 3, 2017
Updated July 12, 2019

TJKM

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EXECUTIVE SUMMARY

This report summarizes the results of the Traffic Impact Analysis (TIA) conducted for the proposed mixed-use development located at 10625 South Foothill Boulevard on the southwest corner of the South Foothill Boulevard/McClellan Road intersection in the City of Cupertino. The purpose of this report is to investigate traffic impacts to the surrounding transportation system. To evaluate the impacts on the transportation infrastructure due to the addition of traffic from the proposed project, the study intersections were evaluated in accordance with the standards set forth by the level of service (LOS) policies of the Santa Clara County Valley Transportation Authority (VTA) Congestion Management Program (CMP) and the City of Cupertino. The project site and vicinity are shown in **Figure 1**.

The development proposes to demolish existing residential and commercial land uses and construct 13 townhouse style residential units, five residential apartments, 5,000 square feet for commercial use, with surface and underground parking. The proposed access to the site is via two existing driveways: one entrance driveway at the South Foothill Boulevard/McClellan Road intersection and another exit driveway at the Stevens Canyon Road/St. Andrews Avenue intersection.

The existing site consists of commercial land uses including bike shop, U-Haul Neighborhood dealer, Stevens Creek Market, coffee shop, beauty salon, restaurant and coin-operated laundry facility. The proposed project will demolish these existing land uses and construct 13 townhouse style residential units,five residential apartments and 5,000 square feet for commercial purpose on approximately 1.5 acres zoned P(CG) Mixed Use Planned Development/Commercial General. The site also contains surface parking spaces, in addition to garages and landscaping.

The report also includes evaluations and recommendations concerning project site access and on-site circulation for vehicles, bicycles, and pedestrians, evaluation of on-site vehicle parking supply, passenger and commercial loading spaces and garbage/trash facilities.To evaluate the impacts on the transportation infrastructure due to the addition of traffic from the proposed project, two study intersections were evaluated during the weekday a.m. peak hour and p.m. peak hour under four study scenarios. The study intersections were evaluated under *No Project* and *Plus Project* scenarios for Existing, and Cumulative Conditions. For the purposes of this analysis, potential traffic operational effects from the proposed project are identified based on established traffic operational thresholds for the VTA CMP and the City of Cupertino.

Project Trip Generation

The proposed residential development project is expected to generate a net of 322 daily trips in which 14 trips are generated during the a.m. peak hour and 29 trips are generated during the p.m. peak hour. The proposed trip generation does not includes discounts for existing site use.

Existing Conditions

Under this scenario, all the intersections operate within applicable standards of City of Cupertino during the a.m. and p.m. peak hours.

Existing plus Project Conditions

Under this scenario, all the intersections operate at acceptable standards for both a.m. and p.m. peak hours.

Based on the City of Cupertino impact criteria the project is expected to have a **less-than-significant** impact at the two study intersections.

Cumulative Conditions

Under this scenario, all the intersections operate within applicable standards of the City of Cupertino (LOS D) and the VTA's CMP (LOS E) during the a.m. and p.m. peak hours.

Cumulative plus Project Conditions

Under this scenario, all the intersections operate at acceptable standards for both a.m. and p.m. peak hours.

Based on the City of Cupertino impact criteria the project is expected to have a **less-than-significant** impact at the two study intersections.

Queuing and Driveway Analysis

The proposed project *does not create a significant impact* on the expected left-turn or right-turn queues at the study intersections. The project driveways are expected to operate at an acceptable LOS and the 95th percentile queueing at the outbound approach of project driveway is expected to be minimal.

Pedestrian, Bicycle and Transit Impacts

The proposed project does not conflict with existing and planned pedestrian or bicycle facilities. There is no transit service near the project vicinity. Therefore, the impact to pedestrian, bicycle facilities and transit facilities is ***less-than-significant***.

On-Site Circulation

TJKM examined the project site plan in order to evaluate the adequacy of on-site vehicle circulation including service trucks and emergency vehicles. The proposed project's access will be via two existing driveways: one driveway at McClellan Road and one at St Andrews Avenue. Based on the evaluation, the proposed on-site vehicle circulation is adequate and should not result in any traffic operations issues that would produce significant impacts on City streets.

Parking

Based on the project site plan dated May 23, 2017 (**Figure 2**) and preliminary underground parking plans, there would be 36 underground spaces, seven surface spaces, and two car garages for each of the 13 townhomes, for a total supply of 69 spaces. Based on the City of Cupertino's parking requirements, 2.8 parking spaces (two car carage/one open) are required per small lot single-family unit. Multi-family residential requires two (one covered/one open) per unit. General retail under 25,000 square feet (sq.ft.) requires one space per 1,250 sq.ft. The base parking supply required would thus be 50 spaces. The

proposed parking supply of 69 spaces. Based on the proposed parking spaces to be provided on site, no parking impacts are projected on City streets.

Recommendation

TJKM recommends the installation of Stop control at the project exit driveway with appropriate pavement delineation and signing.

INTRODUCTION

This report summarizes the results of the TIA for the proposed residential development located at 10625 South Foothill Boulevard on the southwest corner of the South Foothill Boulevard/McClellan Road intersection in the City of Cupertino. The proposed development will demolish the existing residential and commercial land uses and construct 13 townhouse style residential units, five residential apartments, and 5,000 square feet for commercial use, with underground parking. Proposed access to the site will be via two existing driveways: one entrance driveway at the South Foothill Boulevard/McClellan Road intersection and the other exit driveway at the Stevens Canyon Road/St. Andrews Avenue intersection.

The existing site consists of commercial land uses including a bike shop, U-Haul Neighborhood dealer, Stevens Creek Market, coffee shop, beauty salon, restaurant, and a coin-operated laundry facility. The proposed project will be developed on approximately 1.5 acres zoned P(CG) Mixed Use Planned Development/Commercial General.

This chapter discusses the TIA purpose, project study area, analysis scenarios and methods, and criteria used to identify significant impacts.

STUDY INTERSECTIONS AND SCENARIOS

TJKM evaluated traffic conditions at two study intersections during the a.m. and p.m. peak hours for a typical weekday. The peak periods observed were between 7:00-9:00 a.m. and 4:00-6:00 p.m.. The study intersections and associated traffic controls are as follows:

1. South Foothill Boulevard/McClellan Road (Two – Way Stop)
2. Stevens Canyon Road/St. Andrews Avenue (Two – Way Stop)

Both the intersections are considered as four legged Two-Way Stop sign controlled intersections considering the existing driveways as the fourth leg operating under stop control.

Figure 1 illustrates the study intersections and the vicinity map of the proposed project. **Figure 2** shows the proposed project site plan.

This study addresses the following four traffic scenarios:

- **Existing Conditions** – This scenario evaluates the study intersection based on existing traffic volumes, 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.
- **Cumulative Conditions** – This scenario is similar to the Existing Conditions but with the projected growth rate of 1 percent per year for 10 years (Year 2025), which was applied to Existing Conditions traffic volumes.
- **Cumulative plus Project Conditions** – This scenario is identical to Cumulative Conditions, but with the addition of traffic from the proposed project.

Vicinity Map

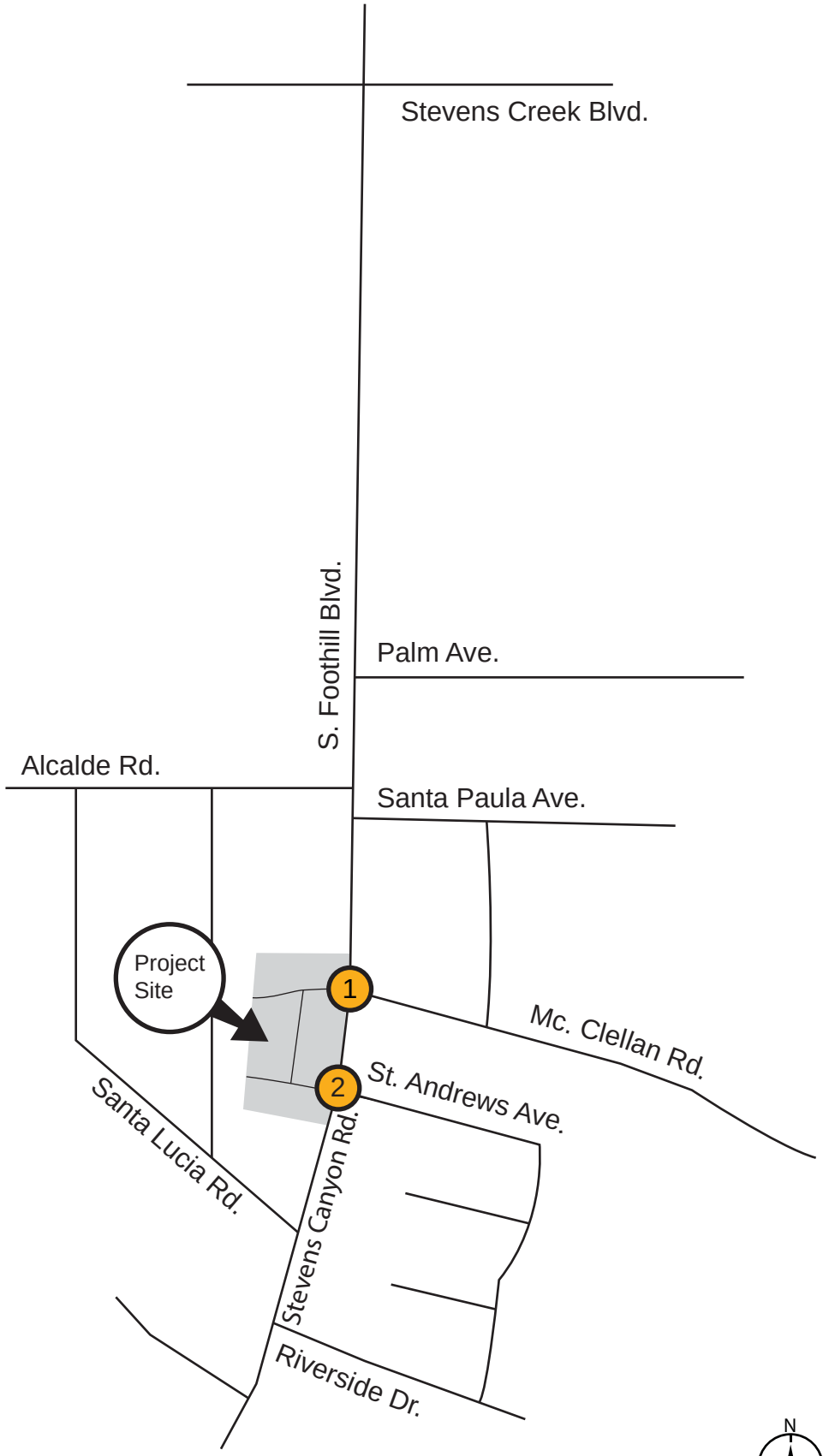

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Figure 1

Project Site Plan

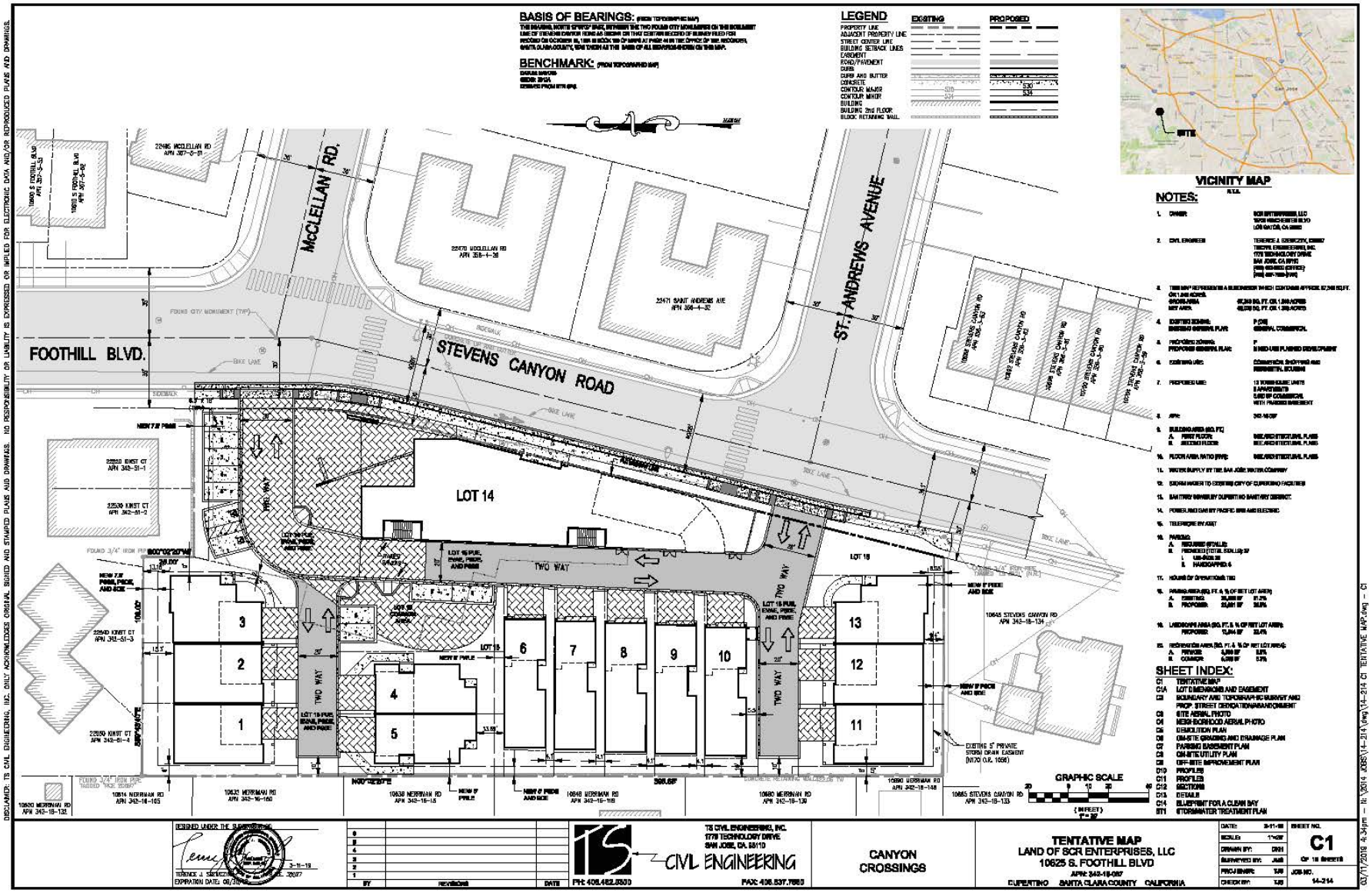

Figure 2

STUDY METHODOLOGY

LEVEL OF SERVICE ANALYSIS METHODOLOGY

Level of Service (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, 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.

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 of Cupertino. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The average control delay for signalized intersections was calculated using TRAFFIX 8.0 analysis software and was correlated to a LOS designation as shown in **Appendix A**. The LOS methodology is described for signalized intersections in detail in **Appendix A**.

Unsignalized Intersections

The study intersections under stop control (unsignalized) were analyzed using the 2000 HCM Operations Methodology for signalized 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 unsignalized intersections was calculated using TRAFFIX 8.0 analysis software and was correlated to a LOS designation as shown in **Appendix A**. The LOS methodology is described for unsignalized intersections in detail in **Appendix A**.

SIGNIFICANT IMPACT CRITERIA/LEVEL OF SERVICE STANDARDS

Using the City of Cupertino's level of service impact criteria, the project's potential transportation impacts were evaluated by comparing the Existing Conditions' and Cumulative Conditions' "No Project" scenarios to their respective "plus Project" scenarios.

Signalized Intersections

The LOS standard for City of Cupertino intersections is generally LOS D; except for a few specific intersections that have a LOS E+ (60 seconds) threshold.

According to City of Cupertino's standards, a project-generated increase in traffic is considered to have a significant impact if it meets either of the following criteria:

- Intersection operations to deteriorate from an acceptable level (LOS D or better) to an unacceptable level (LOS E or F);
- Exacerbation of unacceptable operations by increasing the average critical delay by more than four seconds and increasing the critical volume-to-capacity (V/C) ratio by 0.01 or more at an intersection operating at LOS E or F; or
- The V/C ratio to increase by 0.01 or more at an intersection with unacceptable operations (LOS E or F) when the change in critical delay is negative (i.e., decreases). This can occur if the critical movements change.

There are no signalized intersections to be evaluated for this TIA.

Unsignalized Intersections

Level of service analyses at unsignalized intersections are generally used to determine the need for modification in type of intersection control (i.e., all-way stop or signalization). As part of this evaluation, traffic volumes, delays, and traffic signal warrants are evaluated to determine if the existing intersection control is appropriate.

The City of Cupertino does not have officially adopted significance criteria for unsignalized intersections. Based on previous studies, significant impacts are defined to occur when the addition of project traffic causes the average intersection delay for all-way stop-controlled intersection or the worst movement/approach for side-street stop-controlled intersections to degrade to LOS F and the intersection satisfies any traffic signal warrant from the MUTCD.

There are two unsignalized intersections to be evaluated for this TIA.

Pedestrian and Bicycle Impact Criteria

Pedestrian and bicycle impacts are considered significant if the Project would potentially disrupt existing pedestrian and bicycle facilities, interfere with planned pedestrian and bicycle facilities, or would conflict or create inconsistencies with adopted pedestrian and bicycle system plans, guidelines, policies, or standards.

Transit Impact Criteria

Transit impacts are considered significant if the proposed project conflicts with existing or planned transit facilities, generates potential transit trips in excess of available capacity, or does not provide adequate facilities for pedestrians and bicyclists to access transit routes and stops.

There are no existing transit facilities in the vicinity of the proposed project.

EXISTING CONDITIONS

This section describes existing conditions in the immediate project site vicinity, including roadway facilities, bicycle and pedestrian facilities, and available transit service. In addition, existing traffic volumes and operations are presented for the study intersection, including the results of LOS calculations.

EXISTING SETTING AND ROADWAY SYSTEM

Important roadways adjacent to the project site are discussed below:

South Foothill Boulevard within the project vicinity is a two-lane, north-south roadway. Foothill Boulevard extends between McClellan Road and Interstate 280 (I-280) and is dividend in two segments; one is North Foothill Boulevard between Stevens Creek Boulevard and I-280 and the other is South Foothill Boulevard between Stevens Creek Boulevard and McClellan Road. South Foothill Boulevard provides access to local residential and regional commercial areas and provides direct access to the project site via an existing driveway at McClellan Road. The posted speed limit along South Foothill Boulevard is 30 mph within the project vicinity.

Stevens Canyon Road within the project vicinity is a two-lane, north-south roadway. Stevens Canyon Road extends from McClellan Road to the Stevens Creek reservoir. Stevens Canyon Road provides access to local residential areas and provides direct egress from the project site an via existing driveway at St. Andrews Road. The posted speed limit along Steven Canyon Road is 30 mph within the project vicinity.

McClellan Road within the project vicinity is a two-lane, east-west roadway. McClellan Road extends between South Foothill Boulevard and De Anza Boulevard. The posted speed limit along McClellan Road is 25 mph within the project vicinity.

St. Andrews Road within the project vicinity is a two-lane, east-west residential street. St. Andrews Road extends between Stevens Canyon Road and Deep Cliff Drive. It provides access to the residential areas. The speed limit along St. Andrews Road is 25 mph.

EXISTING PEDESTRIAN FACILITIES

Walkability is defined as the ability to travel easily and safely between various origins and destinations without having to rely on automobiles or other motorized travel. The ideal "walkable" community includes wide sidewalks, a mix of land uses such as residential, employment, and shopping opportunities, a limited number of conflict points with vehicle traffic, and easy access to transit facilities, and services.

Pedestrian facilities comprise 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.

The project site does not have adequate pedestrian access, as sidewalks are present only on the one side of Stevens Canyon Road within the project vicinity. The existing pedestrian facilities in the study area are shown in **Figure 3.**

The South Foothill Boulevard/McClellan Road intersection has crosswalks marked with ladder stripping across only two legs (south leg and east leg) of the two-way stop-controlled intersection. The Stevens Canyon Road/St. Andrews Avenue intersection has a crosswalk marked with ladder stripping at the north leg of the two-way stop-controlled intersection.

Within the project vicinity South Foothill Boulevard, McClellan Road and St. Andrews Avenue have sidewalks on both sides of roadway. Stevens Canyon Road has sidewalks only on eastside of the roadway. There are no sidewalks on the project side of Stevens Canyon Road.

Existing Bicycle Facilities

Bicycle facilities include the following:

- Bike Paths (Class I) – Paved trails that are separated from roadways
- Bike Lanes (Class II) – Lanes on roadways designated for use by bicycles through striping, pavement legends, and signs
- Bike Routes (Class III) – Designated roadways for bicycle use by signs or other markings may or may not include additional pavement width for cyclists

Class II Bike lanes are provided along both sides of the roadway at South Foothill Boulevard and Stevens Canyon Road near the proposed project. There is adequate signage for the bicyclists to maneuver without confusion. Class III Bikeway (Bike Route) designated signs and pavement markings for shared use bikes signs are provided along McClellan Road on both sides of the roadway. Overall, existing bicycle facilities provide adequate connectivity between the proposed project site and the adjacent residential neighborhoods. The existing bicycle facilities in the study area are shown in **Figure 3.**

Existing Transit Facilities

VTA operates bus service services in the City of Cupertino. There is no transit route within the project site.

Existing Peak Hour Traffic Volumes And Lane Configurations

The existing operations of the study intersections were evaluated for the highest one-hour volumes during weekday morning and evening peak periods. Turning movement counts for vehicles, bicycles, and pedestrians were conducted during typical weekday day a.m. and p.m. peak periods (7:00-9:00 a.m. and 4:00- 6:00 p.m., respectively) at the study intersections in January 2016. Field verification of existing intersection lane configurations and traffic controls was also conducted and provided basis for the LOS analysis for Existing conditions. **Appendix B** includes all the data sheets for the collected vehicle, bicycle, and pedestrian counts.

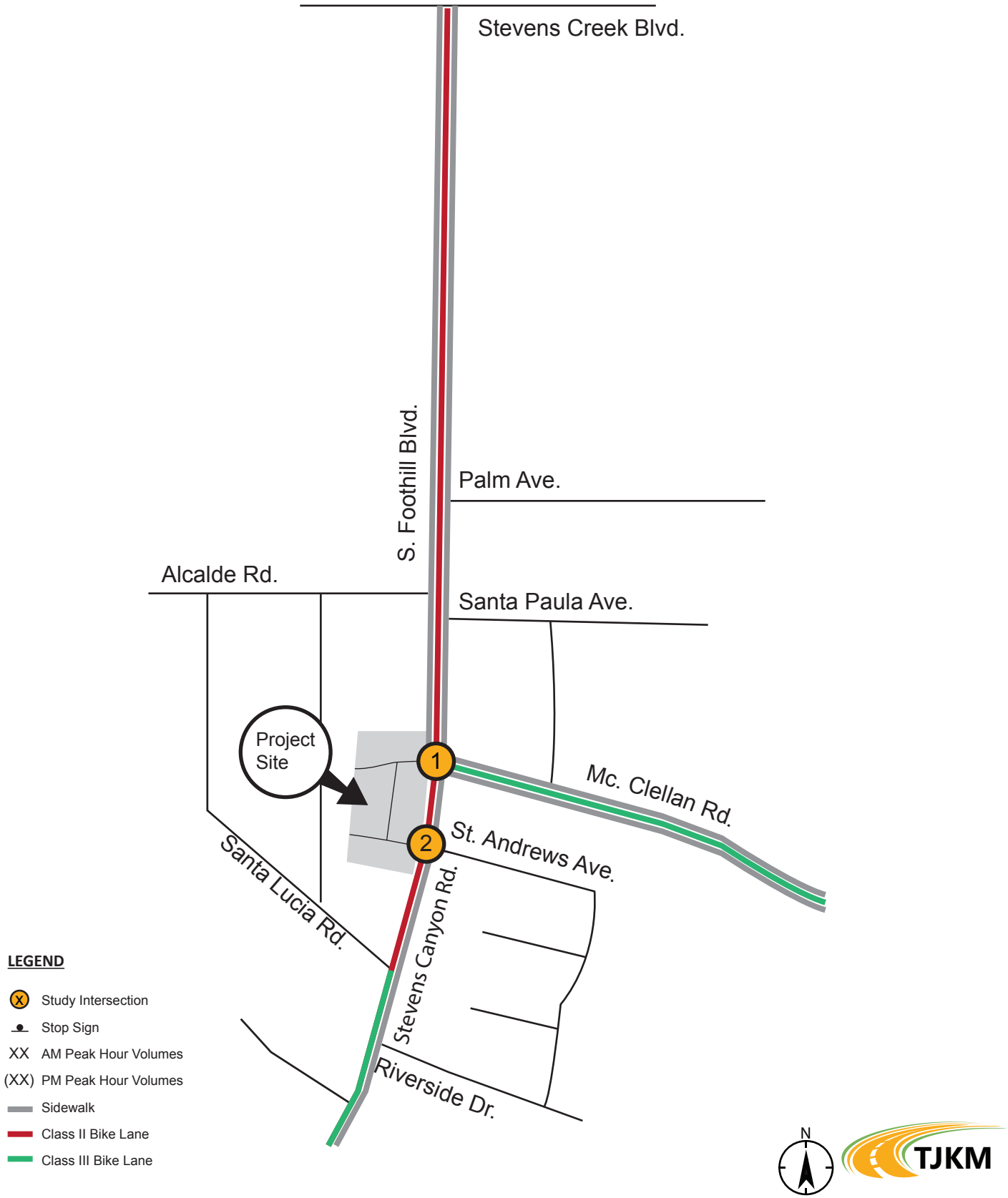

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Figure 3

INTERSECTION LEVEL OF SERVICE ANALYSIS – EXISTING CONDITIONS

The existing operations of the study intersections were evaluated for the highest one-hour volume during the weekday morning and evening peak periods. The a.m. and p.m. peak-hour intersection turning movement counts were conducted by TJKM in January 2016. The results of the LOS analysis using the TRAFFIX software program for Existing Conditions are summarized in **Table 1**. Field verification of existing intersection lane configurations and traffic controls were also conducted and provided the basis for the LOS analysis for Existing Conditions. **Figure 4** illustrates the existing vehicle turning movement volumes, lane geometry, and traffic controls at the study intersections.

The Existing Conditions LOS analysis for the purpose of this TIA 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. TJKM conducted a field review of existing traffic conditions at the study intersections during the prevailing a.m. and p.m. peak periods based on collected traffic counts (7:00-9:00 a.m. and 4:00-6:00 p.m.) in January 2016. The purpose was to identify existing operational conditions at the study intersection that might not be reflected in the preceding existing conditions intersection LOS results. The existing operational conditions at the study intersections reflect the preceding existing conditions intersection LOS results.

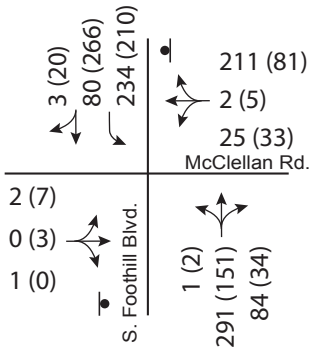
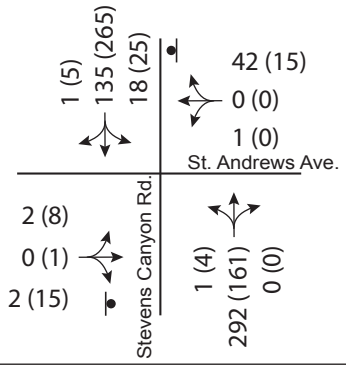
Table 1 below summarizes peak hour levels of service at the study intersections under Existing Conditions. Under this scenario, all the intersection operate within applicable standards of the City of Cupertino during the a.m. and p.m. peak hours. LOS worksheets are provided in **Appendix C**.

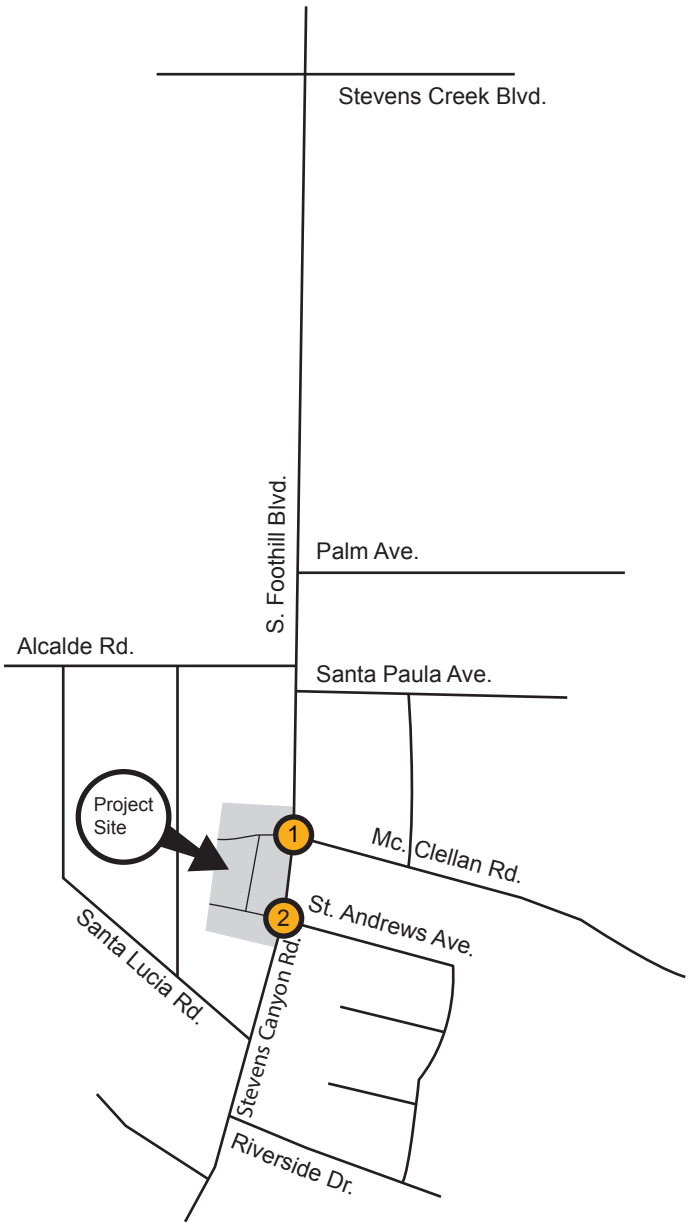
Table 1: Intersection Level of Service Analysis – Existing Conditions

#	*Study Intersections*	*Control*	*Peak Hour*[1]	*Existing Conditions*	
				Delay[2]	*LOS*[3]
1	South Foothill Boulevard/McClellan Road	Two – Way Stop	AM	24.3	C
			PM	22.7	C
2	Stevens Canyon Road/St. Andrews Avenue	Two – Way Stop	AM	10.9	B
			PM	11.0	B

Notes:
[1] AM – morning peak hour, PM – evening peak hour
[2] Delay – Total control delay for the worst movement is presented for side-street stop-controlled intersections.
[3] LOS – Level of Service calculations conducted using the TRAFFIX level of service analysis software package, which applies the methodology described in the 2000 HCM.

Existing Conditions, Lane Geometry, Traffic Controls & Turning Movement Volumes

Intersection #1 S. Foothill Blvd./ Mc. Clellan Rd.	Intersection #2 Stevens Canyon Rd. / St. Andrews Ave.
	



LEGEND

- X Study Intersection
- Stop Sign
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes

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Figure 4

EXISTING PLUS PROJECT CONDITIONS

This analysis scenario presents the impacts of the proposed residential development at the study intersections and surrounding roadway system. This scenario is similar to Existing Conditions, but with the addition of traffic from the proposed project.

PROPOSED PROJECT LOCATION AND DESCRIPTION

The proposed residential development located at 10625 South Foothill Boulevard on the southwest corner of the South Foothill Boulevard/McClellan Road intersection in the City of Cupertino. The proposed development will demolish the existing residential and commercial land uses and construct 13 townhouse style residential units, five residential apartments, and 5,000 square feet for commercial use, with surface and underground parking. Proposed access to the site will be via two existing driveways: one entrance driveway at the South Foothill Boulevard/McClellan Road intersection and the other exit driveway at the Stevens Canyon Road/St. Andrews Avenue intersection.

The existing site consists of commercial land uses such as a bike shop, U-Haul Neighborhood dealer, Stevens Creek Market, coffee shop, beauty salon, restaurant, coin-operated laundry facility. The proposed project will be developed on approximately 1.5 acres zoned P(CG) Mixed Use Planned Development/Commercial General.

PROJECT TRIP GENERATION

TJKM developed estimated project trip generation for the proposed project based on published trip generation rates from the ITE publication Trip Generation Manual (9th *Edition)*. TJKM used published trip rates for the ITE Land Use Residential Condominium Townhouse (ITE Code 230), Apartments (ITE Code 220) and Retail (ITE Code 820). **Table 2** shows the tripsexpected to be generated by the proposed project. The proposed project is expected to generate approximately 322 daily trips, 14 weekday a.m. peak hour trips (five inbound trips, nine outbound trips) and 29 weekday p.m. peak hour trips (16 inbound trips, 13 outbound trips).

For a more conservative approach, TJKM did not apply trip credits from the existing land uses (commercial and restaurant) as it would show a negative trip generation. The trips generated were considered as if the land were a vacant or an undeveloped parcel.

Table 2: Project Trip Generation

#	Land Use (ITE code)	Size		Daily		AM Peak					PM Peak				
				Rate	Trips	Rate	In:Out	In	Out	Total	Rate	In:Out	In	Out	Total
1	Residential Condominium Townhouse[1](230)	13	DU	5.81	76	0.44	17:83	1	5	6	0.52	67:33	5	2	7
2	Apartments[2] (220)	5	No	6.65	33	0.51	20:80	1	2	3	0.62	65:35	2	1	3
3	Retail[3](820)	5.00	ksfgla	42.70	214	0.96	62:38	3	2	5	3.71	48:52	9	10	19
	Total Trips				***322***			***5***	***9***	***14***			***16***	***13***	***29***

Source: ITE Trip Generation Manual,9th Edition,2012
DU-Dwelling Units
ksfgla - 1,000 Square feet Gross Leasable Area
[1]ITE Trip rates per unit for residential condominium houses
[2]ITE Trip rates per unit for residential apartments
[3]ITE Trip rates per 1,000 square feet for retail use

PROJECT TRIP DISTRIBUTION AND ASSIGNMENT

Trip distribution is a process that determines in what proportion vehicles would be expected to travel between the project site and various destinations outside the project study area and also determines the various routes that vehicles would take from the project site to each destination using the calculated trip distribution.

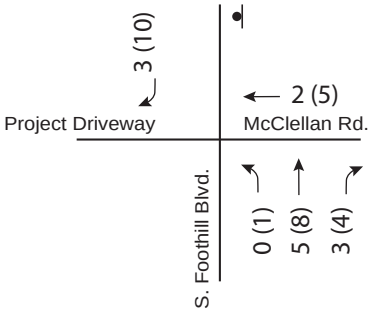
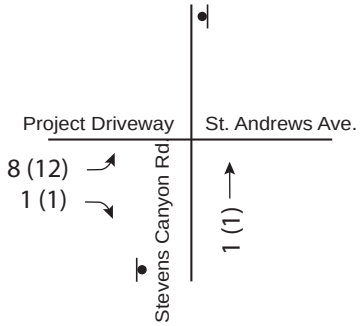
Trip distribution assumptions for the proposed mixed-use development project were developed based on the existing travel patterns and TJKM's knowledge of the study area.

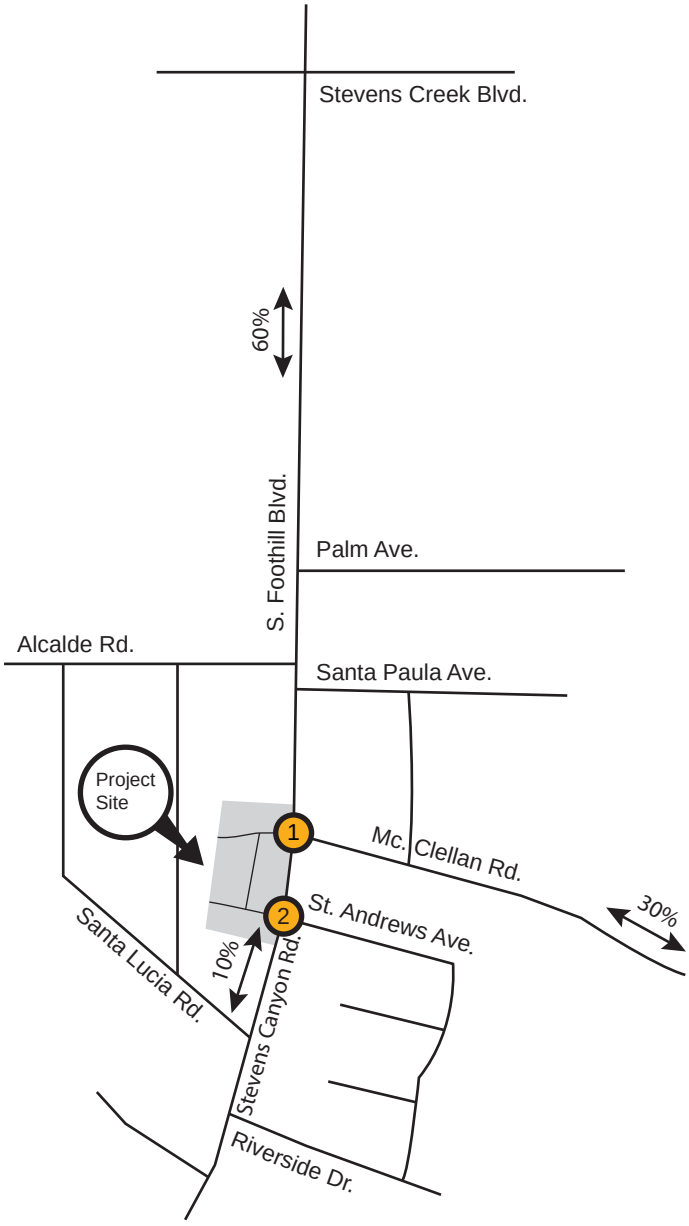
The distribution assumptions are as follows**:**

- 60 percent to/from South Foothill Boulevard north of McClellan Road
- 30 percent to/from McClellan Road east of South Foothill Boulevard
- 10 percent to/from Stevens Canyon Road south of St. Andrews Avenue

Figure 5 illustrates the trip distribution percentages and trip assignment project volumes developed for the proposed project. The assigned project trips were then added to traffic volumes under Existing Conditions to generate Existing plus Project Conditions traffic volumes.

Project Trip Distribution & Assignment

Intersection #1 S. Foothill Blvd./ Mc. Clellan Rd.	Intersection #2 Stevens Canyon Rd. / St. Andrews Ave.
	



LEGEND

- X — Study Intersection
- ● — Stop Sign
- XX — AM Peak Hour Volumes
- (XX) — PM Peak Hour Volumes

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Figure 5

INTERSECTION LEVEL OF SERVICE ANALYSIS – EXISTING PLUS PROJECT CONDITIONS

The intersection LOS analysis results for Existing plus Project Conditions are summarized in **Table 3**. Detailed calculation sheets for Existing plus Project Conditions are contained in **Appendix D**. Under this scenario, all the intersections operate within applicable standards of the City of Cupertino during the a.m. and p.m. peak hours. There is an increase in delay on South Foothill Boulevard/McClellan Road, however still within acceptable LOS standards.

Based on the City of Cupertino's impact criteria the project is expected to have a **less-than-significant** impact at the study intersections. It shouled be noted that the delay experienced at the study intersection #1 under existing plus project conditions is less than the existing conditions delay, since the project driveway is one-way, and all the vehicles need to enter at the study intersection of South Foothill Boulevard/McClellan Road and exit through the intersection of Stevens Canyon Road/St.Andrews Avenue.

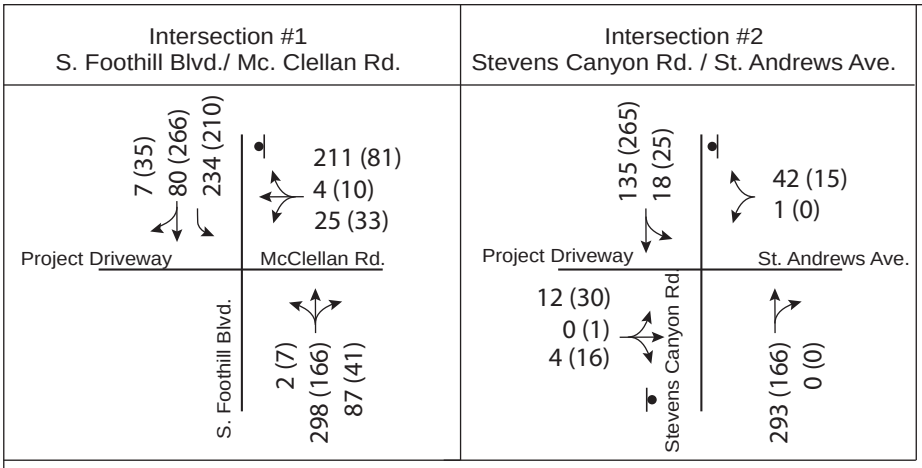
Figure 6 shows projected turning movement volumes at all of the study intersections for Existing plus Project Conditions.

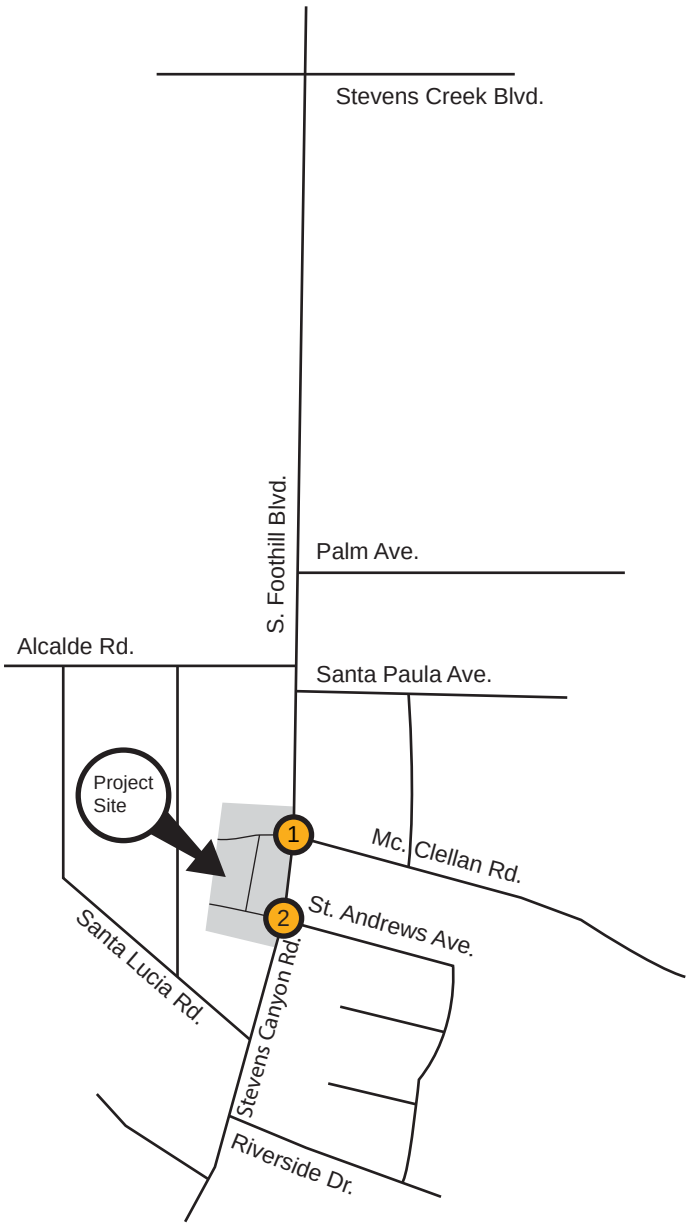
Table 3: Intersection Level of Service Analysis – Existing plus Project Conditions

#	Study Intersections	Control	Peak Hour[1]	Existing Conditions		Existing plus Project Conditions	
				Delay[2]	LOS[3]	Delay[2]	LOS[3]
1	South Foothill Boulevard/ McClellan Road	Two – Way Stop	AM	24.3	C	15.4	C
			PM	22.7	C	15.1	C
2	Stevens Canyon Road/St. Andrews Avenue	Two – Way Stop	AM	10.9	B	12.0	B
			PM	11.0	B	12.2	B

Notes:
[1] AM – morning peak hour, PM – evening peak hour
[2] Delay – Total control delay for the worst movement is presented for side-street stop-controlled intersections.
[3] LOS – Level of Service calculations conducted using the TRAFFIX level of service analysis software package, which applies the methodology described in the 2000 HCM.

Existing Plus Project Conditions, Lane Geometry, Traffic Controls & Turning Movement Volumes





LEGEND

- X Study Intersection
- Stop Sign
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes

N

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Figure 6

CUMULATIVE CONDITIONS

This section details expected traffic conditions at the study intersections under Cumulative (No Project) Conditions. This analysis scenario is defined as baseline conditions without the proposed project in year 2025. This scenario is similar to the Existing Conditions, but with a projected growth rate of one percent per year over ten years applied to Existing traffic conditions to project traffic demands for the Horizon Year 2025.

INTERSECTION LEVEL OF SERVICE ANALYSIS - CUMULATIVE CONDITIONS

The intersection LOS analysis results for Cumulative Conditions are summarized in **Table 4**. Detailed calculation sheets for Cumulative Conditions are contained in **Appendix D**. Under this scenario, all the intersections operate within applicable standards of the City of Cupertino during the a.m. and p.m. peak hours.

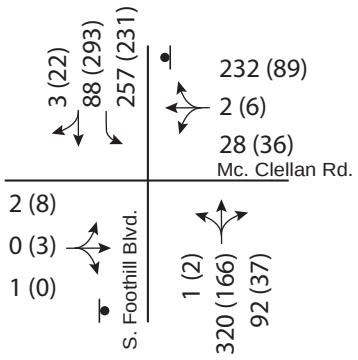
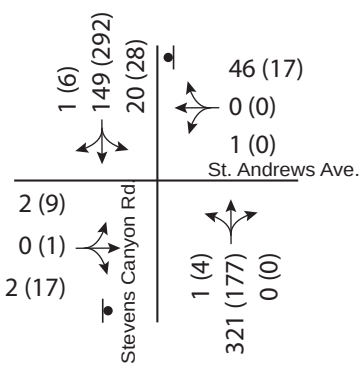
Figure 7 shows projected turning movement volumes at both of the study intersections for Cumulative Conditions.

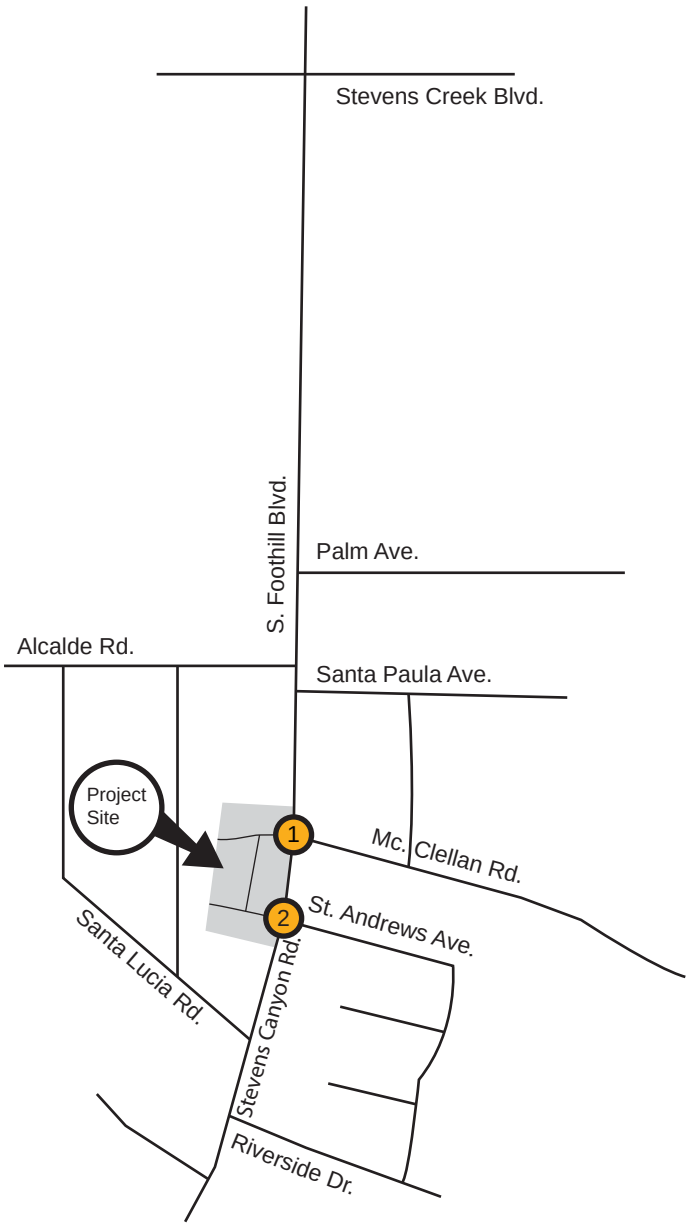
Table 4: Intersection Level of Service Analysis – Cumulative Conditions

#	*Study Intersections*	*Control*	*Peak Hour*[1]	*Cumulative Conditions*	
				Delay[2]	*LOS*[3]
1	South Foothill Boulevard/ McClellan Road	Two – Way Stop	AM	29.5	D
			PM	26.2	D
2	Stevens Canyon Road/St. Andrews Avenue	Two – Way Stop	AM	11.3	B
			PM	11.4	B

Notes:
[1] AM – morning peak hour, PM – evening peak hour
[2] Delay – Total control delay for the worst movement is presented for side-street stop-controlled intersections.
[3] LOS – Level of Service calculations conducted using the TRAFFIX level of service analysis software package, which applies the methodology described in the 2000 HCM.

Cumulative Conditions, Lane Geometry, Traffic Controls & Turning Movement Volumes

Intersection #1 S. Foothill Blvd./ Mc. Clellan Rd.	Intersection #2 Stevens Canyon Rd. / St. Andrews Ave.
	



LEGEND

- X Study Intersection
- Stop Sign
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes

N

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Figure 7

CUMULATIVE PLUS PROJECT CONDITIONS

This scenario is similar to the Cumulative Conditions, with the addition of projected traffic from the proposed mixed-use development project. Trip generation, distribution, and assignment for the proposed project are identical to that assumed under Existing plus Project Conditions. **Figure 8** shows projected turning movement volumes at both the study intersections for Cumulative 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 5**. Detailed calculation sheets for Cumulative plus Project Conditions are contained in **Appendix E**. Under this scenario, all the intersections operate within applicable standards of City of Cupertino during the a.m. and p.m. peak hours.

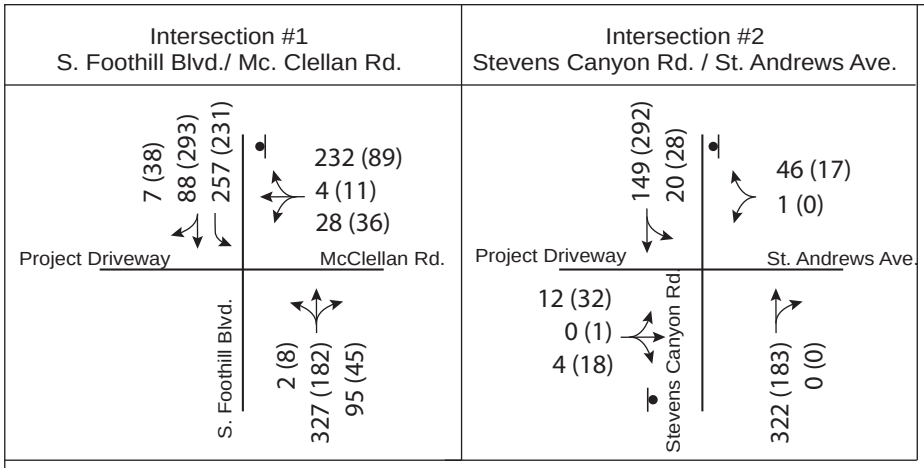
Based on the City of Cupertino impact criteria, the project is expected to have a **less-than-significant** impact at the two study intersections.

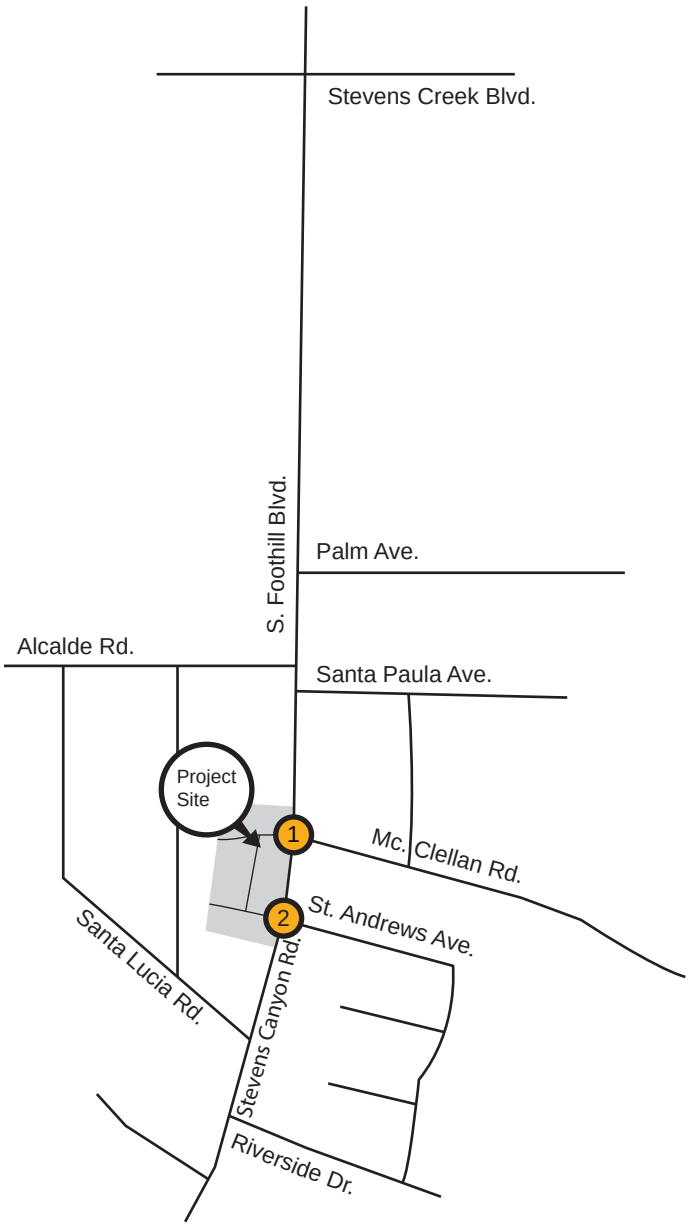
Table 5: Intersection Level of Service Analysis – Cumulative plus Project Conditions

#	Study Intersections	Control	Peak Hour[1]	Cumulative Conditions		Cumulative plus Project Conditions	
				Delay[2]	LOS[3]	Delay[2]	LOS[3]
1	South Foothill Boulevard/McClellan Road	Two – Way Stop	AM	29.5	D	17.7	C
			PM	26.2	D	16.9	C
2	Stevens Canyon Road/St. Andrews Avenue	Two – Way Stop	AM	11.3	B	12.6	B
			PM	11.4	B	12.7	B

Notes:
[1] AM – morning peak hour, PM – evening peak hour
[2] Delay – Total control delay for the worst movement is presented for side-street stop-controlled intersections.
[3] LOS – Level of Service calculations conducted using the TRAFFIX level of service analysis software package, which applies the methodology described in the 2000 HCM.

Cumulative Plus Project Conditions, Lane Geometry, Traffic Controls & Turning Movement Volumes





LEGEND

- X Study Intersection
- Stop Sign
- XX AM Peak Hour Volumes
- (XX) PM Peak Hour Volumes

N

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Figure 8

SITE ACCESS AND ON-SITE CIRCULATION AND OTHER IMPACTS

Site Access

This section analyzes site access and internal circulation for vehicles, pedestrians and bicycles based on the site plan presented in **Figure 2**. TJKM reviewed internal and external access for the project site for vehicles, pedestrians, and bicycles.

TJKM reviewed the proposed project site plan to evaluate on-site access to the project. The proposed project's access will be via two full access driveways: one at McClellan Road on South Foothill Boulevard and one at St. Andrews Avenue on Stevens Canyon Road, as shown in the project site plan dated 03/11/2019 (**Figure 2**).

The proposed project is embedded in a predominiately residential neighborhood with resident driveways and neighborhood streets adjacent and in close proximity. Per the site plan, there are three streets in the proposed project: McClellan Road extension, St. Andrews Avenue extension, and a new roadway between the two streets to connect the streets. Service and emergency vehicles would be accommodated with two access points as well as sufficiently wide aisle ways for entering and turning. The internal circulation was reviewed for issues related to queueing, turning radii, safety and circulation aisles. All circulation aisles are 20 feet wide, and the turning radii are adequate for emergency and service vehicles. Installation of Stop control at the project exit driveways with appropriate pavement delineation and signing is recommended.

Pedestrian Access

Pedestrian access to the project site will be facilitated by existing sidewalks on South Foothill Boulevard and Stevens Canyon Road, as well as proposed internal pedestrian circulation facilities. In the project vicinity, the South Foothill Boulevard/McClellan Road intersection has crosswalks marked with ladder striping across the south and east legs of the two-way stop-controlled intersection. The Stevens Canyon Road/St. Andrews Avenue intersection has a crosswalk marked with ladder striping at the north leg of the two-way stop-controlled intersection. Within the project vicinity South Foothill Boulevard, McClellan Road and St. Andrews Avenue have sidewalks on both sides of the roadway. Stevens Canyon Road has sidewalks only on the east side of the roadway. There are no sidewalks on the project side of Stevens Canyon Road. All the existing sidewalks are 5 to 10 feet wide varying along the project area. There is adequate street lighting in the vicinity. An impact to pedestrians would occur if the proposed project disrupts existing pedestrian facilities or create inconsistencies with planned pedestrian facilities or adopted pedestrian system plans, guidelines, policies or standards conflict with the City of Cupertino. The project's site plan proposes eight foot sidewalks along Stevens Canyon Road, on the project side. The proposed project is expected to improve overall pedestrian access and facilities by providing sidewalks and curb cuts within the project vicinity with adequate accessible design (per the ADA) that meets the City of Cupertino design standards. The proposed project provides adequate and appropriate facilities for safe non-motorized mobility. The proposed project will have adequate pedestrian access to the project site from the surrounding area. The proposed project will not result in any impacts to existing or planned pedestrian facilities in the immediate vicinity of the project. The proposed project does not conflict with

existing and planned pedestrian facilities; therefore, the impact to pedestrian facilities is **less-than-significant.**

Bicycle Access

In terms of bicycle access to the project site, there are Class II Bike Lanes along South Foothill Boulevard-Stevens Canyon Road north of Riverside Road, and Class III Bike Routes along Stevens Canyon Road south of Riverside Road to the city limits and McClellan Road. There is adequate signage for the bicyclists to maneuver without confusion. Overall, existing bicycle facilities provide adequate connectivity between the proposed project site and the adjacent residential neighborhoods. The project does not conflict with existing and planned bicycle facilities; therefore, the impact to bicycle facilities is **less-than-significant**.

Transit Access

The transit service within the project vicinity; therefore, the impact to transit facilities is **less-than-significant**.

Sight Distance Analysis

Sight distance is evaluated to determine if a driver will have adequate visibility to enter a roadway safely without resulting in a conflict with traffic already on the roadway. According to Highway Design Manual, Chapter 200, 2014, the required minimum stopping sight distance for design speed of 35 mph is 250 feet. The line of sight for vehicles exiting the southern driveway and vehicles travelling southbound d on South Foothill Boulevard is 369 feet. Therefore, vehicles exiting the driveways will be visible to the vehicles travelling southbound and northbound on South Foothill Boulevard. See Appendix F for details.

Parking

Based on the project site plan dated March 11, 2019 (**Figure 2**) and preliminary underground parking plans, there would be 36 underground spaces, seven surface spaces, and two car garages for each of the 13 townhomes, for a total supply of 69 spaces. Based on the City of Cupertino's parking requirements, 2.8 parking spaces (two car carage/one open) are required per small lot single-family unit. Multi-family residential requires two (one covered/one open) per unit. General retail under 25,000 square feet (sq.ft.) requires one space per 1,250 sq.ft. The base parking supply required would thus be 50 spaces. The proposed parking supply of 69 spaces. Based on the proposed parking spaces to be provided on site, no parking impacts are projected on City streets.

CONCLUSIONS AND RECOMMENDATIONS

Project Trip Generation

The proposed residential development project is expected to generate a net of 322 daily trips in which 14 trips are generated during the a.m. peak hour and 29 trips are generated during the p.m. peak hour. The proposed trip generation does not includes discounts for existing site use.

Existing Conditions

Under this scenario, all the intersections operate within applicable standards of the City of Cupertino during the a.m. and p.m. peak hours.

Existing plus Project Conditions

Under this scenario, all the intersection operate at acceptable standards for both a.m. and p.m. peak hours.

Based on the City of Cupertino impact criteria the project is expected to have a **less-than-significant** impact at the two study intersections.

Cumulative Conditions

Under this scenario, all the intersection operate within applicable jurisdictional standards of City of Cupertino (LOS D) and the VTA's CMP (LOS E) or better during the a.m. and p.m. peak hours.

Cumulative plus Project Conditions

Under this scenario, all the intersection operate at acceptable standards for both a.m. and p.m. peak hours.

Based on the City of Cupertino impact criteria the project is expected to have a **less-than-significant** impact at the two study intersections.

Queuing and Driveway Analysis

The proposed project *does not create a significant impact* on the expected left-turn or right-turn queues at the study intersections. The project driveways are expected to operate at an acceptable LOS and the 95th percentile queuing at the outbound approach of project driveway is expected to be minimal.

Pedestrian, Bicycle and Transit Impacts

The proposed project does not conflict with existing and planned pedestrian or bicycle facilities. There is no transit service around the project vicinity. Therefore, the impact to pedestrian, bicycle facilities and transit facilities is ***less-than-significant***.

On-Site Circulation

TJKM examined the project site plan in order to evaluate the adequacy of on-site vehicle circulation including service trucks and emergency vehicles. The proposed project's access will be via two existing driveways: one driveway at McClellan Road and other one at St Andrews Avenue. Based on the evaluation,

the proposed on-site vehicle circulation is adequate and should not result in any sufficient traffic operations issues.

Parking

Based on the proposed parking spaces to be provided on site, no parking impacts are projected on City streets.

Recommendation

TJKM recommends the installation of Stop control at the project's exit driveways with appropriate pavement delineation and signing.

Appendix A – Level of Service Methodology

LEVEL OF SERVICE METHODOLOGY

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*

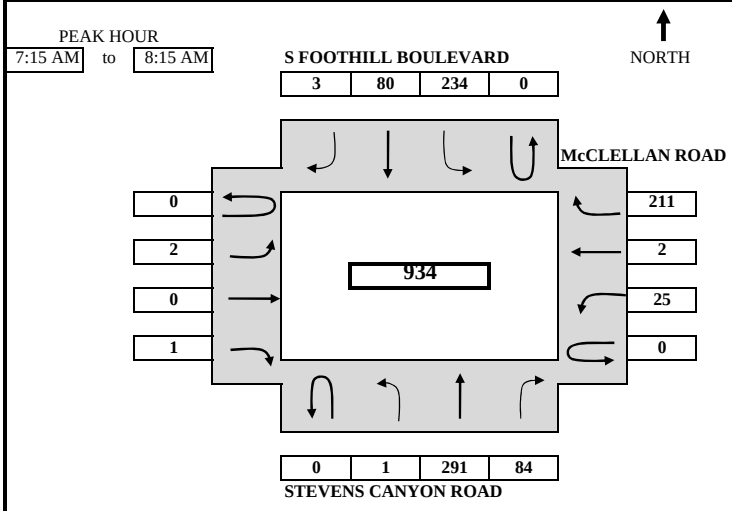
Appendix B – Existing Turning Movement Counts

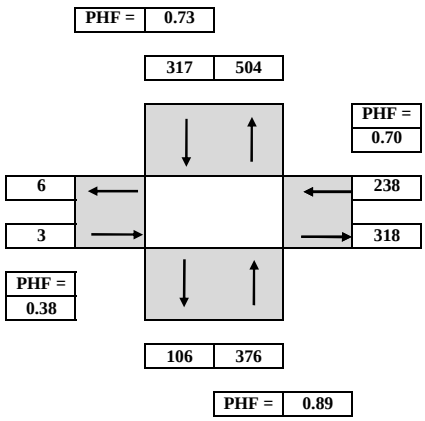
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**	**DAY:**	**TUESDAY**
N-S APPROACH:	**STEVENS CANYON ROAD - S FOOTHILL BLVD**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**McCLELLAN ROAD**	**JURISDICTION:**	**CUPERTINO**	**FILE:**	**3601004-1AM**

PEAK HOUR 7:15 AM to 8:15 AM





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM		0	38	9		48	24	0		0	0	0		3	0	24	**146**
7:15 AM	to	7:30 AM		0	117	36		144	36	0		0	0	0		7	0	68	**408**
7:30 AM	to	7:45 AM		0	191	49		160	52	1		2	0	0		19	0	123	**597**
7:45 AM	to	8:00 AM		1	262	62		213	66	2		2	0	0		25	1	154	**788**
8:00 AM	to	8:15 AM		1	329	93		282	104	3		2	0	1		28	2	235	**1080**
8:15 AM	to	8:30 AM		1	394	99		292	128	4		2	0	1		46	3	306	**1276**
8:30 AM	to	8:45 AM		1	467	106		309	155	5		3	0	1		54	4	339	**1444**
8:45 AM	to	9:00 AM		2	544	114		333	187	5		3	0	1		61	5	369	**1624**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	38	9	0	48	24	0	0	0	0	0	0	3	0	24	**146**
7:15 AM	to	7:30 AM	0	0	79	27	0	96	12	0	0	0	0	0	0	4	0	44	**262**
7:30 AM	to	7:45 AM	0	0	74	13	0	16	16	1	0	2	0	0	0	12	0	55	**189**
7:45 AM	to	8:00 AM	0	1	71	13	0	53	14	1	0	0	0	0	0	6	1	31	**191**
8:00 AM	to	8:15 AM	0	0	67	31	0	69	38	1	0	0	0	1	0	3	1	81	**292**
8:15 AM	to	8:30 AM	0	0	65	6	0	10	24	1	0	0	0	0	0	18	1	71	**196**
8:30 AM	to	8:45 AM	0	0	73	7	0	17	27	1	0	1	0	0	0	8	1	33	**168**
8:45 AM	to	9:00 AM	0	1	77	8	0	24	32	0	0	0	0	0	0	7	1	30	**180**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	1	262	62	0	213	66	2	0	2	0	0	0	25	1	154	**788**
7:15 AM	to	8:15 AM	0	1	291	84	0	234	80	3	0	2	0	1	0	25	2	211	**934**
7:30 AM	to	8:30 AM	0	1	277	63	0	148	92	4	0	2	0	1	0	39	3	238	**868**
7:45 AM	to	8:45 AM	0	1	276	57	0	149	103	4	0	1	0	1	0	35	4	216	**847**
8:00 AM	to	9:00 AM	0	1	282	52	0	120	121	3	0	1	0	1	0	36	4	215	**836**

PEAK HOUR SUMMARY

7:15 AM to 8:15 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	1	291	84	0	234	80	3	0	2	0	1	0	25	2	211	**934**
PHF BY MOVEMENT	0.00	0.25	0.92	0.68	0.00	0.61	0.53	0.75	0.00	0.25	0.00	0.25	0.00	0.52	0.50	0.65	OVERALL
PHF BY APPROACH	0.89				0.73				0.38				0.70				0.80
BICYCLE	7				4				0				2				**13**
PEDESTRIAN	0				3				0				2				**5**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	0				2				3				0				**5**

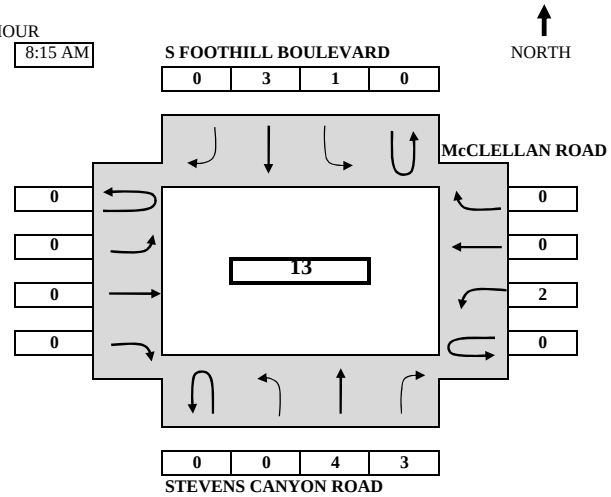
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

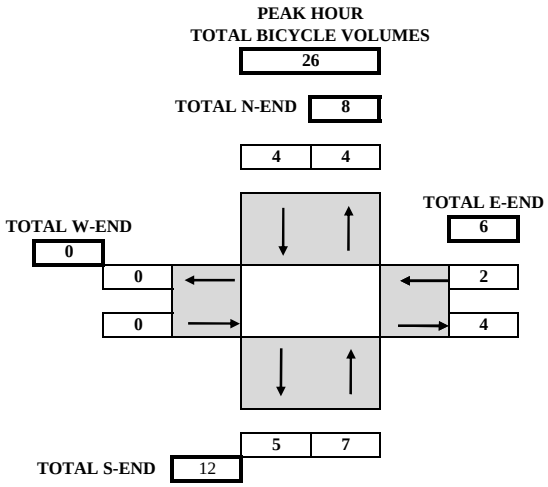
B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**		**SURVEY DATE:**	**1/12/2016**	**DAY: TUESDAY**
N-S APPROACH:	**STEVENS CANYON ROAD**	**- S FOOTHILL BLVD**	**SURVEY TIME:**	**7:00 AM**	**TO 9:00 AM**
E-W APPROACH:	**McCLELLAN ROAD**		**JURISDICTION:**	**CUPERTINO**	**FILE: 3601004-1AM**

PEAK HOUR 7:15 AM to 8:15 AM





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM	0	0	0	1	0	2	2	0	0	0	0	0	0	0	0	2	**7**
7:15 AM	to	7:30 AM	0	0	0	3	0	2	4	0	0	0	0	0	0	0	0	2	**11**
7:30 AM	to	7:45 AM	0	0	2	3	0	2	5	0	0	0	0	0	0	1	0	2	**15**
7:45 AM	to	8:00 AM	0	0	4	4	0	3	5	0	0	0	0	0	0	2	0	2	**20**
8:00 AM	to	8:15 AM	0	0	4	4	0	3	5	0	0	0	0	0	0	2	0	2	**20**
8:15 AM	to	8:30 AM	0	0	4	4	0	3	6	0	0	0	0	0	0	3	0	3	**23**
8:30 AM	to	8:45 AM	0	0	5	4	0	3	7	0	0	0	0	0	0	3	0	3	**25**
8:45 AM	to	9:00 AM	0	0	6	5	0	3	7	0	0	0	0	0	0	3	0	3	**27**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	0	1	0	2	2	0	0	0	0	0	0	0	0	2	**7**
7:15 AM	to	7:30 AM	0	0	0	2	0	0	2	0	0	0	0	0	0	0	0	0	**4**
7:30 AM	to	7:45 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	1	0	0	**4**
7:45 AM	to	8:00 AM	0	0	2	1	0	1	0	0	0	0	0	0	0	1	0	0	**5**
8:00 AM	to	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:15 AM	to	8:30 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0	1	**3**
8:30 AM	to	8:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
8:45 AM	to	9:00 AM	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	**2**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	0	4	4	0	3	5	0	0	0	0	0	0	2	0	2	**20**
7:15 AM	to	8:15 AM	0	0	4	3	0	1	3	0	0	0	0	0	0	2	0	0	**13**
7:30 AM	to	8:30 AM	0	0	4	1	0	1	2	0	0	0	0	0	0	3	0	1	**12**
7:45 AM	to	8:45 AM	0	0	3	1	0	1	2	0	0	0	0	0	0	2	0	1	**10**
8:00 AM	to	9:00 AM	0	0	2	1	0	0	2	0	0	0	0	0	0	1	0	1	**7**

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7:15 AM to 8:15 AM

APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	7	4	0	2	**13**

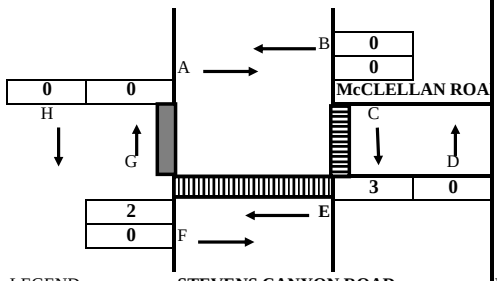
B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**
N-S APPROACH:	**STEVENS CANYON ROAD - S FOOTHILL BLVD**	**DAY:**	**TUESDAY**
E-W APPROACH:	**McCLELLAN ROAD**	**JURISDICTION:**	**CUPERTINO**
SURVEY PERIOD:	**7:00 AM TO 9:00 AM**	**FILE:**	**3601004-1AM**

PEAK HOUR

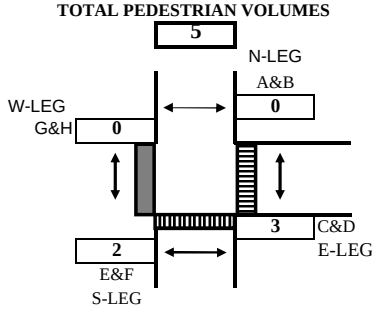
07:15 AM TO 08:15 AM **S FOOTHILL BOULEVARD**



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR

TOTAL PEDESTRIAN VOLUMES



BY LEG:	
N-LEG	**0**
S-LEG	**2**
E-LEG	**3**
W-LEG	**0**

BY DIRECTION:	
NB(D+G)	**0**
SB(C+H)	**3**
EB(A+F)	**0**
WB(B+E)	**2**

TIME PERIOD From		To	NORTH X-WALK A	NORTH X-WALK B	EAST X-WALK C	EAST X-WALK D	SOUTH X-WALK E	SOUTH X-WALK F	WEST X-WALK G	WEST X-WALK H	TOTAL
SURVEY DATA											
07:00 AM	---	07:15 AM	0	0	0	0	0	0	0	0	***0***
07:15 AM	---	07:30 AM	0	0	1	0	0	0	0	0	***1***
07:30 AM	---	07:45 AM	0	0	3	0	2	0	0	0	***5***
07:45 AM	---	08:00 AM	0	0	3	0	2	0	0	0	***5***
08:00 AM	---	08:15 AM	0	0	3	0	2	0	0	0	***5***
08:15 AM	---	08:30 AM	0	0	4	0	2	0	0	1	***7***
08:30 AM	---	08:45 AM	0	0	4	0	2	0	0	2	***8***
08:45 AM	---	09:00 AM	0	0	4	0	2	0	0	2	***8***
TOTAL BY PERIOD											
07:00 AM	---	07:15 AM	0	0	0	0	0	0	0	0	***0***
07:15 AM	---	07:30 AM	0	0	1	0	0	0	0	0	***1***
07:30 AM	---	07:45 AM	0	0	2	0	2	0	0	0	***4***
07:45 AM	---	08:00 AM	0	0	0	0	0	0	0	0	***0***
08:00 AM	---	08:15 AM	0	0	0	0	0	0	0	0	***0***
08:15 AM	---	08:30 AM	0	0	1	0	0	0	0	1	***2***
08:30 AM	---	08:45 AM	0	0	0	0	0	0	0	1	***1***
08:45 AM	---	09:00 AM	0	0	0	0	0	0	0	0	***0***
HOURLY TOTALS											
07:00 AM	---	08:00 AM	0	0	3	0	2	0	0	0	***5***
07:15 AM	---	08:15 AM	0	0	3	0	2	0	0	0	***5***
07:30 AM	---	08:30 AM	0	0	3	0	2	0	0	1	***6***
07:45 AM	---	08:45 AM	0	0	1	0	0	0	0	2	***3***
08:00 AM	---	09:00 AM	0	0	1	0	0	0	0	2	***3***

Tel : (510) 232-1271 ***Fax: (510) 232-1272***

12:00 AM to 12:00 AM

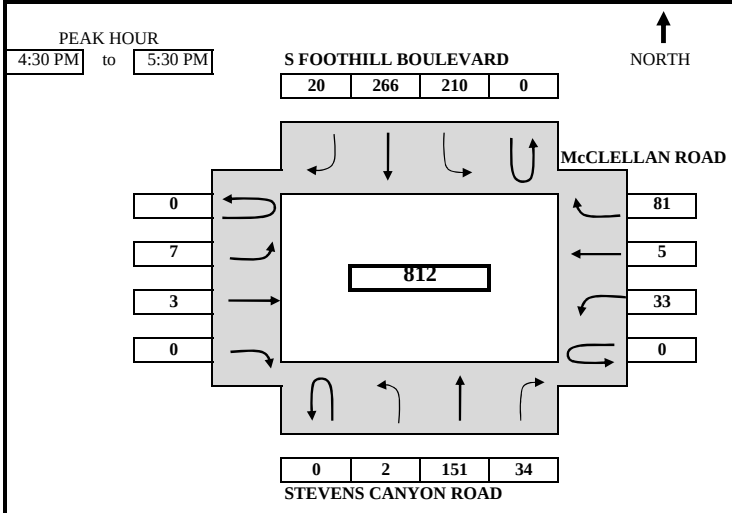
VOLUME BY DIRECTION	NB	SB	EB	WB	TOTAL
PEDESTRIAN	0	3	0	2	**5**
VOLUME BY LEG	**N-LEG**	**S-LEG**	**E-LEG**	**W-LEG**	**TOTAL**
PEDESTRIAN	0	2	3	0	**5**

B.A.Y.M.E.T.R.I.C.S.

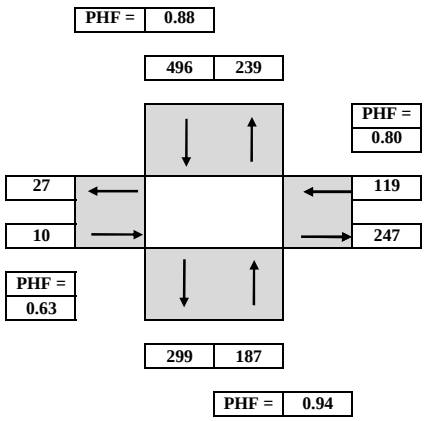
INTERSECTION TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**	**DAY:**	**TUESDAY**
N-S APPROACH:	**STEVENS CANYON ROAD - S FOOTHILL BLVD**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**McCLELLAN ROAD**	**JURISDICTION:**	**CUPERTINO**	**FILE:**	**3601004-1PM**

PEAK HOUR 4:30 PM to 5:30 PM



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM		0	40	7		30	56	3		2	2	0		5	1	8	**154**
4:15 PM	to	4:30 PM		0	65	16		69	103	4		2	2	0		12	2	21	**296**
4:30 PM	to	4:45 PM		0	99	24		104	174	11		3	4	0		23	3	46	**491**
4:45 PM	to	5:00 PM		0	140	33		152	244	15		3	4	0		29	3	56	**679**
5:00 PM	to	5:15 PM		1	180	41		213	297	21		6	5	0		37	6	74	**881**
5:15 PM	to	5:30 PM		2	216	50		279	369	24		9	5	0		45	7	102	**1108**
5:30 PM	to	5:45 PM		3	245	57		329	424	27		11	6	1		54	9	118	**1284**
5:45 PM	to	6:00 PM		3	279	65		375	477	30		12	6	1		61	10	127	**1446**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	40	7	0	30	56	3	0	2	2	0	0	5	1	8	**154**
4:15 PM	to	4:30 PM	0	0	25	9	0	39	47	1	0	0	0	0	0	7	1	13	**142**
4:30 PM	to	4:45 PM	0	0	34	8	0	35	71	7	0	1	2	0	0	11	1	25	**195**
4:45 PM	to	5:00 PM	0	0	41	9	0	48	70	4	0	0	0	0	0	6	0	10	**188**
5:00 PM	to	5:15 PM	0	1	40	8	0	61	53	6	0	3	1	0	0	8	3	18	**202**
5:15 PM	to	5:30 PM	0	1	36	9	0	66	72	3	0	3	0	0	0	8	1	28	**227**
5:30 PM	to	5:45 PM	0	1	29	7	0	50	55	3	0	2	1	1	0	9	2	16	**176**
5:45 PM	to	6:00 PM	0	0	34	8	0	46	53	3	0	1	0	0	0	7	1	9	**162**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	0	140	33	0	152	244	15	0	3	4	0	0	29	3	56	**679**
4:15 PM	to	5:15 PM	0	1	140	34	0	183	241	18	0	4	3	0	0	32	5	66	**727**
4:30 PM	to	5:30 PM	0	2	151	34	0	210	266	20	0	7	3	0	0	33	5	81	**812**
4:45 PM	to	5:45 PM	0	3	146	33	0	225	250	16	0	8	2	1	0	31	6	72	**793**
5:00 PM	to	6:00 PM	0	3	139	32	0	223	233	15	0	9	2	1	0	32	7	71	**767**

PEAK HOUR SUMMARY

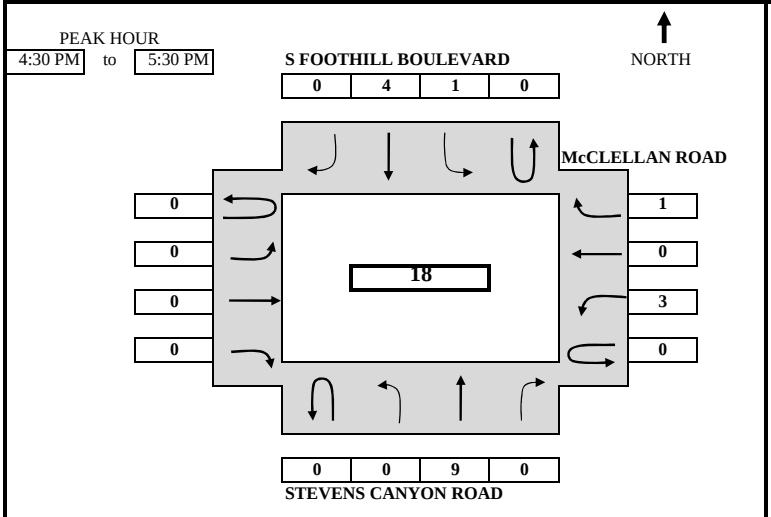
4:30 PM to 5:30 PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	2	151	34	0	210	266	20	0	7	3	0	0	33	5	81	**812**
PHF BY MOVEMENT	0.00	0.50	0.92	0.94	0.00	0.80	0.92	0.71	0.00	0.58	0.38	0.00	0.00	0.75	0.42	0.72	OVERALL
PHF BY APPROACH	0.94				0.88				0.63				0.80				0.89
BICYCLE	9				5				0				4				**18**
PEDESTRIAN	1				1				0				0				**2**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	0				0				2				0				**2**

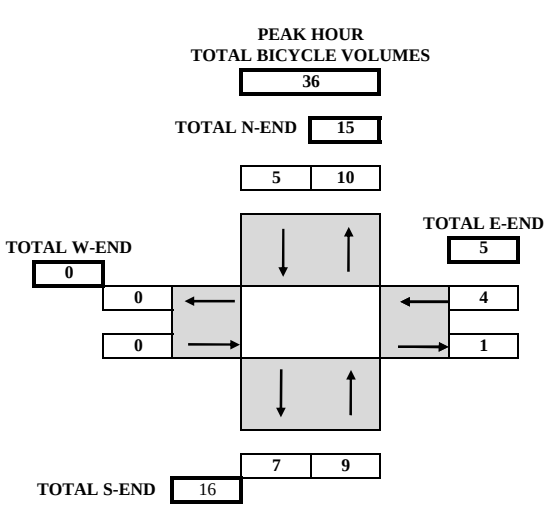
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**	**DAY:**	**TUESDAY**
N-S APPROACH:	**STEVENS CANYON ROAD - S FOOTHILL BLVD**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**McCLELLAN ROAD**	**JURISDICTION:**	**CUPERTINO**	**FILE:**	**3601004-1PM**





TIME	PERIOD	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From	To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																		
4:00 PM	to 4:15 PM	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	**6**
4:15 PM	to 4:30 PM	0	0	2	2	0	4	2	0	0	2	0	0	0	0	0	0	**12**
4:30 PM	to 4:45 PM	0	0	5	2	0	4	3	0	0	2	0	0	0	1	0	0	**17**
4:45 PM	to 5:00 PM	0	0	7	2	0	4	4	0	0	2	0	0	0	1	0	1	**21**
5:00 PM	to 5:15 PM	0	0	11	2	0	5	6	0	0	2	0	0	0	2	0	1	**29**
5:15 PM	to 5:30 PM	0	0	11	2	0	5	6	0	0	2	0	0	0	3	0	1	**30**
5:30 PM	to 5:45 PM	0	0	11	3	0	6	7	0	0	2	0	0	0	3	0	1	**33**
5:45 PM	to 6:00 PM	0	0	12	3	0	6	7	0	0	2	0	0	0	3	0	2	**35**
TOTAL BY PERIOD																		
4:00 PM	to 4:15 PM	0	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	**6**
4:15 PM	to 4:30 PM	0	0	0	1	0	1	2	0	0	2	0	0	0	0	0	0	**6**
4:30 PM	to 4:45 PM	0	0	3	0	0	0	1	0	0	0	0	0	0	1	0	0	**5**
4:45 PM	to 5:00 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	1	**4**
5:00 PM	to 5:15 PM	0	0	4	0	0	1	2	0	0	0	0	0	0	1	0	0	**8**
5:15 PM	to 5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	**1**
5:30 PM	to 5:45 PM	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	**3**
5:45 PM	to 6:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	**2**
HOURLY TOTALS																		
4:00 PM	to 5:00 PM	0	0	7	2	0	4	4	0	0	2	0	0	0	1	0	1	**21**
4:15 PM	to 5:15 PM	0	0	9	1	0	2	6	0	0	2	0	0	0	2	0	1	**23**
4:30 PM	to 5:30 PM	0	0	9	0	0	1	4	0	0	0	0	0	0	3	0	1	**18**
4:45 PM	to 5:45 PM	0	0	6	1	0	2	4	0	0	0	0	0	0	2	0	1	**16**
5:00 PM	to 6:00 PM	0	0	5	1	0	2	3	0	0	0	0	0	0	2	0	1	**14**

TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

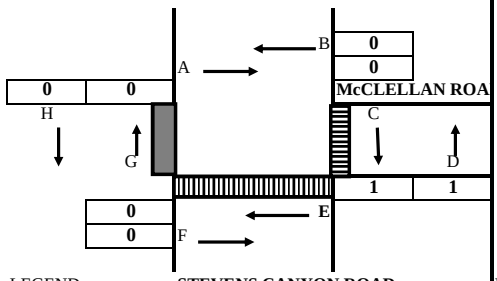
4:30 PM to 5:30 PM					
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	9	5	0	4	**18**

B.A.Y.M.E.T.R.I.C.S.

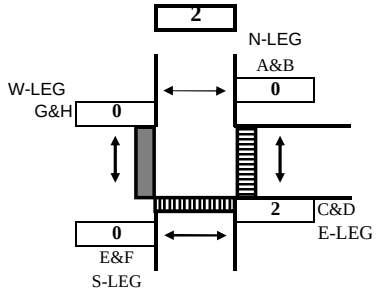
PEDESTRIAN MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**
N-S APPROACH:	**STEVENS CANYON ROAD - S FOOTHILL BLVD**	**DAY:**	**TUESDAY**
E-W APPROACH:	**McCLELLAN ROAD**	**JURISDICTION:**	**CUPERTINO**
SURVEY PERIOD:	**4:00 PM TO 6:00 PM**	**FILE:**	**3601004-1PM**

PEAK HOUR
04:30 PM TO 05:30 PM **S FOOTHILL BOULEVARD**



PEAK HOUR
TOTAL PEDESTRIAN VOLUMES



BY LEG:		**BY DIRECTION:**	
N-LEG	**0**	**NB**(D+G)	**1**
S-LEG	**0**	**SB**(C+H)	**1**
E-LEG	**2**	**EB**(A+F)	**0**
W-LEG	**0**	**WB**(B+E)	**0**

TIME PERIOD			NORTH X-WALK		EAST X-WALK		SOUTH X-WALK		WEST X-WALK		
From		**To**	***A***	***B***	***C***	***D***	***E***	***F***	***G***	***H***	***TOTAL***
SURVEY DATA											
04:00 PM	---	04:15 PM	0	0	0	0	0	0	0	0	***0***
04:15 PM	---	04:30 PM	0	0	0	0	0	0	0	0	***0***
04:30 PM	---	04:45 PM	0	0	0	0	0	0	0	0	***0***
04:45 PM	---	05:00 PM	0	0	0	0	0	0	0	0	***0***
05:00 PM	---	05:15 PM	0	0	1	0	0	0	0	0	***1***
05:15 PM	---	05:30 PM	0	0	1	1	0	0	0	0	***2***
05:30 PM	---	05:45 PM	0	0	1	1	0	0	0	0	***2***
05:45 PM	---	06:00 PM	0	0	1	2	0	0	0	0	***3***
TOTAL BY PERIOD											
04:00 PM	---	04:15 PM	0	0	0	0	0	0	0	0	***0***
04:15 PM	---	04:30 PM	0	0	0	0	0	0	0	0	***0***
04:30 PM	---	04:45 PM	0	0	0	0	0	0	0	0	***0***
04:45 PM	---	05:00 PM	0	0	0	0	0	0	0	0	***0***
05:00 PM	---	05:15 PM	0	0	1	0	0	0	0	0	***1***
05:15 PM	---	05:30 PM	0	0	0	1	0	0	0	0	***1***
05:30 PM	---	05:45 PM	0	0	0	0	0	0	0	0	***0***
05:45 PM	---	06:00 PM	0	0	0	1	0	0	0	0	***1***
HOURLY TOTALS											
04:00 PM	---	05:00 PM	0	0	0	0	0	0	0	0	***0***
04:15 PM	---	05:15 PM	0	0	1	0	0	0	0	0	***1***
04:30 PM	---	05:30 PM	0	0	1	1	0	0	0	0	***2***
04:45 PM	---	05:45 PM	0	0	1	1	0	0	0	0	***2***
05:00 PM	---	06:00 PM	0	0	1	2	0	0	0	0	***3***

Tel : (510) 232-1271 ***Fax: (510) 232-1272***

12:00 AM to 12:00 AM

VOLUME BY DIRECTION	NB	SB	EB	WB	TOTAL
PEDESTRIAN	1	1	0	0	**2**
VOLUME BY LEG	**N-LEG**	**S-LEG**	**E-LEG**	**W-LEG**	**TOTAL**
PEDESTRIAN	0	0	2	0	**2**

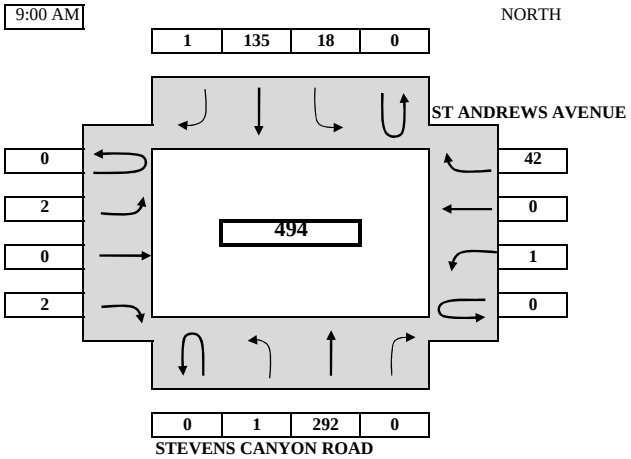
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

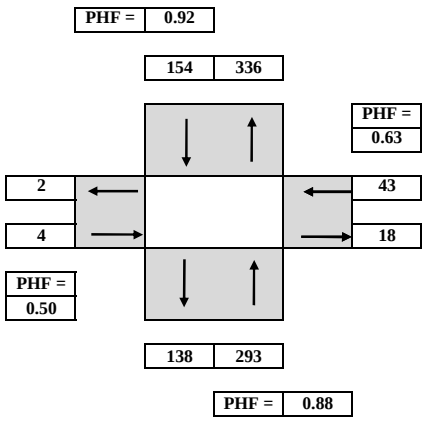
PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**	**DAY:**	**TUESDAY**
N-S APPROACH:	**STEVENS CANYON ROAD**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**ST ANDREWS AVENUE**	**JURISDICTION:**	**CUPERTINO**	**FILE:**	**3601004-2AM**

PEAK HOUR 8:00 AM to 9:00 AM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM		0	42	0		0	27	0		0	0	0		0	0	5	**74**
7:15 AM	to	7:30 AM		0	132	0		1	41	0		0	0	0		0	0	16	**190**
7:30 AM	to	7:45 AM		0	216	0		4	67	0		1	0	0		0	0	24	**312**
7:45 AM	to	8:00 AM		0	288	0		4	87	0		2	0	0		0	0	34	**415**
8:00 AM	to	8:15 AM		0	371	0		8	123	1		3	0	1		0	0	51	**558**
8:15 AM	to	8:30 AM		0	436	0		14	159	1		3	0	1		0	0	55	**669**
8:30 AM	to	8:45 AM		0	501	0		18	187	1		4	0	1		0	0	64	**776**
8:45 AM	to	9:00 AM		1	580	0		22	222	1		4	0	2		1	0	76	**909**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	42	0	0	0	27	0	0	0	0	0	0	0	0	5	**74**
7:15 AM	to	7:30 AM	0	0	90	0	0	1	14	0	0	0	0	0	0	0	0	11	**116**
7:30 AM	to	7:45 AM	0	0	84	0	0	3	26	0	0	1	0	0	0	0	0	8	**122**
7:45 AM	to	8:00 AM	0	0	72	0	0	0	20	0	0	1	0	0	0	0	0	10	**103**
8:00 AM	to	8:15 AM	0	0	83	0	0	4	36	1	0	1	0	1	0	0	0	17	**143**
8:15 AM	to	8:30 AM	0	0	65	0	0	6	36	0	0	0	0	0	0	0	0	4	**111**
8:30 AM	to	8:45 AM	0	0	65	0	0	4	28	0	0	1	0	0	0	0	0	9	**107**
8:45 AM	to	9:00 AM	0	1	79	0	0	4	35	0	0	0	0	1	0	1	0	12	**133**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	0	288	0	0	4	87	0	0	2	0	0	0	0	0	34	**415**
7:15 AM	to	8:15 AM	0	0	329	0	0	8	96	1	0	3	0	1	0	0	0	46	**484**
7:30 AM	to	8:30 AM	0	0	304	0	0	13	118	1	0	3	0	1	0	0	0	39	**479**
7:45 AM	to	8:45 AM	0	0	285	0	0	14	120	1	0	3	0	1	0	0	0	40	**464**
8:00 AM	to	9:00 AM	0	1	292	0	0	18	135	1	0	2	0	2	0	1	0	42	**494**

PEAK HOUR SUMMARY

8:00 AM to 9:00 AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	1	292	0	0	18	135	1	0	2	0	2	0	1	0	42	**494**
PHF BY MOVEMENT	0.00	0.25	0.88	0.00	0.00	0.75	0.94	0.25	0.00	0.50	0.00	0.50	0.00	0.25	0.00	0.62	OVERALL
PHF BY APPROACH	0.88				0.92				0.50				0.63				0.86
BICYCLE	3				3				0				0				**6**
PEDESTRIAN	0				3				1				0				**4**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	1				0				2				1				**4**

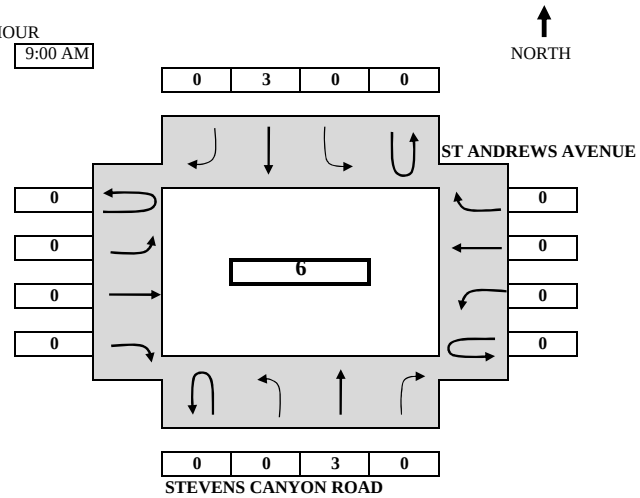
TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

B.A.Y.M.E.T.R.I.C.S.

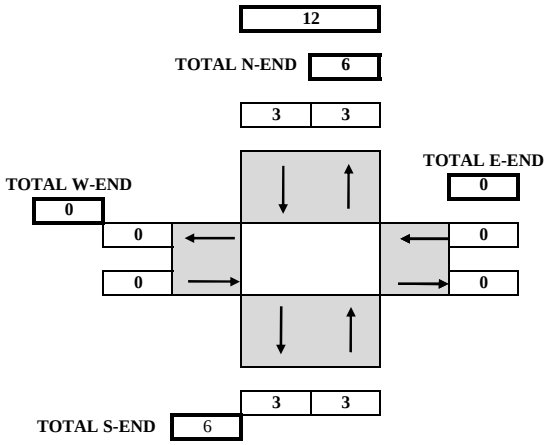
BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**	**DAY:**	**TUESDAY**
N-S APPROACH:	**STEVENS CANYON ROAD**	**SURVEY TIME:**	**7:00 AM**	**TO**	**9:00 AM**
E-W APPROACH:	**ST ANDREWS AVENUE**	**JURISDICTION:**	**CUPERTINO**	**FILE:**	**3601004-2AM**

PEAK HOUR
8:00 AM to 9:00 AM



PEAK HOUR
TOTAL BICYCLE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
7:00 AM	to	7:15 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	**3**
7:15 AM	to	7:30 AM	0	0	1	0	0	0	3	0	0	0	0	0	0	0	0	1	**5**
7:30 AM	to	7:45 AM	0	0	3	0	0	0	6	0	0	0	0	0	0	0	0	1	**10**
7:45 AM	to	8:00 AM	0	0	5	0	0	0	7	0	0	0	0	0	0	0	0	2	**14**
8:00 AM	to	8:15 AM	0	0	5	0	0	0	7	0	0	0	0	0	0	0	0	2	**14**
8:15 AM	to	8:30 AM	0	0	5	0	0	0	9	0	0	0	0	0	0	0	0	2	**16**
8:30 AM	to	8:45 AM	0	0	6	0	0	0	10	0	0	0	0	0	0	0	0	2	**18**
8:45 AM	to	9:00 AM	0	0	8	0	0	0	10	0	0	0	0	0	0	0	0	2	**20**
TOTAL BY PERIOD																			
7:00 AM	to	7:15 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	1	**3**
7:15 AM	to	7:30 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
7:30 AM	to	7:45 AM	0	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	**5**
7:45 AM	to	8:00 AM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	1	**4**
8:00 AM	to	8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**0**
8:15 AM	to	8:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	**2**
8:30 AM	to	8:45 AM	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	**2**
8:45 AM	to	9:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	**2**
HOURLY TOTALS																			
7:00 AM	to	8:00 AM	0	0	5	0	0	0	7	0	0	0	0	0	0	0	0	2	**14**
7:15 AM	to	8:15 AM	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	1	**11**
7:30 AM	to	8:30 AM	0	0	4	0	0	0	6	0	0	0	0	0	0	0	0	1	**11**
7:45 AM	to	8:45 AM	0	0	3	0	0	0	4	0	0	0	0	0	0	0	0	1	**8**
8:00 AM	to	9:00 AM	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	**6**

TEL: (510) 232 - 1271 FAX: (510) 232 - 1272

8:00 AM to 9:00 AM

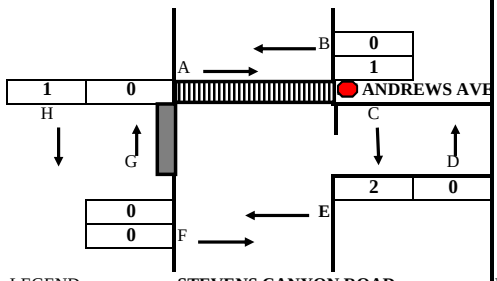
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	3	3	0	0	**6**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

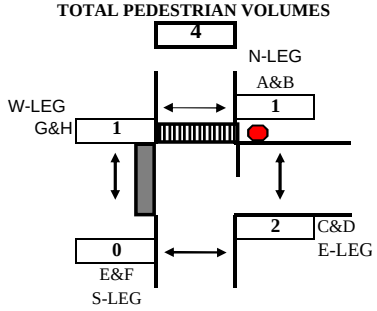
PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**
N-S APPROACH:	**STEVENS CANYON ROAD**	**DAY:**	**TUESDAY**
E-W APPROACH:	**ST ANDREWS AVENUE**	**JURISDICTION:**	**CUPERTINO**
SURVEY PERIOD:	**7:00 AM TO 9:00 AM**	**FILE:**	**3601004-2AM**

PEAK HOUR
08:00 AM TO 09:00 AM



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP

PEAK HOUR
TOTAL PEDESTRIAN VOLUMES



BY LEG:	
N-LEG	**1**
S-LEG	**0**
E-LEG	**2**
W-LEG	**1**

BY DIRECTION:	
NB(D+G)	**0**
SB(C+H)	**3**
EB(A+F)	**1**
WB(B+E)	**0**

TIME PERIOD From		To	NORTH X-WALK A	NORTH X-WALK B	EAST X-WALK C	EAST X-WALK D	SOUTH X-WALK E	SOUTH X-WALK F	WEST X-WALK G	WEST X-WALK H	TOTAL
SURVEY DATA											
07:00 AM	---	07:15 AM	1	0	0	0	0	0	1	0	***2***
07:15 AM	---	07:30 AM	1	0	0	1	0	0	1	0	***3***
07:30 AM	---	07:45 AM	1	0	0	1	0	0	1	0	***3***
07:45 AM	---	08:00 AM	2	0	0	4	0	0	2	0	***8***
08:00 AM	---	08:15 AM	2	0	0	4	0	0	2	0	***8***
08:15 AM	---	08:30 AM	2	0	1	4	0	0	2	1	***10***
08:30 AM	---	08:45 AM	3	0	1	4	0	0	2	1	***11***
08:45 AM	---	09:00 AM	3	0	2	4	0	0	2	1	***12***
TOTAL BY PERIOD											
07:00 AM	---	07:15 AM	1	0	0	0	0	0	1	0	***2***
07:15 AM	---	07:30 AM	0	0	0	1	0	0	0	0	***1***
07:30 AM	---	07:45 AM	0	0	0	0	0	0	0	0	***0***
07:45 AM	---	08:00 AM	1	0	0	3	0	0	1	0	***5***
08:00 AM	---	08:15 AM	0	0	0	0	0	0	0	0	***0***
08:15 AM	---	08:30 AM	0	0	1	0	0	0	0	1	***2***
08:30 AM	---	08:45 AM	1	0	0	0	0	0	0	0	***1***
08:45 AM	---	09:00 AM	0	0	1	0	0	0	0	0	***1***
HOURLY TOTALS											
07:00 AM	---	08:00 AM	2	0	0	4	0	0	2	0	***8***
07:15 AM	---	08:15 AM	1	0	0	4	0	0	1	0	***6***
07:30 AM	---	08:30 AM	1	0	1	3	0	0	1	1	***7***
07:45 AM	---	08:45 AM	2	0	1	3	0	0	1	1	***8***
08:00 AM	---	09:00 AM	1	0	2	0	0	0	0	1	***4***

Tel : (510) 232-1271 ***Fax: (510) 232-1272***

12:00 AM to 12:00 AM

VOLUME BY DIRECTION	NB	SB	EB	WB	TOTAL
PEDESTRIAN	0	3	1	0	**4**
VOLUME BY LEG	**N-LEG**	**S-LEG**	**E-LEG**	**W-LEG**	**TOTAL**
PEDESTRIAN	1	0	2	1	**4**

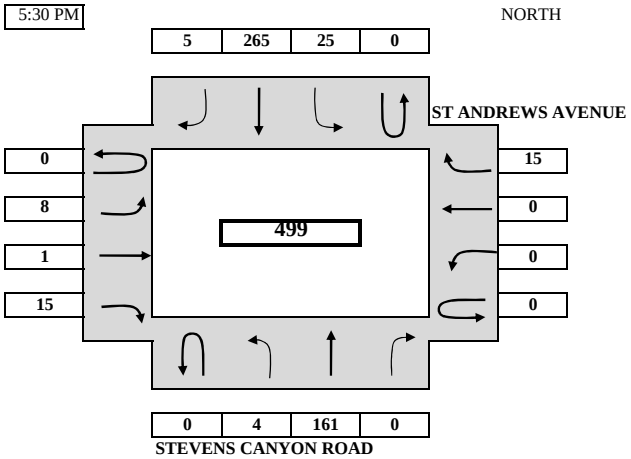
B.A.Y.M.E.T.R.I.C.S.

INTERSECTION TURNING MOVEMENT SUMMARY

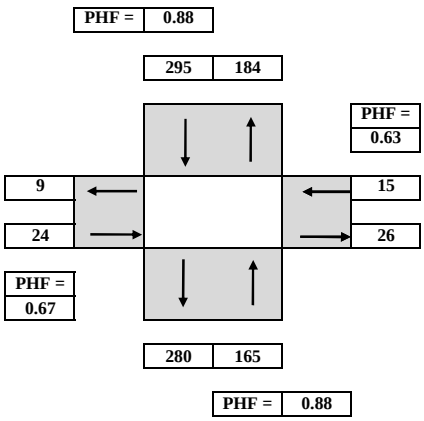
PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**	**DAY:**	**TUESDAY**
N-S APPROACH:	**STEVENS CANYON ROAD**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**ST ANDREWS AVENUE**	**JURISDICTION:**	**CUPERTINO**	**FILE:**	**3601004-2PM**

PEAK HOUR 4:30 PM to 5:30 PM

NORTH



ARRIVAL / DEPARTURE VOLUMES



TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM		1	43	0		5	52	1		2	1	4		0	0	1	**110**
4:15 PM	to	4:30 PM		2	75	0		11	100	1		2	1	5		0	0	4	**201**
4:30 PM	to	4:45 PM		2	111	0		19	176	1		5	1	8		0	0	6	**329**
4:45 PM	to	5:00 PM		3	153	0		25	242	6		7	1	10		0	0	12	**459**
5:00 PM	to	5:15 PM		5	198	0		28	297	6		8	2	17		0	0	16	**577**
5:15 PM	to	5:30 PM		6	236	0		36	365	6		10	2	20		0	0	19	**700**
5:30 PM	to	5:45 PM		6	271	0		41	426	7		11	2	24		0	0	23	**811**
5:45 PM	to	6:00 PM		6	308	0		48	482	7		13	2	24		0	0	27	**917**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	1	43	0	0	5	52	1	0	2	1	4	0	0	0	1	**110**
4:15 PM	to	4:30 PM	0	1	32	0	0	6	48	0	0	0	0	1	0	0	0	3	**91**
4:30 PM	to	4:45 PM	0	0	36	0	0	8	76	0	0	3	0	3	0	0	0	2	**128**
4:45 PM	to	5:00 PM	0	1	42	0	0	6	66	5	0	2	0	2	0	0	0	6	**130**
5:00 PM	to	5:15 PM	0	2	45	0	0	3	55	0	0	1	1	7	0	0	0	4	**118**
5:15 PM	to	5:30 PM	0	1	38	0	0	8	68	0	0	2	0	3	0	0	0	3	**123**
5:30 PM	to	5:45 PM	0	0	35	0	0	5	61	1	0	1	0	4	0	0	0	4	**111**
5:45 PM	to	6:00 PM	0	0	37	0	0	7	56	0	0	2	0	0	0	0	0	4	**106**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	3	153	0	0	25	242	6	0	7	1	10	0	0	0	12	**459**
4:15 PM	to	5:15 PM	0	4	155	0	0	23	245	5	0	6	1	13	0	0	0	15	**467**
4:30 PM	to	5:30 PM	0	4	161	0	0	25	265	5	0	8	1	15	0	0	0	15	**499**
4:45 PM	to	5:45 PM	0	4	160	0	0	22	250	6	0	6	1	16	0	0	0	17	**482**
5:00 PM	to	6:00 PM	0	3	155	0	0	23	240	1	0	6	1	14	0	0	0	15	**458**

PEAK HOUR SUMMARY

4:30 PM to 5:30 PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	
VOLUME	0	4	161	0	0	25	265	5	0	8	1	15	0	0	0	15	**499**
PHF BY MOVEMENT	0.00	0.50	0.89	0.00	0.00	0.78	0.87	0.25	0.00	0.67	0.25	0.54	0.00	0.00	0.00	0.63	OVERALL
PHF BY APPROACH	0.88				0.88				0.67				0.63				0.96
BICYCLE	10				6				0				0				**16**
PEDESTRIAN	2				5				0				2				**9**
	N-LEG				**S-LEG**				**E-LEG**				**W-LEG**				
PEDESTRIAN BY LEG:	1				1				5				2				**9**

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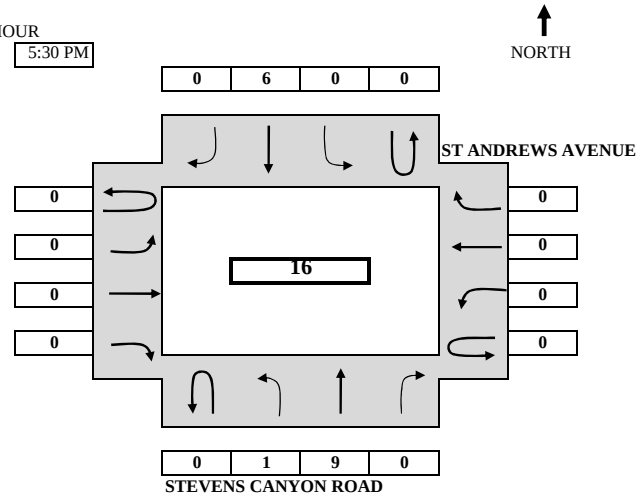
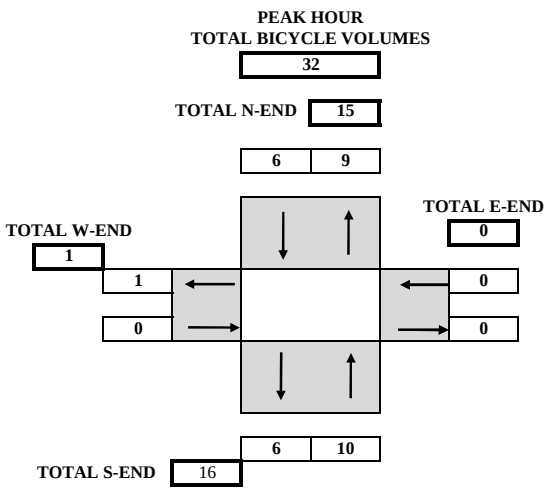
B.A.Y.M.E.T.R.I.C.S.

BICYCLE TURNING MOVEMENT SUMMARY

PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**	**DAY:**	**TUESDAY**
N-S APPROACH:	**STEVENS CANYON ROAD**	**SURVEY TIME:**	**4:00 PM**	**TO**	**6:00 PM**
E-W APPROACH:	**ST ANDREWS AVENUE**	**JURISDICTION:**	**CUPERTINO**	**FILE:**	**3601004-2PM**

PEAK HOUR
4:30 PM to 5:30 PM





TIME PERIOD			NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				TOTAL
From		To	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	U-TURN	LEFT	THRU	RIGHT	
SURVEY DATA																			
4:00 PM	to	4:15 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:15 PM	to	4:30 PM	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	0	**6**
4:30 PM	to	4:45 PM	0	0	7	0	0	0	4	0	0	0	0	0	0	0	0	0	**11**
4:45 PM	to	5:00 PM	0	0	9	0	0	0	5	0	0	0	0	0	0	0	0	0	**14**
5:00 PM	to	5:15 PM	0	1	13	0	0	0	7	0	0	0	0	0	0	0	0	0	**21**
5:15 PM	to	5:30 PM	0	1	13	0	0	0	8	0	0	0	0	0	0	0	0	0	**22**
5:30 PM	to	5:45 PM	0	1	14	0	0	0	10	0	0	0	0	0	0	0	0	0	**25**
5:45 PM	to	6:00 PM	0	1	15	0	0	0	10	0	0	0	0	0	0	0	0	0	**26**
TOTAL BY PERIOD																			
4:00 PM	to	4:15 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
4:15 PM	to	4:30 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	**3**
4:30 PM	to	4:45 PM	0	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	**5**
4:45 PM	to	5:00 PM	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	**3**
5:00 PM	to	5:15 PM	0	1	4	0	0	0	2	0	0	0	0	0	0	0	0	0	**7**
5:15 PM	to	5:30 PM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	**1**
5:30 PM	to	5:45 PM	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	**3**
5:45 PM	to	6:00 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
HOURLY TOTALS																			
4:00 PM	to	5:00 PM	0	0	9	0	0	0	5	0	0	0	0	0	0	0	0	0	**14**
4:15 PM	to	5:15 PM	0	1	10	0	0	0	7	0	0	0	0	0	0	0	0	0	**18**
4:30 PM	to	5:30 PM	0	1	9	0	0	0	6	0	0	0	0	0	0	0	0	0	**16**
4:45 PM	to	5:45 PM	0	1	7	0	0	0	6	0	0	0	0	0	0	0	0	0	**14**
5:00 PM	to	6:00 PM	0	1	6	0	0	0	5	0	0	0	0	0	0	0	0	0	**12**

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4:30 PM to 5:30 PM

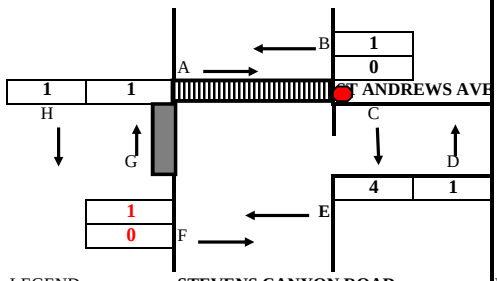
APPROACH VOLUME	NB	SB	EB	WB	TOTAL
BICYCLE	10	6	0	0	**16**

B.A.Y.M.E.T.R.I.C.S.

PEDESTRIAN MOVEMENT SUMMARY

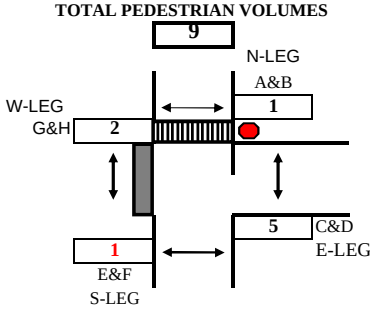
PROJECT:	**TRAFFIC COUNTS IN CUPERTINO**	**SURVEY DATE:**	**1/12/2016**
N-S APPROACH:	**STEVENS CANYON ROAD**	**DAY:**	**TUESDAY**
E-W APPROACH:	**ST ANDREWS AVENUE**	**JURISDICTION:**	**CUPERTINO**
SURVEY PERIOD:	**4:00 PM TO 6:00 PM**	**FILE:**	**3601004-2PM**

PEAK HOUR
04:30 PM TO 05:30 PM



LEGEND:
- CROSSWALK
- SIDEWALK
- STOP CONTROL LINE
- STOP
- * J-WALK IN RED

PEAK HOUR
TOTAL PEDESTRIAN VOLUMES



BY LEG:	
N-LEG	**1**
S-LEG	**1**
E-LEG	**5**
W-LEG	**2**

BY DIRECTION:	
NB(D+G)	**2**
SB(C+H)	**5**
EB(A+F)	**0**
WB(B+E)	**2**

TIME PERIOD From		To	NORTH X-WALK A	NORTH X-WALK B	EAST X-WALK C	EAST X-WALK D	SOUTH X-WALK E *	SOUTH X-WALK F *	WEST X-WALK G	WEST X-WALK H	TOTAL
SURVEY DATA											
04:00 PM	---	04:15 PM	0	0	1	0	0	0	0	0	***1***
04:15 PM	---	04:30 PM	0	0	2	1	0	1	1	0	***5***
04:30 PM	---	04:45 PM	0	0	3	2	1	1	1	0	***8***
04:45 PM	---	05:00 PM	0	1	4	2	1	1	1	1	***11***
05:00 PM	---	05:15 PM	0	1	6	2	1	1	2	1	***14***
05:15 PM	---	05:30 PM	0	1	6	2	1	1	2	1	***14***
05:30 PM	---	05:45 PM	0	1	8	3	1	1	2	1	***17***
05:45 PM	---	06:00 PM	0	1	8	4	1	1	2	1	***18***
TOTAL BY PERIOD											
04:00 PM	---	04:15 PM	0	0	1	0	0	0	0	0	***1***
04:15 PM	---	04:30 PM	0	0	1	1	0	1	1	0	***4***
04:30 PM	---	04:45 PM	0	0	1	1	1	0	0	0	***3***
04:45 PM	---	05:00 PM	0	1	1	0	0	0	0	1	***3***
05:00 PM	---	05:15 PM	0	0	2	0	0	0	1	0	***3***
05:15 PM	---	05:30 PM	0	0	0	0	0	0	0	0	***0***
05:30 PM	---	05:45 PM	0	0	2	1	0	0	0	0	***3***
05:45 PM	---	06:00 PM	0	0	0	1	0	0	0	0	***1***
HOURLY TOTALS											
04:00 PM	---	05:00 PM	0	1	4	2	1	1	1	1	***11***
04:15 PM	---	05:15 PM	0	1	5	2	1	1	2	1	***13***
04:30 PM	---	05:30 PM	0	1	4	1	1	0	1	1	***9***
04:45 PM	---	05:45 PM	0	1	5	1	0	0	1	1	***9***
05:00 PM	---	06:00 PM	0	0	4	2	0	0	1	0	***7***

Tel : (510) 232-1271 ***Fax: (510) 232-1272***

12:00 AM to 12:00 AM

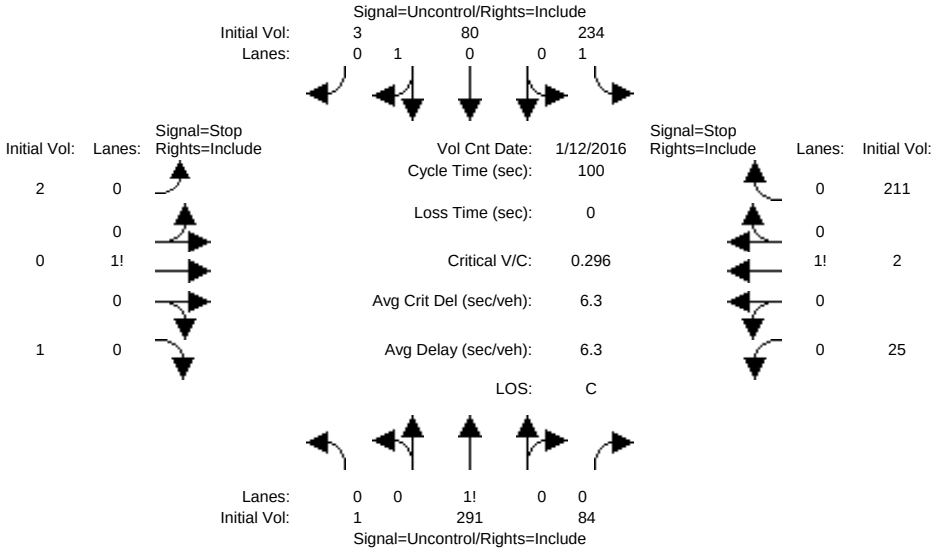
VOLUME BY DIRECTION	NB	SB	EB	WB	TOTAL
PEDESTRIAN	2	5	0	2	**9**
VOLUME BY LEG	**N-LEG**	**S-LEG**	**E-LEG**	**W-LEG**	**TOTAL**
PEDESTRIAN	1	1	5	2	**9**

Appendix C – Existing Conditions Intersections Level of Service Worksheets

10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #1: Foothill Blvd/McClellan Road




```
Street Name:Foothill Blvd-Stevens Canyon Road          McClellan Road
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 12 Jan 2016 <<
Base Vol:       1  291    84   234   80     3     2    0     1    25    2   211
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:    1  291    84   234   80     3     2    0     1    25    2   211
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  291    84   234   80     3     2    0     1    25    2   211
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    1  291    84   234   80     3     2    0     1    25    2   211
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:   83 xxxx xxxxx   375 xxxx xxxxx   991  927    82   885  886   333
Potent Cap.: 1527 xxxx xxxxx  1195 xxxx xxxxx   227  271   984   268  286   713
Move Cap.:   1527 xxxx xxxxx  1195 xxxx xxxxx   135  217   984   227  230   713
Volume/Cap:  0.00 xxxx  xxxx  0.20 xxxx  xxxx  0.01 0.00  0.00  0.11 0.01  0.30
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.7 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.4 xxxx xxxxx   8.7 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  189 xxxxx  xxxx  574 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.0 xxxxx xxxxx  2.0 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 24.3 xxxxx xxxxx 15.6 xxxxx
Shared LOS:     *    *     *     *    *     *     *    C     *     *    C     *
ApproachDel:    xxxxxx           xxxxxx             24.3            15.6
ApproachLOS:         *                *               C               C
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Foothill Blvd/McClellan Road
********************************************************************************
Base 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
```

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```
------------|---------------||---------------||---------------||---------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  0  1! 0  0    1  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:    1  291    84   234   80     3     2    0     1    25    2   211
ApproachDel:    xxxxxx           xxxxxx             24.3             15.6
------------|---------------||---------------||---------------||---------------|
Approach[eastbound][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=3]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=934]
   SUCCEED - Total volume greater than or equal to 800 for intersection
             with four or more approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=238]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=934]
   SUCCEED - Total volume greater than or equal to 800 for intersection
             with four or more 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 #1 Foothill Blvd/McClellan Road
********************************************************************************
Base 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  0  1! 0  0    1  0  0  1  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:    1  291    84   234   80     3     2    0     1    25    2   211
------------|---------------||---------------||---------------||---------------|
Major Street Volume:             693
Minor Approach Volume:           238
Minor Approach Volume Threshold: 411
--------------------------------------------------------------------------------
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.
```

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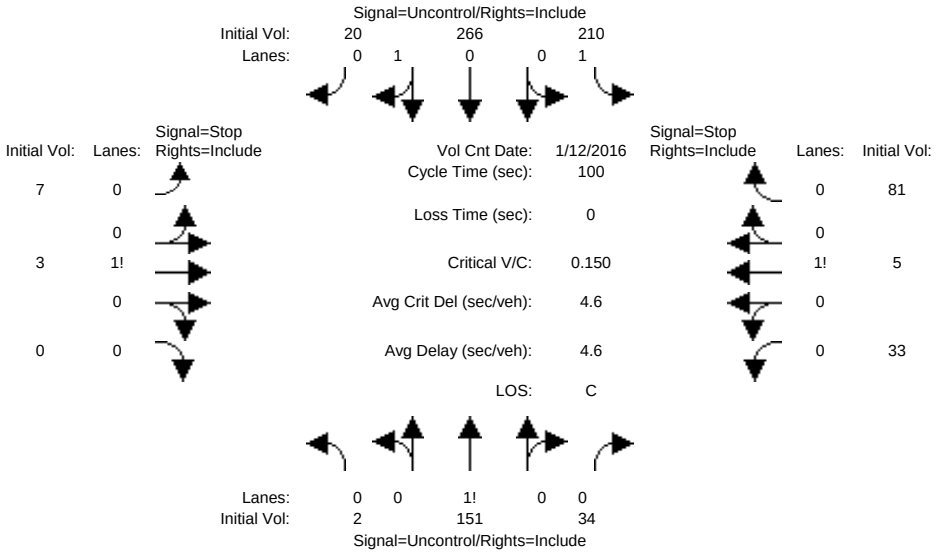
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #1: Foothill Blvd/McClellan Road




```
Street Name:Foothill Blvd-Stevens Canyon Road          McClellan Road
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 12 Jan 2016 <<
Base Vol:       2  151    34   210  266    20     7    3     0    33    5    81
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:    2  151    34   210  266    20     7    3     0    33    5    81
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:     2  151    34   210  266    20     7    3     0    33    5    81
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    2  151    34   210  266    20     7    3     0    33    5    81
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5 xxxxx   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0 xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  286 xxxx xxxxx   185 xxxx xxxxx   911  885 xxxxx   870  878   168
Potent Cap.: 1288 xxxx xxxxx  1402 xxxx xxxxx   257  286 xxxxx   274  289   881
Move Cap.:   1288 xxxx xxxxx  1402 xxxx xxxxx   203  243 xxxxx   240  245   881
Volume/Cap:  0.00 xxxx  xxxx  0.15 xxxx  xxxx  0.03 0.01  xxxx  0.14 0.02  0.09
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.5 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.8 xxxx xxxxx   8.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx   214 xxxx xxxxx  xxxx  477 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   0.1 xxxx xxxxx xxxxx  1.0 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  22.7 xxxx xxxxx xxxxx 15.0 xxxxx
Shared LOS:     *    *     *     *    *     *     C    *     *     *    C     *
ApproachDel:    xxxxxx           xxxxxx             22.7             15.0
ApproachLOS:         *                *                C                C
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Foothill Blvd/McClellan Road
********************************************************************************
Base 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
```

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```
------------|--------------||--------------||--------------||--------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  0  1! 0  0    1  0  0  1  0    0  1  0  0  0    0  0  1! 0  0
Initial Vol:    2  151    34   210  266    20     7    3     0    33    5    81
ApproachDel:    xxxxxx           xxxxxx             22.7             15.0
------------|--------------||--------------||--------------||--------------|
Approach[eastbound][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=10]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=812]
   SUCCEED - Total volume greater than or equal to 800 for intersection
             with four or more approaches.
--------------------------------------------------------------------------------
Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
   FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=119]
   SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=812]
   SUCCEED - Total volume greater than or equal to 800 for intersection
             with four or more 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 #1 Foothill Blvd/McClellan Road
********************************************************************************
Base 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  0  1! 0  0    1  0  0  1  0    0  1  0  0  0    0  0  1! 0  0
Initial Vol:    2  151    34   210  266    20     7    3     0    33    5    81
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             683
Minor Approach Volume:           119
Minor Approach Volume Threshold: 416
--------------------------------------------------------------------------------
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.
```

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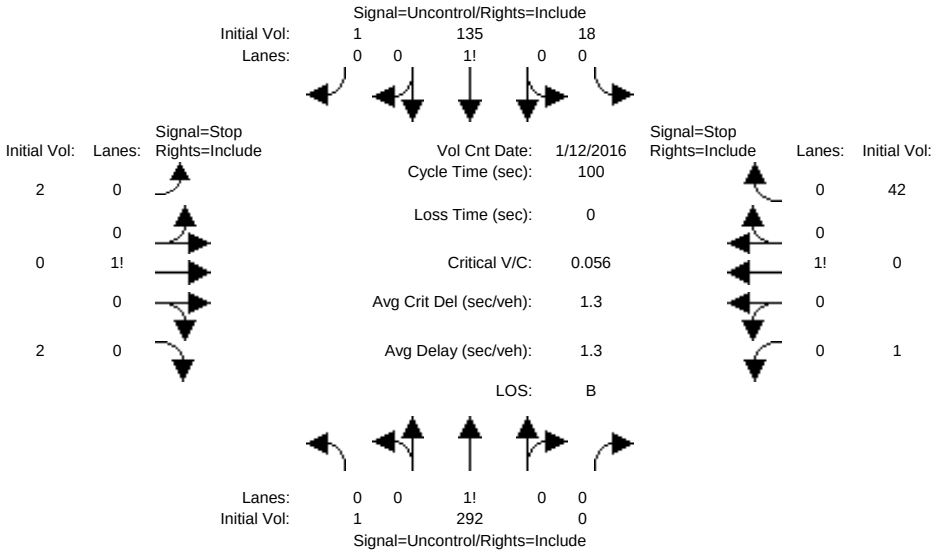
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #2: Stevens Canyon Road/St. Andrews Ave




```
Street Name:       Stevens Canyon Road              St. Andrews 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: >> Count Date: 12 Jan 2016 <<
Base Vol:       1  292    0    18  135    1     2    0     2     1    0    42
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:    1  292    0    18  135    1     2    0     2     1    0    42
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  292    0    18  135    1     2    0     2     1    0    42
Reduct Vol:     0    0    0     0    0    0     0    0     0     0    0     0
FinalVolume:    1  292    0    18  135    1     2    0     2     1    0    42
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  136 xxxx xxxxx   292 xxxx xxxxx   487  466   136   467  466   292
Potent Cap.: 1461 xxxx xxxxx  1281 xxxx xxxxx   495  497   919   510  497   752
Move Cap.:   1461 xxxx xxxxx  1281 xxxx xxxxx   462  490   919   503  490   752
Volume/Cap:  0.00 xxxx  xxxx  0.01 xxxx  xxxx  0.00 0.00  0.00  0.00 0.00  0.06
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.5 xxxx xxxxx   7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  614 xxxxx  xxxx  743 xxxxx
SharedQueue:  0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.0 xxxxx xxxxx  0.2 xxxxx
Shrd ConDel:  7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 10.9 xxxxx xxxxx 10.1 xxxxx
Shared LOS:     A    *     *     *    *     *     *    B     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx             10.9             10.1
ApproachLOS:         *                *                B                B
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Stevens Canyon Road/St. Andrews Ave
********************************************************************************
Base 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
```

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```
------------|--------------||--------------||--------------||--------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  1  0  0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:    1  292     0    18  135     1     2    0     2     1    0    42
ApproachDel:    xxxxxx           xxxxxx             10.9             10.1
------------|--------------||--------------||--------------||--------------|
Approach[eastbound][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=4]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=494]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
Approach[westbound][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=43]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=494]
   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 Stevens Canyon Road/St. Andrews Ave
********************************************************************************
Base 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  1  0  0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  1! 0  0
Initial Vol:    1  292     0    18  135     1     2    0     2     1    0    42
------------|--------------||--------------||--------------||--------------|
Major Street Volume:              447
Minor Approach Volume:            43
Minor Approach Volume Threshold: 434
--------------------------------------------------------------------------------
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.
```

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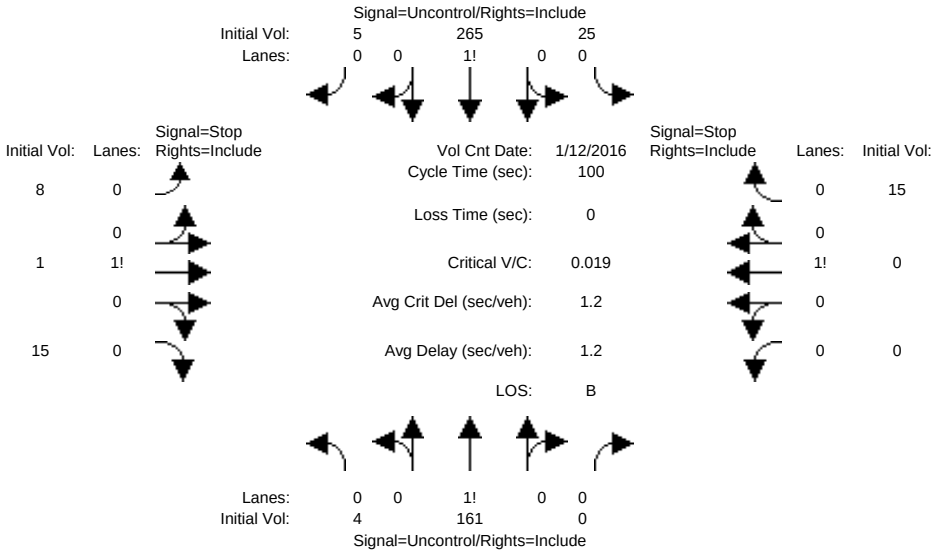
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #2: Stevens Canyon Road/St. Andrews Ave




```
Street Name:       Stevens Canyon Road              St. Andrews 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: >> Count Date: 12 Jan 2016 <<
Base Vol:       4  161    0    25  265    5     8    1    15     0    0    15
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:    4  161    0    25  265    5     8    1    15     0    0    15
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:     4  161    0    25  265    5     8    1    15     0    0    15
Reduct Vol:     0    0    0     0    0    0     0    0     0     0    0     0
FinalVolume:    4  161    0    25  265    5     8    1    15     0    0    15
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2 xxxxx  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  270 xxxx xxxxx   161 xxxx xxxxx   494  487   268  xxxx  489   161
Potent Cap.: 1305 xxxx xxxxx  1430 xxxx xxxxx   489  484   776  xxxx  482   889
Move Cap.:   1305 xxxx xxxxx  1430 xxxx xxxxx   473  474   776  xxxx  472   889
Volume/Cap:  0.00 xxxx  xxxx  0.02 xxxx  xxxx  0.02 0.00  0.02  xxxx 0.00  0.02
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.8 xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  626 xxxxx  xxxx xxxx   889
SharedQueue:  0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.1 xxxxx xxxxx xxxx   0.1
Shrd ConDel:  7.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.0 xxxxx xxxxx xxxx   9.1
Shared LOS:     A    *     *     *    *     *     *    B     *     *    *     A
ApproachDel:    xxxxxx           xxxxxx             11.0             9.1
ApproachLOS:         *                *                B               A
Note: Queue reported is the number of cars per lane.
                    Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Stevens Canyon Road/St. Andrews Ave
********************************************************************************
Base 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
```

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```
------------|--------------||--------------||--------------||--------------|
Control:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  1  0  0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  0  1  0
Initial Vol:    4  161     0    25  265     5     8    1    15     0    0    15
ApproachDel:    xxxxxx           xxxxxx             11.0             9.1
------------|--------------||--------------||--------------||--------------|
Approach[eastbound][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=24]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=499]
   FAIL - Total volume less than 650 for intersection
          with less than four approaches.
--------------------------------------------------------------------------------
Approach[westbound][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=15]
   FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=499]
   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 Stevens Canyon Road/St. Andrews Ave
********************************************************************************
Base 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:       Uncontrolled     Uncontrolled      Stop Sign        Stop Sign
Lanes:        0  1  0  0  0    0  0  1! 0  0    0  0  1! 0  0    0  0  0  1  0
Initial Vol:    4  161     0    25  265     5     8    1    15     0    0    15
------------|--------------||--------------||--------------||--------------|
Major Street Volume:             460
Minor Approach Volume:           24
Minor Approach Volume Threshold: 427
--------------------------------------------------------------------------------
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.
```

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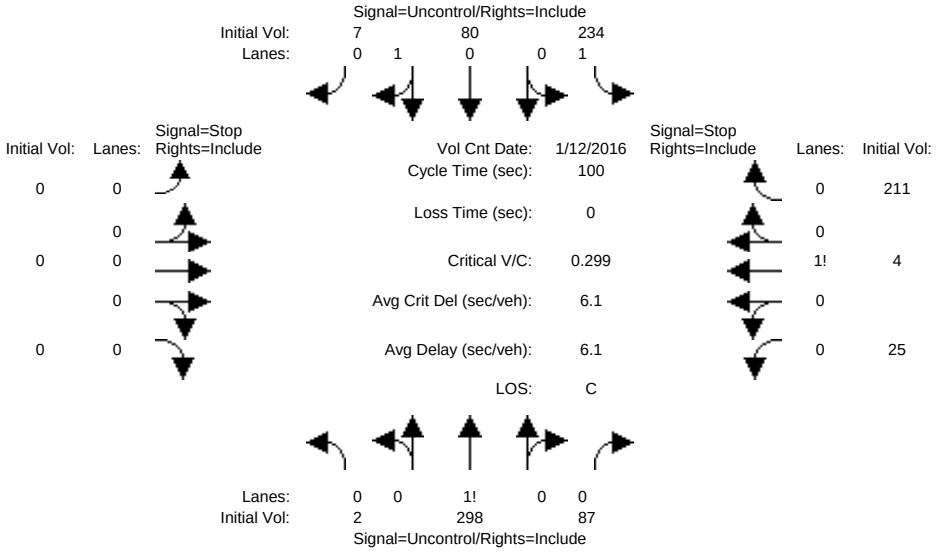
Appendix D – Existing plus Project Conditions Intersections Level of Service Worksheets

10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing Plus Conditions AM

Intersection #1: Foothill Blvd/McClellan Road




```
Street Name:Foothill Blvd-Stevens Canyon Road          McClellan Road
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 12 Jan 2016 <<
Base Vol:       2  293    84   234   80     4     0    0     0    25    2   211
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:    2  293    84   234   80     4     0    0     0    25    2   211
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Project:        0    5     3     0    0     3     0    0     0     0    2     0
Initial Fut:    2  298    87   234   80     7     0    0     0    25    4   211
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:     2  298    87   234   80     7     0    0     0    25    4   211
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    2  298    87   234   80     7     0    0     0    25    4   211
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:   87 xxxx xxxxx   385 xxxx xxxxx  xxxx xxxx xxxxx   897  901   342
Potent Cap.: 1522 xxxx xxxxx  1185 xxxx xxxxx  xxxx xxxx xxxxx   313  280   706
Move Cap.:   1522 xxxx xxxxx  1185 xxxx xxxxx  xxxx xxxx xxxxx   265  225   706
Volume/Cap:  0.00 xxxx  xxxx  0.20 xxxx  xxxx  xxxx xxxx  xxxx  0.09 0.02  0.30
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.7 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.4 xxxx xxxxx   8.8 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A     *      *     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  584 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  2.0 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 15.4 xxxxx
Shared LOS:      *    *      *     *    *      *     *    *      *     *     C     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             15.4
ApproachLOS:         *                *                *                C
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Foothill Blvd/McClellan Road
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			1 0 0 1 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	2	298	87	234	80	7	0	0	0	25	4	211
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			15.4		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.0]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=240]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=948]
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 #1 Foothill Blvd/McClellan Road

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			1 0 0 1 0			0 0 0 0 0			0 0 1! 0 0		
Initial Vol:	2	298	87	234	80	7	0	0	0	25	4	211

Major Street Volume: 708
Minor Approach Volume: 240
Minor Approach Volume Threshold: 404

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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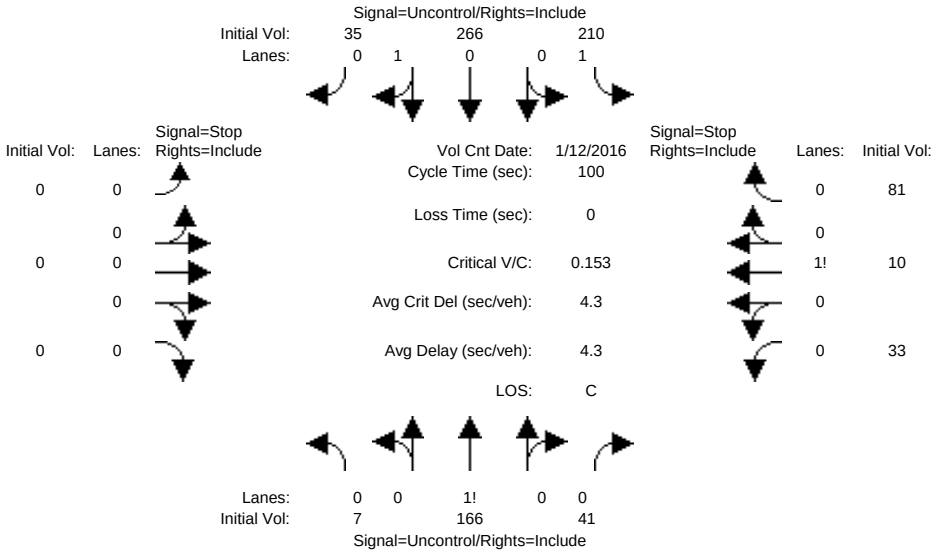
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing Plus Conditions PM

Intersection #1: Foothill Blvd/McClellan Road




```
Street Name:Foothill Blvd-Stevens Canyon Road          McClellan Road
Approach:      North Bound      South Bound       East Bound       West Bound
Movement:     L  -  T  -  R    L  -  T  -  R    L  -  T  -  R    L  -  T  -  R
------------|---------------||---------------||---------------||---------------|
Volume Module: >> Count Date: 12 Jan 2016 <<
Base Vol:       6  158    37   210  266    25     0    0     0    33    5    81
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:    6  158    37   210  266    25     0    0     0    33    5    81
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Project:        1    8     4     0    0    10     0    0     0     0    5     0
Initial Fut:    7  166    41   210  266    35     0    0     0    33   10    81
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:     7  166    41   210  266    35     0    0     0    33   10    81
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    7  166    41   210  266    35     0    0     0    33   10    81
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx xxxxx xxxx xxxxx   6.4  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx xxxxx xxxx xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  301 xxxx xxxxx   207 xxxx xxxxx  xxxx xxxx xxxxx   904  922   187
Potent Cap.: 1272 xxxx xxxxx  1376 xxxx xxxxx  xxxx xxxx xxxxx   310  272   861
Move Cap.:   1272 xxxx xxxxx  1376 xxxx xxxxx  xxxx xxxx xxxxx   272  230   861
Volume/Cap:  0.01 xxxx  xxxx  0.15 xxxx  xxxx  xxxx xxxx  xxxx  0.12 0.04  0.09
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.5 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.8 xxxx xxxxx   8.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     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  479 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx  1.0 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx xxxxx 15.1 xxxxx
Shared LOS:     *    *     *     *    *     *     *    *     *     *    C     *
ApproachDel:    xxxxxx           xxxxxx           xxxxxx             15.1
ApproachLOS:         *                *                *                C
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Foothill Blvd/McClellan Road
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	1 0	0 1	0	0 0	0 0	0	0 0	1! 0	0
Initial Vol:	7	166	41	210	266	35	0	0	0	33	10	81
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			15.1		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=124]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=849]
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 #1 Foothill Blvd/McClellan Road

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	1 0	0 1	0	0 0	0 0	0	0 0	1! 0	0
Initial Vol:	7	166	41	210	266	35	0	0	0	33	10	81

Major Street Volume: 725
Minor Approach Volume: 124
Minor Approach Volume Threshold: 396

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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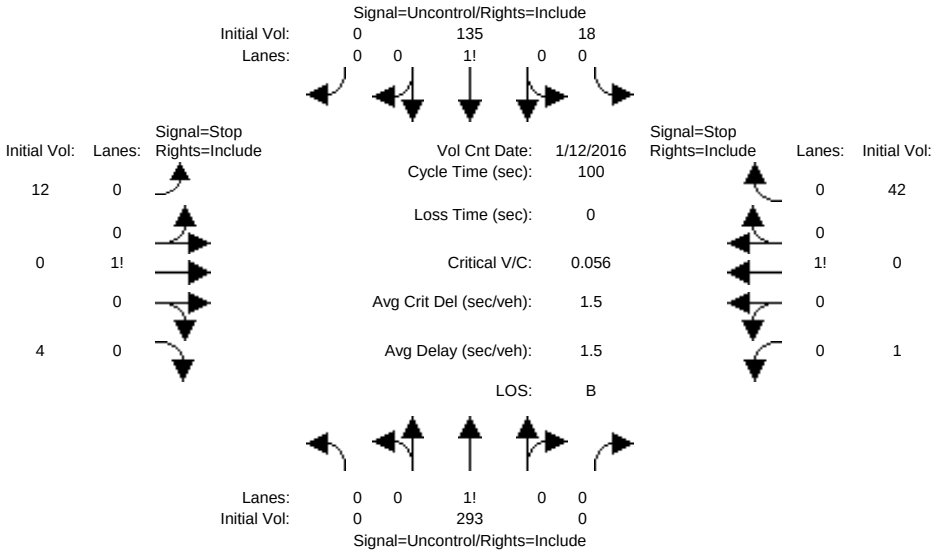
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing Plus Conditions AM

Intersection #2: Stevens Canyon Road/St. Andrews Ave




```
Street Name:       Stevens Canyon Road              St. Andrews 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: >> Count Date: 12 Jan 2016 <<
Base Vol:       0  293     0    18  135     0     4     0     3     1     0    42
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  293     0    18  135     0     4     0     3     1     0    42
Added Vol:      0    0     0     0    0     0     0     0     0     0     0     0
Project:        0    0     0     0    0     0     8     0     1     0     0     0
Initial Fut:    0  293     0    18  135     0    12     0     4     1     0    42
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  293     0    18  135     0    12     0     4     1     0    42
Reduct Vol:     0    0     0     0    0     0     0     0     0     0     0     0
FinalVolume:    0  293     0    18  135     0    12     0     4     1     0    42
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   293 xxxx xxxxx   485  464   135   466  464   293
Potent Cap.: xxxx xxxx xxxxx  1280 xxxx xxxxx   496  498   919   510  498   751
Move Cap.:   xxxx xxxx xxxxx  1280 xxxx xxxxx   463  491   919   503  491   751
Volume/Cap:  xxxx xxxx  xxxx  0.01 xxxx  xxxx  0.03 0.00  0.00  0.00 0.00  0.06
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   7.9 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  528 xxxxx  xxxx  742 xxxxx
SharedQueue:xxxxx xxxx xxxxx   0.0 xxxx xxxxx xxxxx  0.1 xxxxx xxxxx  0.2 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx   7.9 xxxx xxxxx xxxxx 12.0 xxxxx xxxxx 10.1 xxxxx
Shared LOS:     *    *     *     A    *     *     *    B     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx              12.0             10.1
ApproachLOS:         *                *                 B                B
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Stevens Canyon Road/St. Andrews Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 1	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	0 293		0	18 135		0	12	0	4	1	0	42
ApproachDel:	xxxxxx			xxxxxx			12.0			10.1		

Approach[eastbound][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=16]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=505]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][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=43]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=505]
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]

****

Intersection #2 Stevens Canyon Road/St. Andrews Ave

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 1	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	0 293		0	18 135		0	12	0	4	1	0	42

Major Street Volume: 446
Minor Approach Volume: 43
Minor Approach Volume Threshold: 435

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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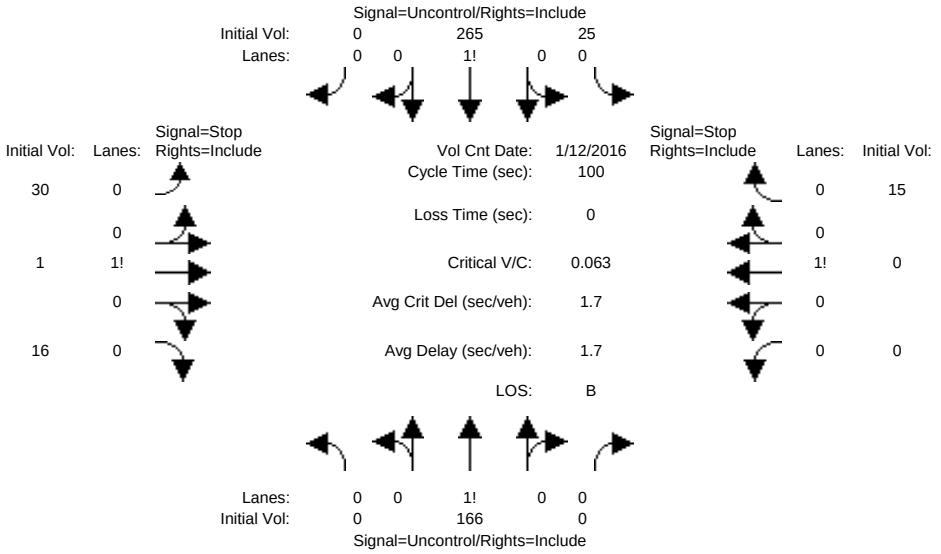
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

Level Of Service Computation Report
2000 HCM Unsignalized (Future Volume Alternative)
Existing Plus Conditions PM

Intersection #2: Stevens Canyon Road/St. Andrews Ave



Street Name:	Stevens Canyon Road						St. Andrews 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: >> Count Date: 12 Jan 2016 <<												
Base Vol:	0	165	0	25	265	0	18	1	15	0	0	15
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	165	0	25	265	0	18	1	15	0	0	15
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project:	0	1	0	0	0	0	12	0	1	0	0	0
Initial Fut:	0	166	0	25	265	0	30	1	16	0	0	15
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	166	0	25	265	0	30	1	16	0	0	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	0	166	0	25	265	0	30	1	16	0	0	15
Critical Gap Module:												
Critical Gp:	xxxxx	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	xxxxx	xxxx	6.2
FollowUpTim:	xxxxx	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	xxxx	xxxx	xxxxx	166	xxxx	xxxxx	489	481	265	xxxx	xxxx	166
Potent Cap.:	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx	493	487	779	xxxx	xxxx	884
Move Cap.:	xxxx	xxxx	xxxxx	1424	xxxx	xxxxx	478	479	779	xxxx	xxxx	884
Volume/Cap:	xxxx	xxxx	xxxx	0.02	xxxx	xxxx	0.06	0.00	0.02	xxxx	xxxx	0.02
Level Of Service Module:												
2Way95thQ:	xxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1
Control Del:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.1
LOS by Move:	*	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	550	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxxx	0.3	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	12.2	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	*	*	*	A	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			12.2			9.1		
ApproachLOS:	*			*			B			A		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Stevens Canyon Road/St. Andrews Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Lanes:	0	0 1	0 0	0	1 0	0 0	0	0 1!	0 0	0	0 0	0 0	1
Initial Vol:	0	166	0	25	265	0	30	1	16	0	0	0	15
ApproachDel:	xxxxxx			xxxxxx			12.2			9.1			

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=47]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=518]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][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=15]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=518]
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]

****

Intersection #2 Stevens Canyon Road/St. Andrews Ave

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Lanes:	0	0 1	0 0	0	1 0	0 0	0	0 1!	0 0	0	0 0	0 0	1
Initial Vol:	0	166	0	25	265	0	30	1	16	0	0	0	15

Major Street Volume: 456
Minor Approach Volume: 47
Minor Approach Volume Threshold: 429

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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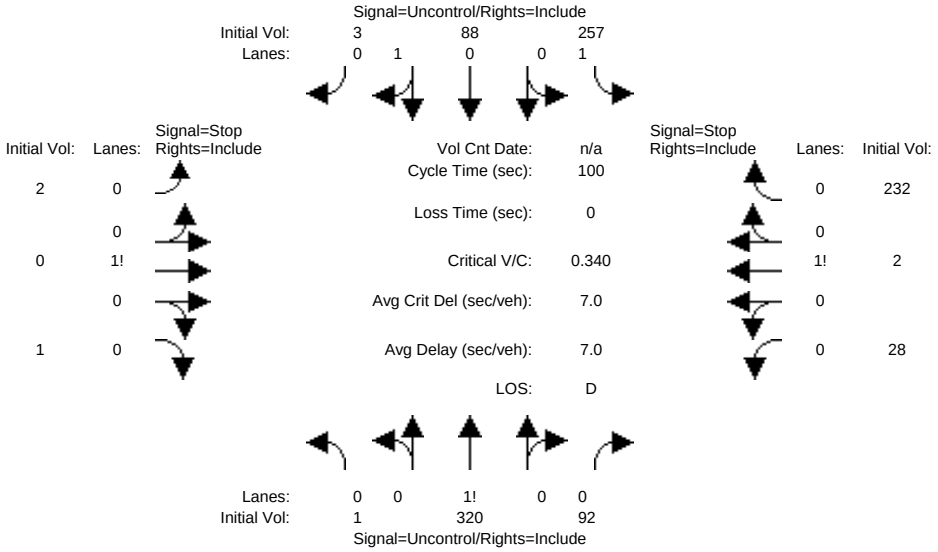
Appendix E – Cumulative Conditions Intersections Level of Service Worksheets

10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #1: Foothill Blvd/McClellan Road



Street Name:	Foothill Blvd-Stevens Canyon Road						McClellan Road					
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:	1	291	84	234	80	3	2	0	1	25	2	211
Growth Adj:	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Initial Bse:	1	320	92	257	88	3	2	0	1	28	2	232
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
0:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1	320	92	257	88	3	2	0	1	28	2	232
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	320	92	257	88	3	2	0	1	28	2	232
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	1	320	92	257	88	3	2	0	1	28	2	232
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	7.1	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	91	xxxx	xxxxx	413	xxxx	xxxxx	1090	1019	90	974	975	366
Potent Cap.:	1516	xxxx	xxxxx	1157	xxxx	xxxxx	194	239	974	233	254	683
Move Cap.:	1516	xxxx	xxxxx	1157	xxxx	xxxxx	105	186	974	193	197	683
Volume/Cap:	0.00	xxxx	xxxx	0.22	xxxx	xxxx	0.02	0.00	0.00	0.14	0.01	0.34
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.9	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	9.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	150	xxxxx	xxxx	531	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	2.7	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	29.5	xxxxx	xxxxx	18.2	xxxxx
Shared LOS:	*	*	*	*	*	*	*	D	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			29.5			18.2		
ApproachLOS:	*			*			D			C		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #1 Foothill Blvd/McClellan Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	1	320	92	257	88	3	2	0	1	28	2	232
ApproachDel:	xxxxxx			xxxxxx			29.5			18.2		

Approach[eastbound][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=3]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1027]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=262]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=1027]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

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

****

Intersection #1 Foothill Blvd/McClellan Road

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0			0 0 1! 0 0		
Initial Vol:	1	320	92	257	88	3	2	0	1	28	2	232

Major Street Volume: 762
Minor Approach Volume: 262
Minor Approach Volume Threshold: 378

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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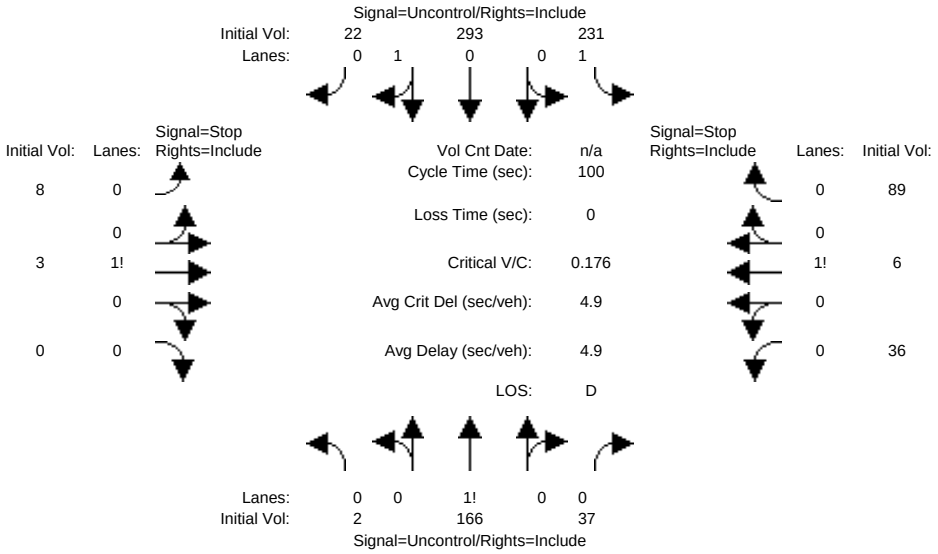
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #1: Foothill Blvd/McClellan Road




```
Street Name:Foothill Blvd-Stevens Canyon Road          McClellan Road
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:       2  151    34   210  266    20     7    3     0    33    5    81
Growth Adj:  1.10 1.10  1.10  1.10 1.10  1.10  1.10 1.10  1.10  1.10 1.10  1.10
Initial Bse:    2  166    37   231  293    22     8    3     0    36    6    89
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
 :              0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    2  166    37   231  293    22     8    3     0    36    6    89
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:     2  166    37   231  293    22     8    3     0    36    6    89
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    2  166    37   231  293    22     8    3     0    36    6    89
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5 xxxxx   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0 xxxxx   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  315 xxxx xxxxx   204 xxxx xxxxx  1002  974 xxxxx   956  966   185
Potent Cap.: 1257 xxxx xxxxx  1380 xxxx xxxxx   223  254 xxxxx   240  257   863
Move Cap.:   1257 xxxx xxxxx  1380 xxxx xxxxx   171  211 xxxxx   206  213   863
Volume/Cap:  0.00 xxxx  xxxx  0.17 xxxx  xxxx  0.05 0.02  xxxx  0.18 0.03  0.10
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.6 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.9 xxxx xxxxx   8.1 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx   181 xxxx xxxxx  xxxx  429 xxxxx
SharedQueue:xxxxx xxxx xxxxx xxxxx xxxx xxxxx   0.2 xxxx xxxxx xxxxx  1.3 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx xxxxx xxxx xxxxx  26.2 xxxx xxxxx xxxxx 17.0 xxxxx
Shared LOS:     *    *     *     *    *     *     D    *     *     *    C     *
ApproachDel:    xxxxxx           xxxxxx              26.2             17.0
ApproachLOS:         *                *                 D                C
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #1 Foothill Blvd/McClellan Road
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	1 0	0 1	0	0 1	0 0	0	0 0	1! 0	0
Initial Vol:	2	166	37	231	293	22	8	3	0	36	6	89
ApproachDel:	xxxxxx			xxxxxx			26.2			17.0		

Approach[eastbound][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=11]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=893]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more approaches.

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=131]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=893]
SUCCEED - Total volume greater than or equal to 800 for intersection with four or more 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 #1 Foothill Blvd/McClellan Road

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	1 0	0 1	0	0 1	0 0	0	0 0	1! 0	0
Initial Vol:	2	166	37	231	293	22	8	3	0	36	6	89

Major Street Volume: 751
Minor Approach Volume: 131
Minor Approach Volume Threshold: 383

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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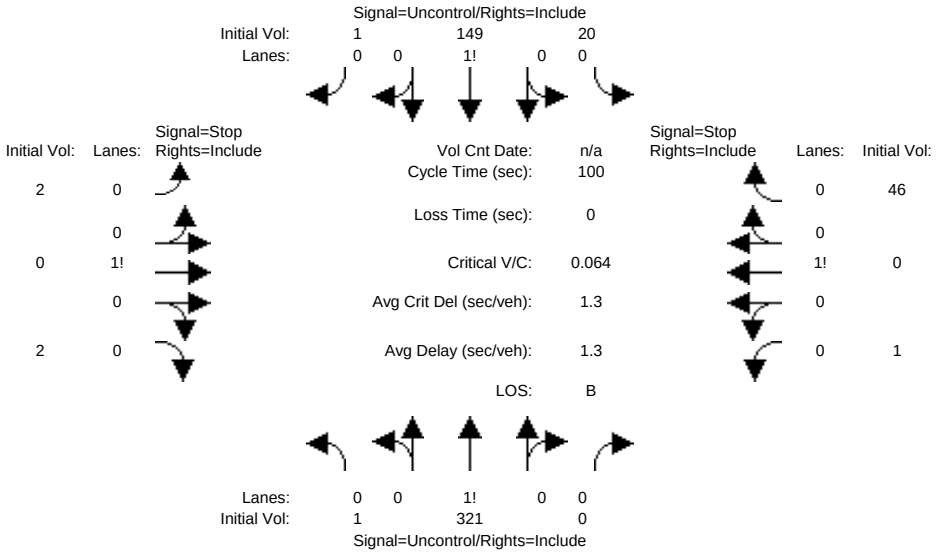
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #2: Stevens Canyon Road/St. Andrews Ave




```
Street Name:       Stevens Canyon Road              St. Andrews 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:       1  292     0    18  135     1     2    0     2     1    0    42
Growth Adj:  1.10 1.10  1.10  1.10 1.10  1.10  1.10 1.10  1.10  1.10 1.10  1.10
Initial Bse:    1  321     0    20  149     1     2    0     2     1    0    46
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
 :              0    0     0     0    0     0     0    0     0     0    0     0
Initial Fut:    1  321     0    20  149     1     2    0     2     1    0    46
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  321     0    20  149     1     2    0     2     1    0    46
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    1  321     0    20  149     1     2    0     2     1    0    46
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:  4.1 xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:  2.2 xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol:  150 xxxx xxxxx   321 xxxx xxxxx   535  512   149   513  513   321
Potent Cap.: 1444 xxxx xxxxx  1250 xxxx xxxxx   459  468   903   475  468   724
Move Cap.:   1444 xxxx xxxxx  1250 xxxx xxxxx   424  460   903   468  460   724
Volume/Cap:  0.00 xxxx  xxxx  0.02 xxxx  xxxx  0.01 0.00  0.00  0.00 0.00  0.06
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:    0.0 xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:  7.5 xxxx xxxxx   7.9 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    A    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  577 xxxxx  xxxx  715 xxxxx
SharedQueue:  0.0 xxxx xxxxx xxxxx xxxx xxxxx xxxxx  0.0 xxxxx xxxxx  0.2 xxxxx
Shrd ConDel:  7.5 xxxx xxxxx xxxxx xxxx xxxxx xxxxx 11.3 xxxxx xxxxx 10.4 xxxxx
Shared LOS:     A    *     *     *    *     *     *    B     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx              11.3             10.4
ApproachLOS:         *                *                 B                B
Note: Queue reported is the number of cars per lane.
```

Peak Hour Delay Signal Warrant Report

```
********************************************************************************
Intersection #2 Stevens Canyon Road/St. Andrews Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	1	321	0	20	149	1	2	0	2	1	0	46
ApproachDel:	xxxxxx			xxxxxx			11.3			10.4		

Approach[eastbound][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=4]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=543]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][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=47]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=543]
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 Stevens Canyon Road/St. Andrews Ave

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 1 0	0	0	0 0 1!	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	1	321	0	20	149	1	2	0	2	1	0	46

Major Street Volume: 492
Minor Approach Volume: 47
Minor Approach Volume Threshold: 409

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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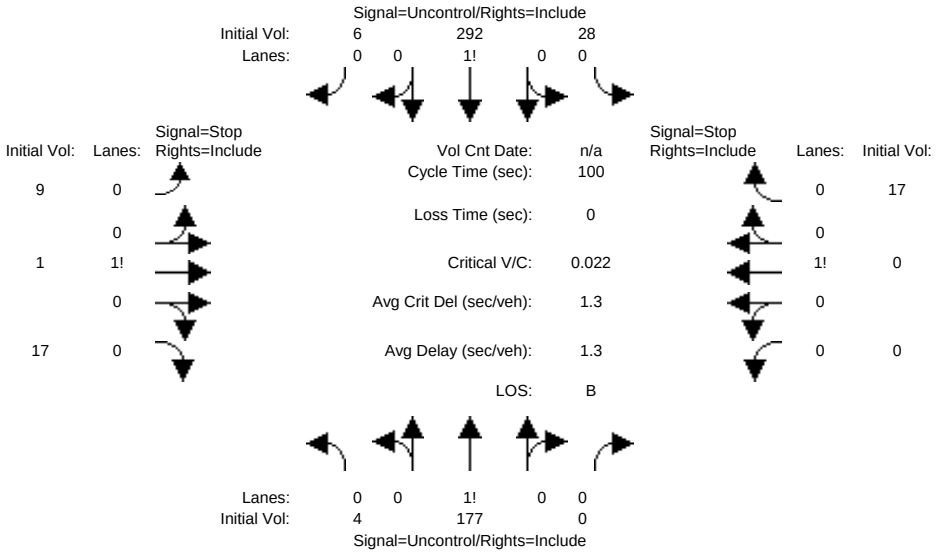
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #2: Stevens Canyon Road/St. Andrews Ave



Street Name:	Stevens Canyon Road						St. Andrews 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:	4	161	0	25	265	5	8	1	15	0	0	15
Growth Adj:	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Initial Bse:	4	177	0	28	292	6	9	1	17	0	0	17
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	4	177	0	28	292	6	9	1	17	0	0	17
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:	4	177	0	28	292	6	9	1	17	0	0	17
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	4	177	0	28	292	6	9	1	17	0	0	17
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	7.1	6.5	6.2	xxxxx	xxxx	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	3.5	4.0	3.3	xxxxx	xxxx	3.3
Capacity Module:												
Cnflict Vol:	297	xxxx	xxxxx	177	xxxx	xxxxx	543	535	294	xxxx	xxxx	177
Potent Cap.:	1276	xxxx	xxxxx	1411	xxxx	xxxxx	453	454	750	xxxx	xxxx	871
Move Cap.:	1276	xxxx	xxxxx	1411	xxxx	xxxxx	437	444	750	xxxx	xxxx	871
Volume/Cap:	0.00	xxxx	xxxx	0.02	xxxx	xxxx	0.02	0.00	0.02	xxxx	xxxx	0.02
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.1	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	0.1
Control Del:	7.8	xxxx	xxxxx	7.6	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	9.2
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	A
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	592	xxxxx	xxxx	xxxx	xxxxx
SharedQueue:	0.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.1	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel:	7.8	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	11.4	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS:	A	*	*	*	*	*	*	B	*	*	*	*
ApproachDel:	xxxxxx			xxxxxx			11.4			9.2		
ApproachLOS:	*			*			B			A		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #2 Stevens Canyon Road/St. Andrews Ave

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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Approach:	North Bound			South Bound			East Bound			West Bound			
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Lanes:	0 1	0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	0	0	1
Initial Vol:	4 177	0		28 292	6		9	1	17	0	0	17	
ApproachDel:	xxxxxx			xxxxxx			11.4			9.2			

Approach[eastbound][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=26]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=549]
FAIL - Total volume less than 650 for intersection with less than four approaches.

Approach[westbound][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=4][total volume=549]
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 Stevens Canyon Road/St. Andrews Ave

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign			
Lanes:	0 1	0	0	0 0	1! 0	0	0 0	1! 0	0	0 0	0	0	1
Initial Vol:	4 177	0		28 292	6		9	1	17	0	0	17	

Major Street Volume: 506
Minor Approach Volume: 26
Minor Approach Volume Threshold: 401

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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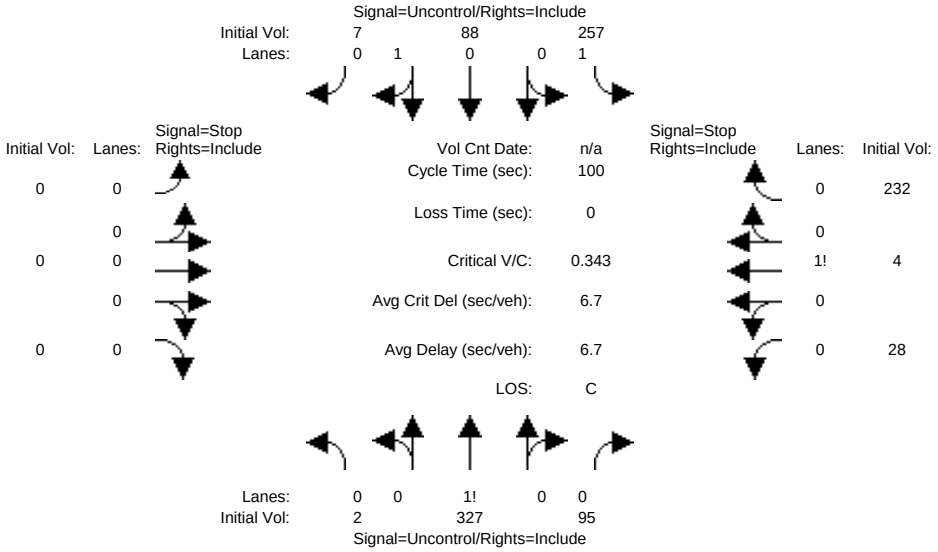
Appendix F – Cumulative plus Project Conditions Intersections Level of Service Worksheets

10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #1: Foothill Blvd/McClellan Road



Street Name:Foothill Blvd-Stevens Canyon Road McClellan Road

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:	2	293	84	234	80	4	0	0	0	25	2	211
Growth Adj:	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Initial Bse:	2	322	92	257	88	4	0	0	0	28	2	232
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project:	0	5	3	0	0	3	0	0	0	0	2	0
Initial Fut:	2	327	95	257	88	7	0	0	0	28	4	232
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:	2	327	95	257	88	7	0	0	0	28	4	232
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	2	327	95	257	88	7	0	0	0	28	4	232
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	95	xxxx	xxxxx	423	xxxx	xxxxx	xxxx	xxxx	xxxxx	986	990	375
Potent Cap.:	1511	xxxx	xxxxx	1147	xxxx	xxxxx	xxxx	xxxx	xxxxx	277	249	676
Move Cap.:	1511	xxxx	xxxxx	1147	xxxx	xxxxx	xxxx	xxxx	xxxxx	229	192	676
Volume/Cap:	0.00	xxxx	xxxx	0.22	xxxx	xxxx	xxxx	xxxx	xxxx	0.12	0.02	0.34
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.9	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.4	xxxx	xxxxx	9.0	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	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	544	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.6	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	17.7	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			17.7		
ApproachLOS:	*			*			*			C		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #1 Foothill Blvd/McClellan Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	1 0	0 1	0	0 0	0 0	0	0 0	1! 0	0
Initial Vol:	2	327	95	257	88	7	0	0	0	28	4	232
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			17.7		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=264]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1042]
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 #1 Foothill Blvd/McClellan Road

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	1 0	0 1	0	0 0	0 0	0	0 0	1! 0	0
Initial Vol:	2	327	95	257	88	7	0	0	0	28	4	232

Major Street Volume: 778
Minor Approach Volume: 264
Minor Approach Volume Threshold: 371

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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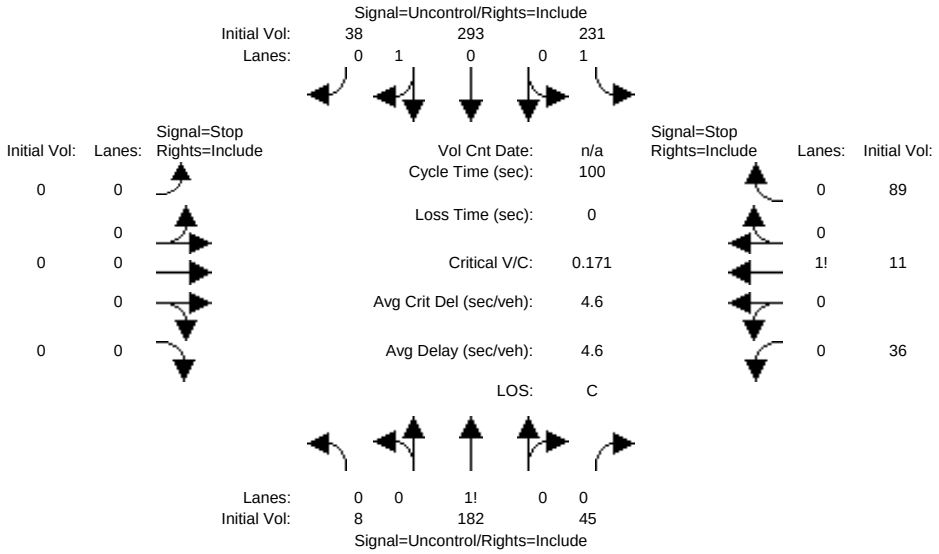
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #1: Foothill Blvd/McClellan Road



Street Name:	Foothill Blvd-Stevens Canyon Road						McClellan Road					
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:	6	158	37	210	266	25	0	0	0	33	5	81
Growth Adj:	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
Initial Bse:	7	174	41	231	293	28	0	0	0	36	6	89
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Project:	1	8	4	0	0	10	0	0	0	0	5	0
Initial Fut:	8	182	45	231	293	38	0	0	0	36	11	89
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:	8	182	45	231	293	38	0	0	0	36	11	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	8	182	45	231	293	38	0	0	0	36	11	89
Critical Gap Module:												
Critical Gp:	4.1	xxxx	xxxxx	4.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	6.4	6.5	6.2
FollowUpTim:	2.2	xxxx	xxxxx	2.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	3.5	4.0	3.3
Capacity Module:												
Cnflict Vol:	330	xxxx	xxxxx	227	xxxx	xxxxx	xxxx	xxxx	xxxxx	993	1011	204
Potent Cap.:	1241	xxxx	xxxxx	1354	xxxx	xxxxx	xxxx	xxxx	xxxxx	275	241	842
Move Cap.:	1241	xxxx	xxxxx	1354	xxxx	xxxxx	xxxx	xxxx	xxxxx	237	199	842
Volume/Cap:	0.01	xxxx	xxxx	0.17	xxxx	xxxx	xxxx	xxxx	xxxx	0.15	0.05	0.11
Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.6	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	7.9	xxxx	xxxxx	8.2	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	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	436	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	1.3	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	16.9	xxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			16.9		
ApproachLOS:	*			*			*			C		

Note: Queue reported is the number of cars per lane.

Peak Hour Delay Signal Warrant Report

****

Intersection #1 Foothill Blvd/McClellan Road

****

Future Volume Alternative: Peak Hour Warrant NOT Met

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	1 0	0 1	0	0 0	0 0	0	0 0	1! 0	0
Initial Vol:	8	182	45	231	293	38	0	0	0	36	11	89
ApproachDel:	xxxxxx			xxxxxx			xxxxxx			16.9		

Approach[westbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.6]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=136]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=931]
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).

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Peak Hour Volume Signal Warrant Report [Urban]

****

Intersection #1 Foothill Blvd/McClellan Road

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0	1! 0	0	1 0	0 1	0	0 0	0 0	0	0 0	1! 0	0
Initial Vol:	8	182	45	231	293	38	0	0	0	36	11	89

Major Street Volume: 795
Minor Approach Volume: 136
Minor Approach Volume Threshold: 364

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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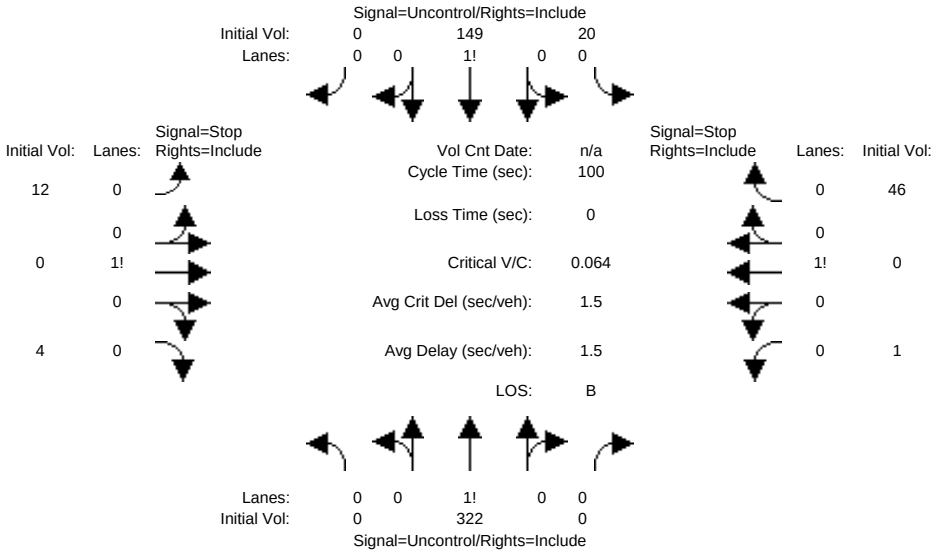
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #2: Stevens Canyon Road/St. Andrews Ave




```
Street Name:       Stevens Canyon Road              St. Andrews 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  293     0    18  135     0     4    0     3     1    0    42
Growth Adj:  1.10 1.10  1.10  1.10 1.10  1.10  1.10 1.10  1.10  1.10 1.10  1.10
Initial Bse:    0  322     0    20  149     0     4    0     3     1    0    46
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Project:        0    0     0     0    0     0     8    0     1     0    0     0
Initial Fut:    0  322     0    20  149     0    12    0     4     1    0    46
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  322     0    20  149     0    12    0     4     1    0    46
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  322     0    20  149     0    12    0     4     1    0    46
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2   7.1  6.5   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3   3.5  4.0   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   322 xxxx xxxxx   534  510   149   513  510   322
Potent Cap.: xxxx xxxx xxxxx  1249 xxxx xxxxx   460  469   904   475  469   723
Move Cap.:   xxxx xxxx xxxxx  1249 xxxx xxxxx   426  462   904   467  462   723
Volume/Cap:  xxxx xxxx  xxxx  0.02 xxxx  xxxx  0.03 0.00  0.00  0.00 0.00  0.06
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.0 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx xxxxx
Control Del:xxxxx xxxx xxxxx   7.9 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx xxxxx
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     *
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  493 xxxxx  xxxx  714 xxxxx
SharedQueue:xxxxx xxxx xxxxx   0.0 xxxx xxxxx xxxxx  0.1 xxxxx xxxxx  0.2 xxxxx
Shrd ConDel:xxxxx xxxx xxxxx   7.9 xxxx xxxxx xxxxx 12.6 xxxxx xxxxx 10.4 xxxxx
Shared LOS:     *    *     *     A    *     *     *    B     *     *    B     *
ApproachDel:    xxxxxx           xxxxxx              12.6             10.4
ApproachLOS:         *                *                 B                B
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Stevens Canyon Road/St. Andrews Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 1	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	0 322		0	20 149		0	12	0	4	1	0	46
ApproachDel:	xxxxxx			xxxxxx			12.6			10.4		

Approach[eastbound][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=4][total volume=555]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][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=47]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=555]
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]

****

Intersection #2 Stevens Canyon Road/St. Andrews Ave

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 1	0	0	0 0 1!	0	0	0 0 1!	0	0
Initial Vol:	0 322		0	20 149		0	12	0	4	1	0	46

Major Street Volume: 491
Minor Approach Volume: 47
Minor Approach Volume Threshold: 409

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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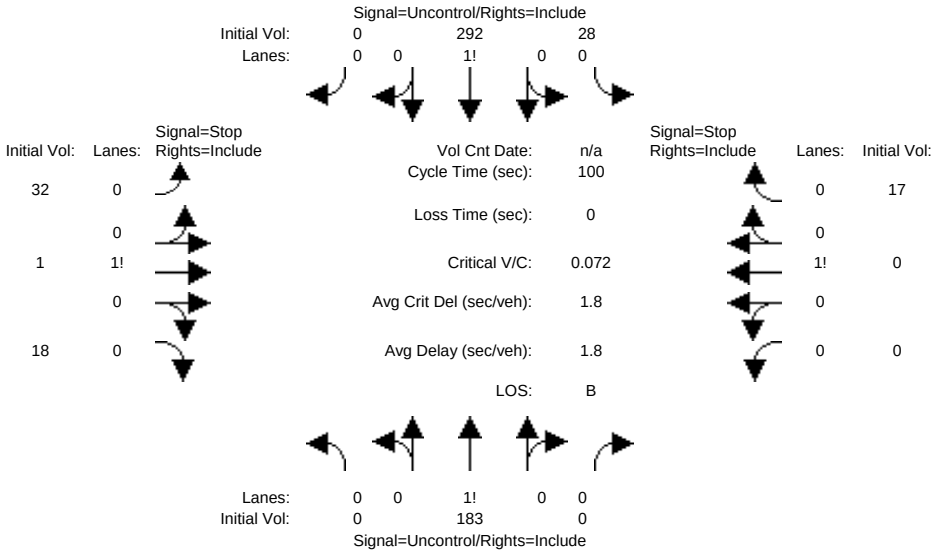
10625 South Foothill Boulevard Traffic Impact Study Report
City of Cupertino, CA

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

Intersection #2: Stevens Canyon Road/St. Andrews Ave




```
Street Name:       Stevens Canyon Road              St. Andrews 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  165     0    25  265     0    18    1    15     0    0    15
Growth Adj:  1.10 1.10  1.10  1.10 1.10  1.10  1.10 1.10  1.10  1.10 1.10  1.10
Initial Bse:    0  182     0    28  292     0    20    1    17     0    0    17
Added Vol:      0    0     0     0    0     0     0    0     0     0    0     0
Project:        0    1     0     0    0     0    12    0     1     0    0     0
Initial Fut:    0  183     0    28  292     0    32    1    18     0    0    17
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  183     0    28  292     0    32    1    18     0    0    17
Reduct Vol:     0    0     0     0    0     0     0    0     0     0    0     0
FinalVolume:    0  183     0    28  292     0    32    1    18     0    0    17
------------|---------------||---------------||---------------||---------------|
Critical Gap Module:
Critical Gp:xxxxx xxxx xxxxx   4.1 xxxx xxxxx   7.1  6.5   6.2 xxxxx xxxx   6.2
FollowUpTim:xxxxx xxxx xxxxx   2.2 xxxx xxxxx   3.5  4.0   3.3 xxxxx xxxx   3.3
------------|---------------||---------------||---------------||---------------|
Capacity Module:
Cnflict Vol: xxxx xxxx xxxxx   183 xxxx xxxxx   537  529   292  xxxx xxxx   183
Potent Cap.: xxxx xxxx xxxxx  1405 xxxx xxxxx   458  458   752  xxxx xxxx   865
Move Cap.:   xxxx xxxx xxxxx  1405 xxxx xxxxx   442  449   752  xxxx xxxx   865
Volume/Cap:  xxxx xxxx  xxxx  0.02 xxxx  xxxx  0.07 0.00  0.02  xxxx xxxx  0.02
------------|---------------||---------------||---------------||---------------|
Level Of Service Module:
2Way95thQ:   xxxx xxxx xxxxx   0.1 xxxx xxxxx  xxxx xxxx xxxxx  xxxx xxxx   0.1
Control Del:xxxxx xxxx xxxxx   7.6 xxxx xxxxx xxxxx xxxx xxxxx xxxxx xxxx   9.2
LOS by Move:    *    *     *     A    *     *     *    *     *     *    *     A
Movement:     LT - LTR - RT    LT - LTR - RT    LT - LTR - RT    LT - LTR - RT
Shared Cap.: xxxx xxxx xxxxx  xxxx xxxx xxxxx  xxxx  516 xxxxx  xxxx xxxx xxxxx
SharedQueue:xxxxx xxxx xxxxx   0.1 xxxx xxxxx xxxxx  0.3 xxxxx xxxxx xxxx xxxxx
Shrd ConDel:xxxxx xxxx xxxxx   7.6 xxxx xxxxx xxxxx 12.7 xxxxx xxxxx xxxx xxxxx
Shared LOS:     *    *     *     A    *     *     *    B     *     *    *     *
ApproachDel:    xxxxxx           xxxxxx              12.7              9.2
ApproachLOS:         *                *                 B                A
Note: Queue reported is the number of cars per lane.
                  Peak Hour Delay Signal Warrant Report
********************************************************************************
Intersection #2 Stevens Canyon Road/St. Andrews Ave
********************************************************************************
Future Volume Alternative: Peak Hour Warrant NOT Met
```

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Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 1	0	0	0 0 1!	0	0	0 0 0	0	1
Initial Vol:	0 183		0	28	292	0	32	1	18	0	0	17
ApproachDel:	xxxxxx			xxxxxx			12.7			9.2		

Approach[eastbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=50]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=568]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

Approach[westbound][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=4][total volume=568]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

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

****

Intersection #2 Stevens Canyon Road/St. Andrews Ave

****

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:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Lanes:	0 0 1	0	0	0 1	0	0	0 0 1!	0	0	0 0 0	0	1
Initial Vol:	0 183		0	28	292	0	32	1	18	0	0	17

Major Street Volume: 502
Minor Approach Volume: 50
Minor Approach Volume Threshold: 403

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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TECHNICAL MEMORANDUM

Date: June 17, 2019

To: Terence J. Szewczyk. P.E.
TS/Civil Engineering, Inc

From: Chris D. Kinzel, P.E.
Vice President

Subject: ***Sight Distance on Stevens Canyon Road***

The City of Cupertino has requested that the stopping sight distance be checked along Stevens Canyon Road near the proposed residential development in the vicinity of intersections with both McClellan Road and St. Andrews Avenue. The proposed mixed use development is to be located on the west side Stevens Canyon Road with driveways opposite the two existing T-intersections at McClellan Road and at St. Andrews Avenue. The City specifically requested a review of sight distance for traffic exiting the southern driveway (opposite St. Andrews Avenue). At this location exiting drivers looking to the left (north) will encounter potential sight restrictions related to a new retail building located close to the west property line and a curve in the roadway at McClellan Road. North of that point Stevens Canyon Road changes its name to Foothill Boulevard.

The speed limit along this section of Stevens Canyon Road is 30 mph, with a 30 mph speed limit sign and a 30 mph pavement marking for southbound traffic located directly along the property frontage. The stopping sight distance for 30 mph is 200 feet; for 35 mph it is 250 feet and for 40 mph it is 300 feet. Along the property frontage, Stevens Canyon Road will have a curb to curb width of 40 feet with no parking allowed on the property frontage. A painted bicycle lane with an estimated width of six feet will be located along the property frontage.

I have attached a site plan with line of sight estimations shown. In the illustration, the driver's vehicle is located at the curb line with the driver's eye about seven feet back of curb. It is assumed the driver will ease out into the roadway, avoiding pedestrians and bicyclists that might be in the vicinity. In this example, the driver can see an oncoming vehicle 369 feet to the north, equating to a stopping distance of greater than 40 mph. Even if the motorist only first notices a

southbound vehicle at the middle of the intersection with McClelland Road, that would provide a sight distance of about 275 feet, which is still over 35 mph.

TJKM concludes that the sight distance from the southern driveway is adequate for local conditions. I will be happy to respond to questions on this.

DISCLAIMER: TS CIVIL ENGINEERING, INC. ONLY ACKNOWLEDGES ORIGINAL SIGNED AND STAMPED PLANS AND DRAWINGS. NO RESPONSIBILITY OR LIABILITY IS EXPRESSED OR IMPLIED FOR ELECTRONIC DATA AND/OR REPRODUCED PLANS AND DRAWINGS.

BASIS OF BEARINGS: (FROM TOPOGRAPHIC MAP)

THE BEARING, NORTH 13°58'00" EAST, BETWEEN THE TWO FOUND CITY MONUMENTS ON THE MONUMENT LINE OF STEVENS CANYON ROAD AS SHOWN ON THAT CERTAIN RECORD OF SURVEY FILED FOR RECORD ON OCTOBER 19, 1964 IN BOOK 186 OF MAPS AT PAGE 44 IN THE OFFICE OF THE RECORDER, SANTA CLARA COUNTY, WAS TAKEN AS THE BASIS OF ALL BEARINGS SHOWN ON THIS MAP.

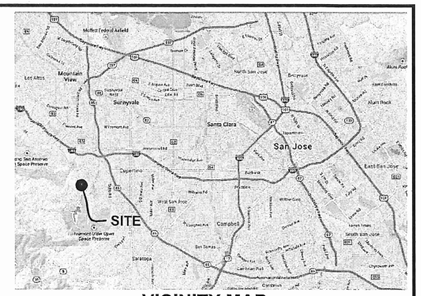
BENCHMARK: (FROM TOPOGRAPHIC MAP)

DATUM: NAVD88
GEOID: 2012A
DERIVED FROM RTN GPS.

H.LYON

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
ADJACENT PROPERTY LINE		
STREET CENTER LINE		
BUILDING SETBACK LINES		
EASEMENT		
ROAD/PAVEMENT		
CURB		
CURB AND GUTTER		
CONCRETE		
CONTOUR MAJOR	530	530
CONTOUR MINOR	534	534
BUILDING		
BUILDING 2nd FLOOR		
BLOCK RETAINING WALL		



VICINITY MAP

N.T.S.

NOTES:

1. OWNER: SCR ENTERPRISES, LLC, 15700 WINCHESTER BLVD, LOS GATOS, CA 95030
2. CIVIL ENGINEER: TERENCE J. SZEWCZYK, C35527, TSICIVIL ENGINEERING, INC., 1776 TECHNOLOGY DRIVE, SAN JOSE, CA 95110, (408) 452-9300 (OFFICE), (408) 837-7550 (FAX)
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15. TELEPHONE BY AT&T
16. PARKING:
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    B. PROVIDED (TOTAL STALLS): 37
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       II. HANDICAPPED: 5
17. HOURS OF OPERATIONS: TBD
18. PAVING AREA (SQ. FT. & % OF NET LOT AREA)
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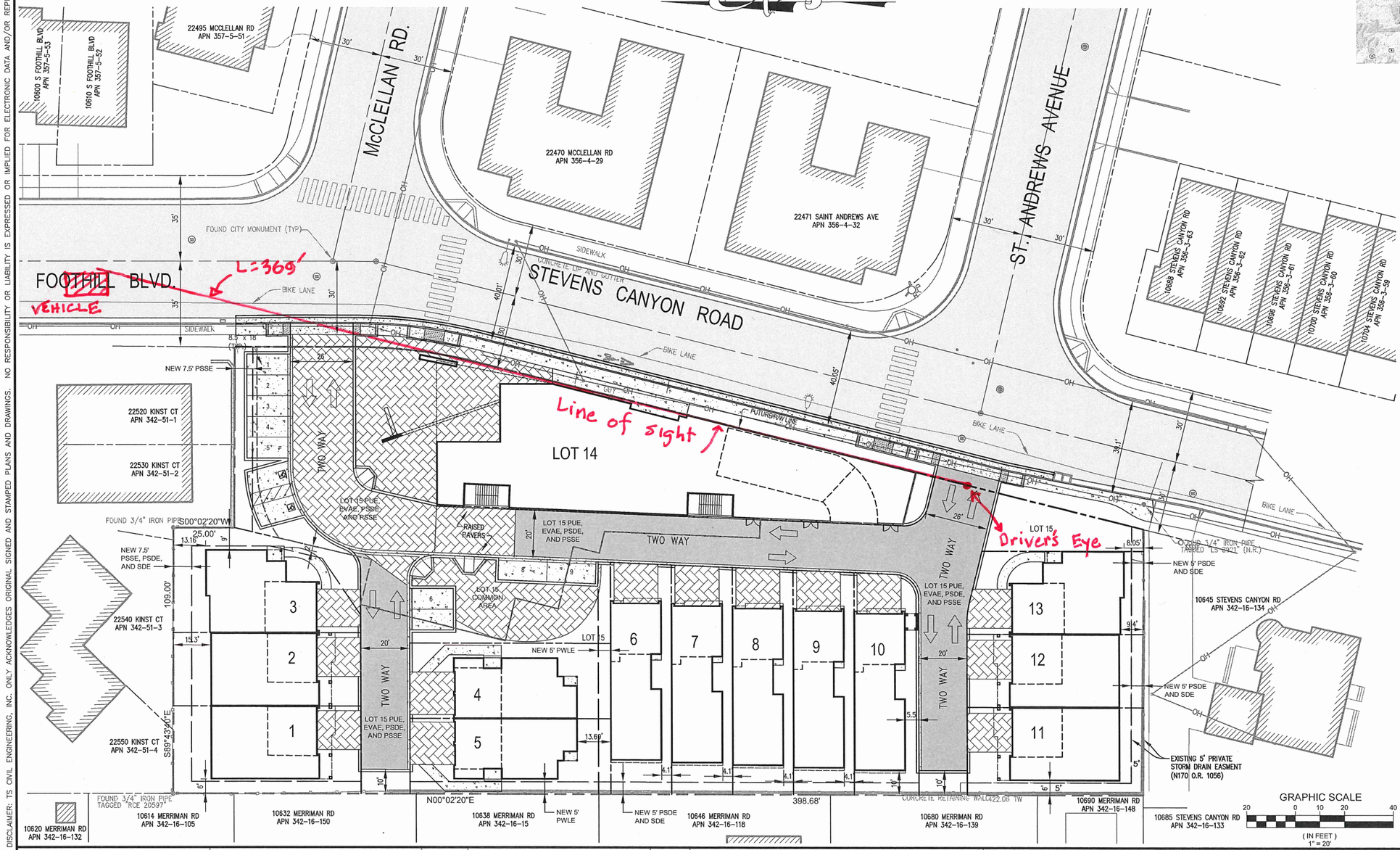


GRAPHIC SCALE
20 0 10 20 40
(IN FEET)
1" = 20'

DESIGNED UNDER THE SUPERVISION OF:
TERENCE J. SZEWCZYK, REGISTERED PROFESSIONAL ENGINEER, EXP. 3-30-20, STATE OF CALIFORNIA
3-11-19
TERENCE J. SZEWCZYK, STATE OF CALIFORNIA, LICENSE NUMBER 35527
EXPIRATION DATE: 09/30/20

BY	REVISIONS	DATE
6		
5		
4		
3		
2		
1		

TS CIVIL ENGINEERING, INC.
1776 TECHNOLOGY DRIVE
SAN JOSE, CA. 95110
PH: 408.452.9300 FAX: 408.837.7550

CANYON CROSSINGS

TENTATIVE MAP
LAND OF SCR ENTERPRISES, LLC
10625 S. FOOTHILL BLVD
APN: 342-16-087
CUPERTINO SANTA CLARA COUNTY CALIFORNIA

DATE:	3-11-19
SCALE:	1"=20'
DRAWN BY:	DKH
SURVEYED BY:	JMS
PROJ ENGR:	TJS
CHECK BY:	TJS

SHEET NO. **C1** OF 16 SHEETS
JOB NO. 14-214

03/11/2019 4:34pm – N:\2014 JOBS\14-214\dwg\14-214 C1 TENTATIVE MAP.dwg – C1

TECHNICAL MEMORANDUM

Date: June 17, 2019

To: Terence J. Szewczyk. P.E.
TS/Civil Engineering, Inc

From: Chris D. Kinzel, P.E.
Vice President

Subject: ***Sight Distance on Stevens Canyon Road***

The City of Cupertino has requested that the stopping sight distance be checked along Stevens Canyon Road near the proposed residential development in the vicinity of intersections with both McClellan Road and St. Andrews Avenue. The proposed mixed use development is to be located on the west side Stevens Canyon Road with driveways opposite the two existing T-intersections at McClellan Road and at St. Andrews Avenue. The City specifically requested a review of sight distance for traffic exiting the southern driveway (opposite St. Andrews Avenue). At this location exiting drivers looking to the left (north) will encounter potential sight restrictions related to a new retail building located close to the west property line and a curve in the roadway at McClellan Road. North of that point Stevens Canyon Road changes its name to Foothill Boulevard.

The speed limit along this section of Stevens Canyon Road is 30 mph, with a 30 mph speed limit sign and a 30 mph pavement marking for southbound traffic located directly along the property frontage. The stopping sight distance for 30 mph is 200 feet; for 35 mph it is 250 feet and for 40 mph it is 300 feet. Along the property frontage, Stevens Canyon Road will have a curb to curb width of 40 feet with no parking allowed on the property frontage. A painted bicycle lane with an estimated width of six feet will be located along the property frontage.

I have attached a site plan with line of sight estimations shown. In the illustration, the driver's vehicle is located at the curb line with the driver's eye about seven feet back of curb. It is assumed the driver will ease out into the roadway, avoiding pedestrians and bicyclists that might be in the vicinity. In this example, the driver can see an oncoming vehicle 369 feet to the north, equating to a stopping distance of greater than 40 mph. Even if the motorist only first notices a southbound vehicle at the middle of the intersection with McClelland Road, that would provide a sight distance of about 275 feet, which is still over 35 mph.

TJKM concludes that the sight distance from the southern driveway is adequate for local conditions. I will be happy to respond to questions on this.

DISCLAIMER: TS CIVIL ENGINEERING, INC. ONLY ACKNOWLEDGES ORIGINAL SIGNED AND STAMPED PLANS AND DRAWINGS. NO RESPONSIBILITY OR LIABILITY IS EXPRESSED OR IMPLIED FOR ELECTRONIC DATA AND/OR REPRODUCED PLANS AND DRAWINGS.

BASIS OF BEARINGS: (FROM TOPOGRAPHIC MAP)

THE BEARING, NORTH 13°58'00" EAST, BETWEEN THE TWO FOUND CITY MONUMENTS ON THE MONUMENT LINE OF STEVENS CANYON ROAD AS SHOWN ON THAT CERTAIN RECORD OF SURVEY FILED FOR RECORD ON OCTOBER 19, 1964 IN BOOK 186 OF MAPS AT PAGE 44 IN THE OFFICE OF THE RECORDER, SANTA CLARA COUNTY, WAS TAKEN AS THE BASIS OF ALL BEARINGS SHOWN ON THIS MAP.

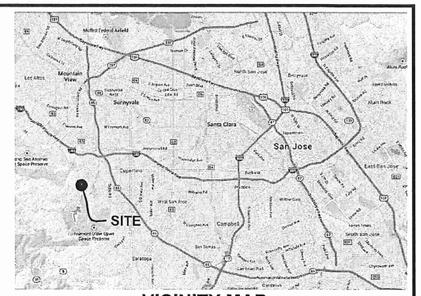
BENCHMARK: (FROM TOPOGRAPHIC MAP)

DATUM: NAVD88
GEOID: 2012A
DERIVED FROM RTN GPS.

H.LYON

LEGEND

	EXISTING	PROPOSED
PROPERTY LINE		
ADJACENT PROPERTY LINE		
STREET CENTER LINE		
BUILDING SETBACK LINES		
EASEMENT		
ROAD/PAVEMENT		
CURB		
CURB AND GUTTER		
CONCRETE		
CONTOUR MAJOR	530	530
CONTOUR MINOR	534	534
BUILDING		
BUILDING 2nd FLOOR		
BLOCK RETAINING WALL		



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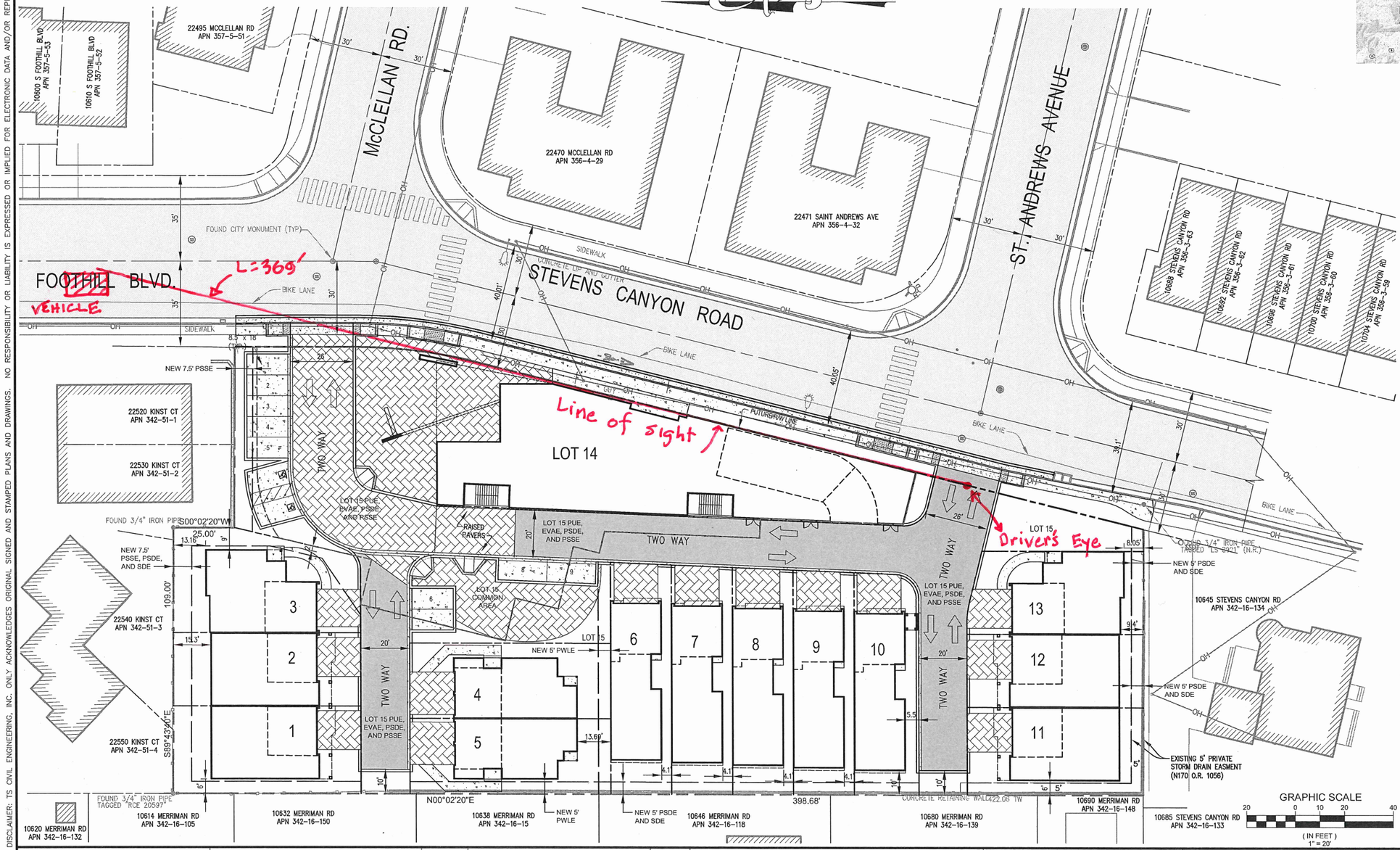

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