

# Appendix A

Draft Transportation Analysis



# Local Transportation Analysis for the 3001 El Camino Real Project



Prepared for the City of Palo Alto

Submitted by  
**W-Trans**

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# Executive Summary

The project proposed for 3001 El Camino Real includes the demolition of an existing vacant building and the construction of 129 affordable housing units in its place. This project would be expected to generate an average of 621 net-new daily trips, including 46 trips during the a.m. peak hour and 59 trips during the p.m. peak hour.

This project is presumed to have a less-than-significant transportation impact on vehicle miles traveled (VMT) since the estimated VMT per capita of 5.84 is below the significance threshold of 11.33 miles per capita and the project would be comprised of 100 percent affordable housing.

Three intersections were evaluated for this study. The intersection of El Camino Real/Page Mill Road is expected to operate at LOS F with or without the project during the p.m. peak hour under the Cumulative Condition. The unsignalized intersection of El Camino Real/Olive Avenue is anticipated to operate at LOS F under every condition evaluated, with or without the project. The intersection of El Camino Real/Hansen Way would operate acceptably under all conditions with or without the project.

The Peak Hour Volume Traffic Signal Warrant, which indicates the potential need for a traffic signal, would be met during the p.m. peak hours under Background plus Project and Cumulative plus Project volumes at the unsignalized intersection of El Camino Real/Olive Avenue. As the City has no policy relative to adding trips to an unsignalized intersection already operating unacceptably, the project's effect is not considered to be inconsistent with Council's adopted Local Transportation Impact Policy. The City of Palo Alto may wish to place this location on a list to be further evaluated if volumes increase as indicated by the model and employ its own criteria for ranking and prioritization, including the study of other signal warrants and collision history, when considering the need and timing for traffic signal installation. Because this intersection is also within Caltrans right-of-way, signalization of the intersection would also require Caltrans approval. Caltrans similarly would have its own criteria for ranking and prioritization when considering the need and timing for traffic signal installation.

Vehicles would primarily access the project site via a driveway on Olive Avenue. Sight distances at this driveway for both entering and exiting drivers is adequate. Pedestrian access between the project site and surrounding streets would be acceptable, as would bicycle and transit access.

As a 100-percent affordable housing development located near a major transit stop, the proposed project is eligible for a parking reduction under the State Density Bonus Law and is therefore exempt from City code requirements regarding the minimum number of off-street spaces provided. It is noted that the proposed parking supply of 103 spaces is less than what is ordinarily required under City Code.

The proposed bicycle parking supply of 142 spaces exceeds the requirement of the City's Code.

# Introduction

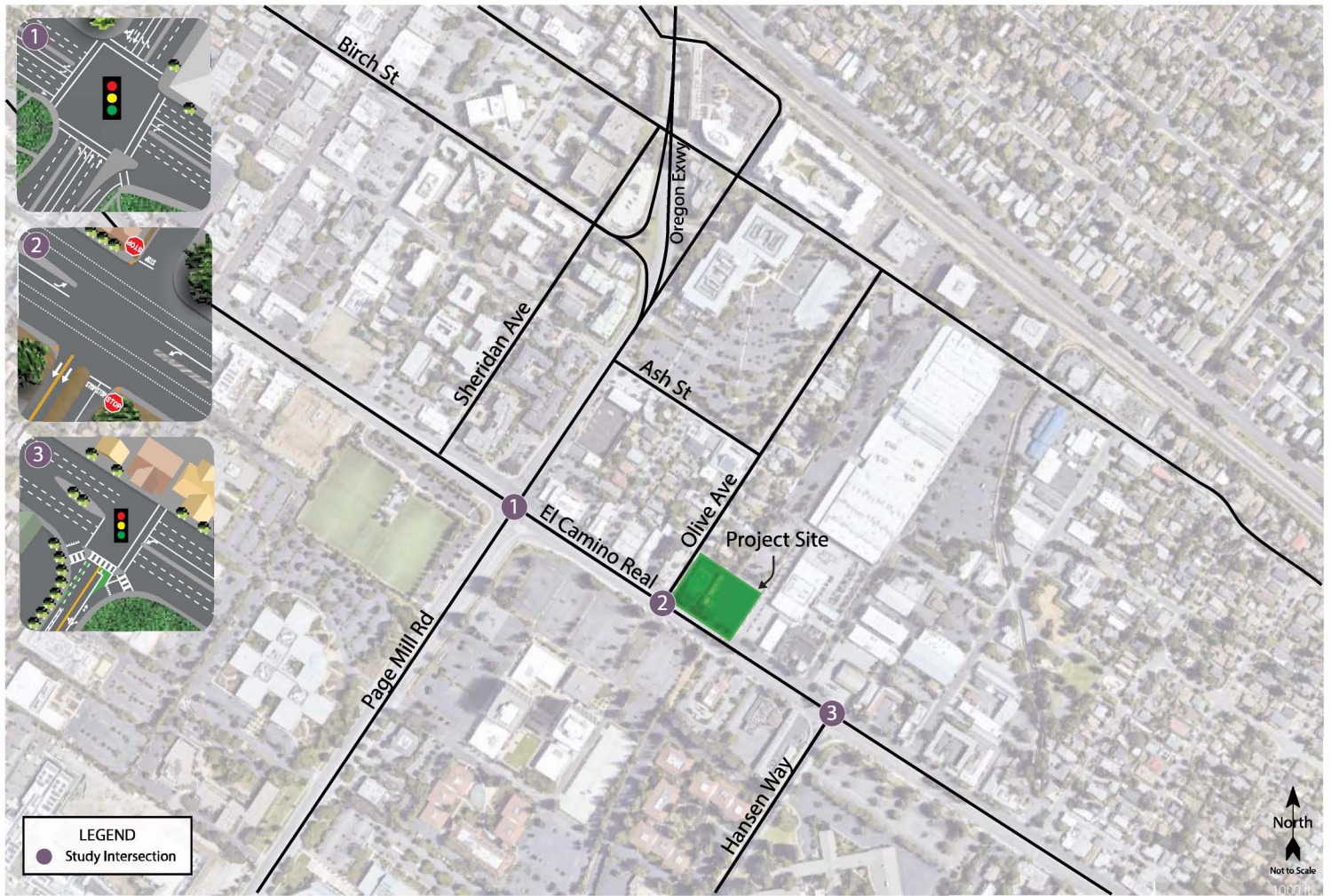
This report presents an analysis of the potential transportation impacts that would be associated with the proposed affordable housing development consisting of 129 residential units to be located at 3001 El Camino Real in the City of Palo Alto. The study was completed in accordance with the criteria established by the City of Palo Alto in the City's *Local Transportation Impact Analysis Policy* and is consistent with standard traffic engineering techniques.

## Prelude

The purpose of a transportation impact study is to provide City staff and policy makers with data that they can use to make an informed decision regarding the potential transportation impacts and effects on traffic operation of a proposed project, and any associated improvements that would be required in order to mitigate these impacts and effects to an acceptable level under CEQA, the City's General Plan, or other policies. Impacts relative to access for pedestrians, bicyclists, and to transit are addressed in the context of the CEQA criteria. Consistent with SB 743, the project's transportation impacts were analyzed using VMT. While no longer required as part of the CEQA review process, vehicular traffic service levels at key intersections were also evaluated for consistency with the City of Palo Alto City Council's adopted policies by determining the number of new trips that the proposed use would be expected to generate, distributing these trips to the surrounding street system based on anticipated travel patterns specific to the proposed project, then analyzing the potential impact the new traffic would be expected to have on the study intersections.

## Project Profile

The proposed project would include the demolition of two vacant buildings to make way for the construction of 129 affordable housing units. Pedestrian access to the building would be provided via various pedestrian entrances facing the adjacent streets of El Camino Real, Acacia Avenue and Olive Avenue. Vehicles would enter and exit the project site from a driveway located on Olive Avenue approximately 140 feet east of El Camino Real. The project site is located at 3001 El Camino Real in the City of Palo Alto, as shown in Figure 1.



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Local Transportation Analysis for 3001 El Camino Real Project  
**Figure 1 – Study Area and Existing Lane Configurations**







In the immediate project area, Class II bike lanes exist west of El Camino Real on both Hansen Way and Page Mill Road. Bicyclists ride in the roadway and/or on sidewalks along all other streets within the project study area. Table 1 summarizes the existing and planned bicycle facilities in the project vicinity, as contained in the *City of Palo Alto Bicycle & Pedestrian Transportation Plan*, 2012.

**Table 1 – Bicycle Facility Summary**

<b>Status Facility</b>	<b>Class</b>	<b>Length (miles)</b>	<b>Begin Point</b>	<b>End Point</b>
<b>Existing</b>				
Page Mill Rd	II	1.4	El Camino Real	Berry Hill Ct
Hansen Wy	II	0.5	El Camino Real	Page Mill Rd
<b>Planned</b>				
Page Mill Rd	I	0.5	Hanover St	El Camino Real
Portage Rd	II	0.3	El Camino Real	Park Blvd
El Camino Real	II	1.2	Page Mill Rd	Maybell Ave
Oregon Expy	III	2.0	El Camino Real	W Bayshore Rd

Source: *City of Palo Alto Bicycle & Pedestrian Transportation Plan*, Alta Planning & Design, 2012

## Transit Facilities

Development sites which are located within a half-mile (2,640-foot) walk of a transit stop are generally considered to be adequately served by transit.

### *Santa Clara Valley Transportation Authority (VTA)*

The Santa Clara Valley Transportation Authority (VTA) provides fixed route bus service and light rail train service in Santa Clara County. Two bicycles can be carried on most VTA buses. Bike rack space is on a first-come, first-served basis. Additional bicycles are allowed on VTA buses at the discretion of the driver.

Within a half-mile walk of the project site there are bus stops for Routes 22, 89, 522, Rapid 522, Express 101, Express 102, Express 103 and Express 104. The combined service areas of these routes provide access between the project site and a variety of destinations such as the Palo Alto Transit Center, Palo Alto VA Hospital, Stanford Research Park, Santa Clara University, Winchester Light Rail Station, Santa Teresa Light Rail Station, Downtown San Jose, and Eastridge Transit Center. Bus service for these routes is generally available daily for 24 hours a day at 15- to 30-minute headways.

Dial-a-ride, also known as paratransit or door-to-door service, is available for those who are unable to independently use the transit system due to a physical or mental disability. VTA Paratransit is designed to serve the needs of individuals with disabilities within Palo Alto and Santa Clara County.

### *Dumbarton Express*

The Dumbarton Express service is provided through a consortium of AC Transit, Bay Area Rapid Transit (BART), Union City Transit, Caltrain, SamTrans and the VTA. This service is provided on weekdays as an express bus service across the Dumbarton Bridge, connecting Palo Alto and Menlo Park with Union City, Fremont, and Newark. Route DB1 provides services from the Union City BART Station to the Stanford research park and operates from 5:10 a.m. to 8:30 p.m. with headways ranging from 15 to 25 minutes depending on the time of day. The nearest bus stop for Route DB1 is located approximately 0.3 miles away from the project site at the intersection of Page Mill Road/Ramos Way. Weekend service is not provided on Route DB1.



### *Stanford Research Park Shuttle*

The Research Park shuttle provides rides from the Palo Alto Transit Center to the Research Park during the morning commute period and back to the Palo Alto Transit Center during the evening commute. Shuttles are typically available at 30-minute headways between 7:00 a.m. to 10:00 a.m. in the morning and 3:20 p.m. to 7:00 pm in the evening. The nearest shuttle stop for this service is located approximately 0.3 miles away at the intersection of Page Mill Road/Ramos Way.

### *Caltrain*

Caltrain is the commuter rail line serving the San Francisco Peninsula. It connects Palo Alto with San Francisco to the north and San Jose and Gilroy to the south. The California Avenue Caltrain Station is located at 101 California Avenue which is approximately 0.5 miles from the project site and less than one-half mile radius. Weekday train service is provided at this station with both northbound and southbound trains at approximately 30-minute headways from 5:00 a.m. to 10:30 p.m.

Both bicycle racks and lockers are provided at the train station. Bicycle racks are available on a first-come-first-served basis, while lockers must be reserved. Paid vehicle parking is available at the station for riders.

### *On-Demand Transportation Services*

On-demand private vehicle services (e.g., taxi, Uber, Lyft, etc.) are available in Palo Alto 24 hours a day. These vehicles can be used for trips both locally and to farther destinations.

# Vehicle Miles Traveled (VMT)

*Senate Bill (SB) 743* established the increase in Vehicle Miles Traveled (VMT) associated with a project as the basis for determining traffic impacts. Consideration was given to the project's potential generation of Vehicle Miles Traveled (VMT). Guidance provided by both the California Governor's Office of Planning and Research (OPR) in the publication *Technical Advisory on Evaluating Transportation Impacts in CEQA*, 2018, and the *City of Palo Alto VMT Transportation Analysis Methodology Under CEQA* (dated June 15, 2020), was used. Guidance provided in these documents recommends the use of screening thresholds to quickly identify when a project should be expected to cause a less-than-significant impact without conducting a detailed study. (See CEQA Guidelines, 15036(c)(3)(C), 15128, and Appendix G.) The Palo Alto VMT Criteria states that projects consisting of 100-percent affordable housing can be presumed to cause a less-than-significant VMT impact. This policy is consistent with OPR guidance which states that there is evidence supporting a presumption of a less-than-significant impact for a 100-percent affordable residential development in infill locations.

The proposed project at 3001 El Camino Real would satisfy the affordable housing screening criteria since 100-percent of the dwelling units would be affordable housing units. The City of Palo Alto, as the lead agency, may at their discretion choose to identify this project as having a less-than-significant impact based on this factor and the recommended guidance from OPR. However, to inform the decision-making process, a VMT analysis was conducted for this specific development project. According to the Palo Alto VMT Criteria, the appropriate significance threshold for residential projects is that a project generating vehicle travel that is 15 or more percent below the baseline County home-based average VMT per capita would have a less-than-significant VMT impact.

According to the Santa Clara Countywide VMT Evaluation Tool (Version 2), the countywide VMT per capita is 13.33 miles. Based on the Palo Alto VMT Criteria, a project generating a VMT that is 15 percent or more below this value, or 11.33 miles per capita or less, would have a less-than-significant VMT impact. The evaluation tool estimates that this project would have a VMT rate of 5.84 miles per capita. Because this per capita VMT rate is below the significance threshold of 11.33 miles, the project would be considered to have a less-than-significant VMT impact. A summary of the VMT findings is provided in Table 2. A copy of the Santa Clara Countywide Evaluation Tool screening results output is provided in Appendix A.

**Table 2 – Vehicle Miles Traveled Analysis Summary**

<b>VMT Metric</b>	<b>Baseline VMT Rate</b>	<b>Significance Threshold</b>	<b>Project VMT Rate</b>	<b>Resulting Significance</b>
Household VMT per Capita (Countywide Baseline)	13.33	11.33	5.84	Less than significant

Note: VMT Rate is measured in VMT/Capita, or the number of daily miles driven per resident

**Finding** – The project would be comprised of 100-percent affordable housing and is expected to have a VMT per capita less than 15-percent below the countywide average VMT per capita, indicating a less-than-significant VMT impact.

# Capacity Analysis

## Intersection Level of Service Methodologies

Level of Service (LOS) is used to rank traffic operation on various types of facilities based on traffic volumes and roadway capacity using a series of letter designations ranging from A to F. Generally, Level of Service A represents free flow conditions and Level of Service F represents forced flow or breakdown conditions. A unit of measure that indicates a level of delay generally accompanies the LOS designation.

The study intersections were analyzed using methodologies published in the *Highway Capacity Manual* (HCM), Transportation Research Board, 2000. This source contains methodologies for various types of intersection control, all of which are related to a measurement of delay in average number of seconds per vehicle.

The Levels of Service for the intersections with side street stop controls, or those which are unsignalized and have one or two approaches stop controlled, were analyzed using the “Two-Way Stop-Controlled” intersection capacity method from the HCM. This methodology determines a level of service for each minor turning movement by estimating the level of average delay in seconds per vehicle. Results are presented for individual movements together with the weighted overall average delay for the intersection.

The study intersections that are currently controlled by a traffic signal, or may be in the future, were evaluated using the signalized methodology from the HCM. This methodology is based on factors including traffic volumes, green time for each movement, phasing, whether the signals are coordinated or not, truck traffic, and pedestrian activity. Average stopped delay per vehicle in seconds is used as the basis for evaluation in this LOS methodology.

VTA has adopted modified default values for HCM analysis as well as modified LOS thresholds. These modified default values were applied to all study intersections. The City of Palo Alto employs the CMP default values for the analysis parameters. The VTA approved LOS thresholds are indicated in Table 3.

**Table 3 – Santa Clara VTA Level of Service Criteria**

LOS	Control Delay (sec per veh)	Description
A	delay $\leq$ 10.0	Free Flow; minimal to no delay.
B+	10.0 < delay $\leq$ 12.0	Stable flow, but speeds are beginning to be restricted by traffic conditions; slight delays.
B	12.0 < delay $\leq$ 18.0	
B-	18.0 < delay $\leq$ 20.0	
C+	20.0 < delay $\leq$ 23.0	Stable flow, but most drivers cannot select their own speeds and feel somewhat restricted; acceptable delays.
C	23.0 < delay $\leq$ 32.0	
C-	32.0 < delay $\leq$ 35.0	
D+	35.0 < delay $\leq$ 39.0	Approaching unstable flow, and drivers have difficulty maneuvering; tolerable delays.
D	39.0 < delay $\leq$ 51.0	
D-	51.0 < delay $\leq$ 55.0	
E+	55.0 < delay $\leq$ 60.0	Unstable flow with stop and go; delays.
E	60.0 < delay $\leq$ 75.0	
E-	75.0 < delay $\leq$ 80.0	
F	delay > 80.0	Total breakdown; congested conditions with excessive delays.

Note: veh=vehicle

Reference: *Traffic Level of Service Analysis Guidelines*, Santa Clara Valley Transportation Authority, 2003



factors of 1.44 and 1.59 were determined for the a.m. and p.m. peak hours, respectively. Copies of the traffic count data sheets are provided in Appendix B.

## Intersection Levels of Service

Under existing conditions, two of the study intersections are operating acceptably during both peak hours evaluated, while the westbound stop-controlled approach to the unsignalized intersection of El Camino Real/Olive Avenue operates at LOS F during each peak hour. A summary of the intersection Level of Service calculations is contained in Table 4, and copies are provided in Appendix C. The existing traffic volumes are shown in Figure 2.

**Table 4 – Existing Peak Hour Intersection Levels of Service**

Study Intersection <i>Approach</i>	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
1. El Camino Real/Page Mill Rd	D	44.5	E+	57.3
2. El Camino Real/Olive Ave	A	4.2	B-	18.6
<i>Westbound (Olive Ave) Approach</i>	<b>F</b>	<b>**</b>	<b>F</b>	<b>**</b>
3. El Camino Real/Hansen Wy	A	8.1	A	8.9

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; \*\* = delay greater than 120 seconds; **Bold** text = deficient operation

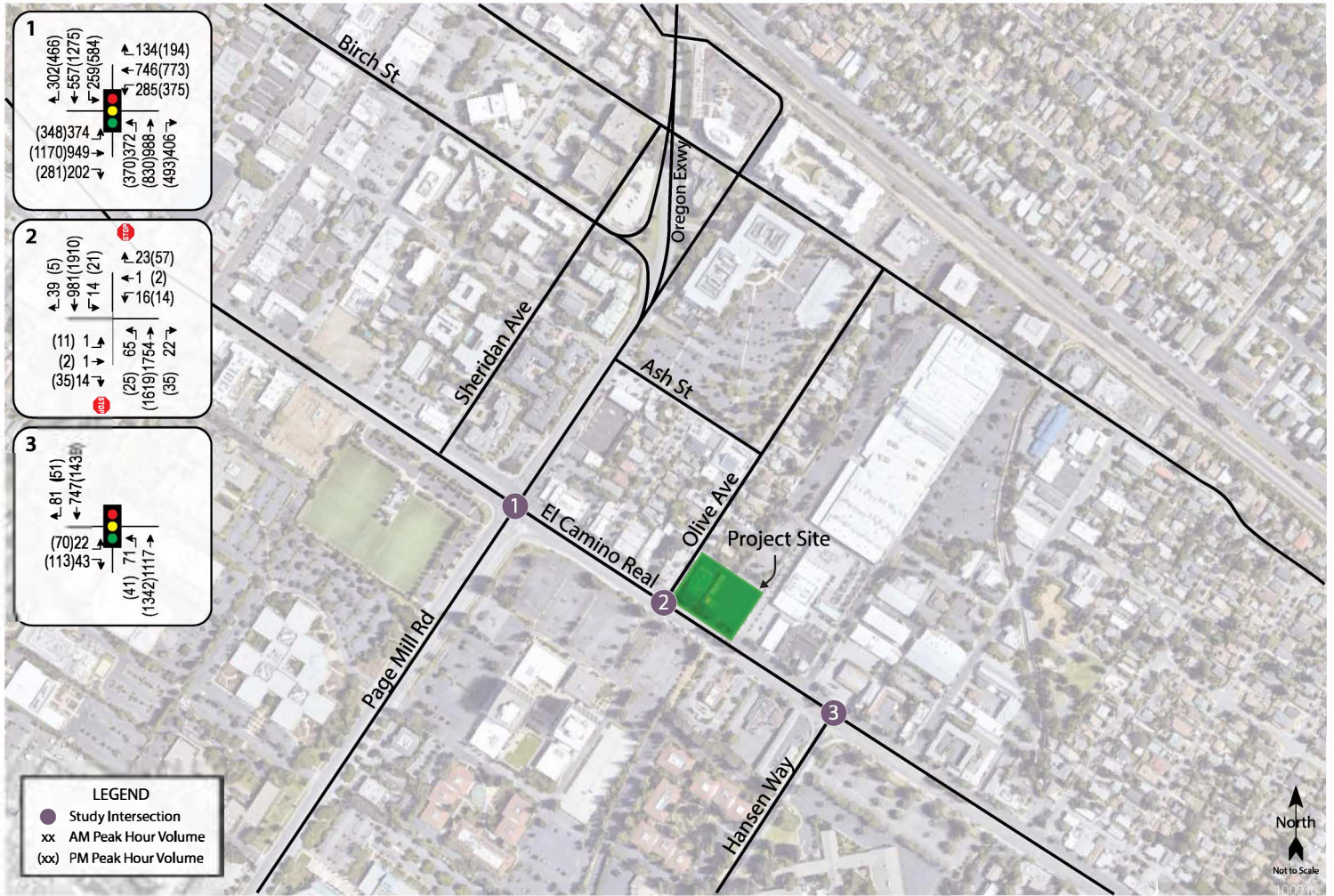
## Background Conditions

The Background Conditions scenario includes existing traffic volumes plus the forecasted traffic demand due to local and regional growth in the near-term, defined to occur by the year 2026 (or existing plus five years).

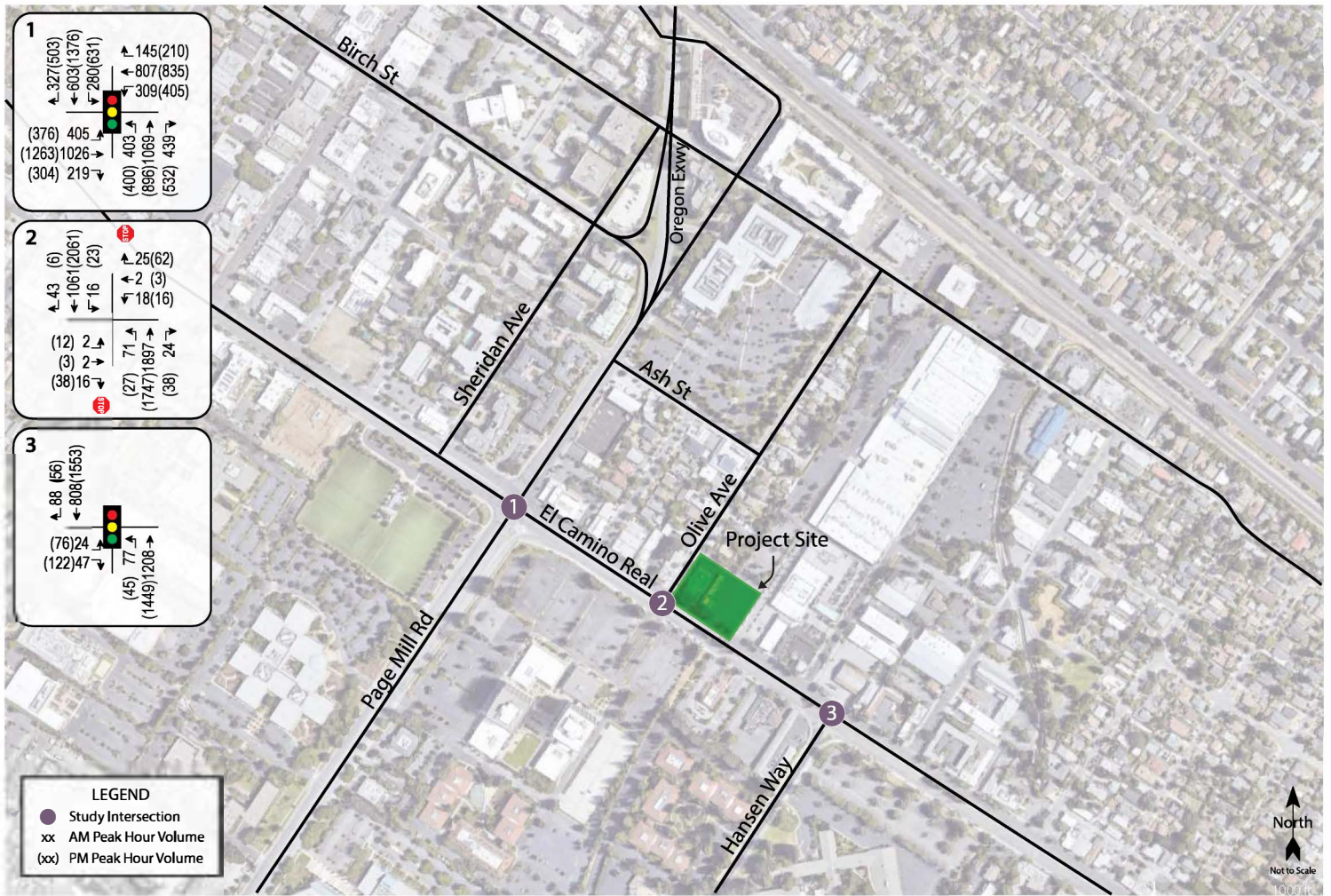
A review of available data from the City of Palo Alto Travel Demand Forecast Model indicates that an annual growth rate of 1.62 percent for the a.m. and 1.58 percent for the p.m. peak hours is appropriate to estimate the future year demand. These growth rates were applied uniformly to all existing traffic volumes for the weekday a.m. and p.m. peak hours to forecast the Background Condition future traffic volumes. In general, changes in future traffic volumes are reflected in these growth rates as they are derived from the City's travel demand model that incorporates land use and future development assumptions across the City and surrounding region.

It was assumed that the transportation network would be the same under Background Conditions as under Existing Conditions; in other words, it was assumed that no capacity enhancements or operational improvements would be made at any of the study intersections within this five-year horizon. It is noted that project trips associated with the residential development project at 200 Portage Road are also included within the background condition volumes.

Under the anticipated background volumes, two of the study intersections are expected to continue operating acceptably during both the a.m. and p.m. peak hours, and the westbound stop-controlled approach to the intersection of El Camino Real/Olive Avenue is expected to operate at LOS F during both the a.m. and p.m. peak hours. Additionally, this intersection is expected to operate at an overall LOS F during the p.m. peak hour. Background volumes are shown in Figure 3 and operating conditions are summarized in Table 5.



Local Transportation Analysis for 3001 El Camino Real Project  
**Figure 2 – Existing Traffic Volumes**



Local Transportation Analysis for 3001 El Camino Real Project  
**Figure 3 – Background Traffic Volumes**

**Table 5 – Background Peak Hour Intersection Levels of Service**

Study Intersection Approach	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
1. El Camino Real/Page Mill Rd	D	46.9	E	68.4
2. El Camino Real/Olive Ave	B+	10.9	<b>F</b>	<b>**</b>
<i>Westbound (Olive Ave) Approach</i>	<b>F</b>	<b>**</b>	<b>F</b>	<b>**</b>
3. El Camino Real/Hansen Wy	A	8.0	A	9.1

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; \*\* = delay greater than 120 seconds; **Bold** text = deficient operation

## Cumulative Conditions

The Cumulative Conditions scenario is comprised of existing traffic plus the forecasted traffic demand due to local and regional growth over the long term defined to occur by the year 2040 (or existing 2021 condition plus 19 years). Determination of the Cumulative Conditions traffic volumes used the same annual growth rates as were applied to forecast the Background Conditions volumes.

There are no planned improvements at any of the study intersections so it was assumed that the transportation network would be the same under Cumulative Conditions as under existing conditions.

Under the anticipated cumulative volumes, only one study intersection is expected to operate acceptably during both the a.m. and p.m. peak hours. The El Camino Real/Page Mill Road intersection is projected to operate at LOS F during the p.m. peak hour and at the unsignalized intersection of El Camino Real/Olive Avenue the stop-controlled westbound approach as well as the intersection overall are projected to operate at LOS F during each peak hour evaluated. Operating conditions are summarized in Table 6 and Cumulative volumes are shown in Figure 4.

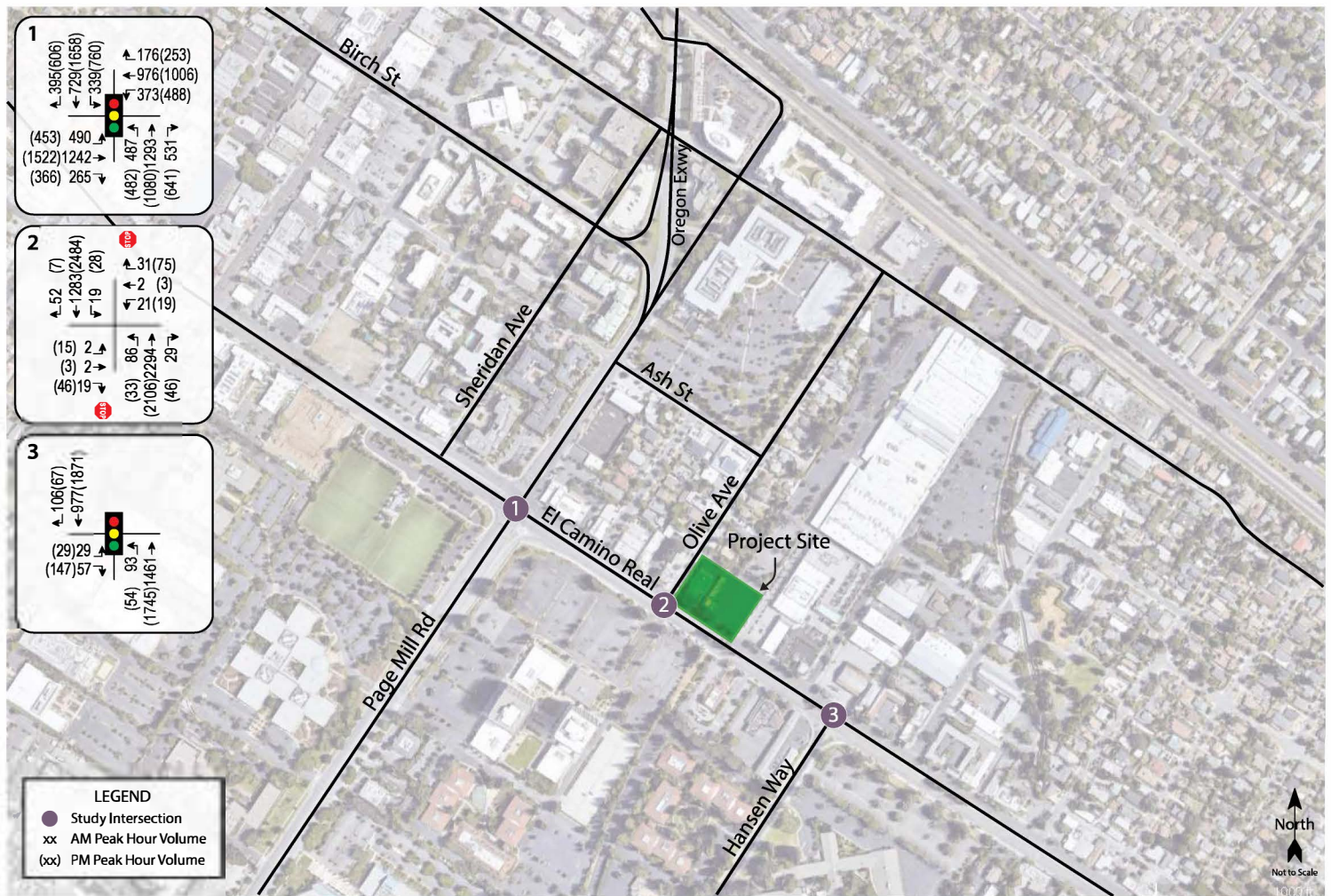
**Table 6 – Cumulative Peak Hour Intersection Levels of Service**

Study Intersection Approach	AM Peak		PM Peak	
	LOS	Delay	LOS	Delay
1. El Camino Real/Page Mill Rd	E	64.0	<b>F</b>	<b>118.2</b>
2. El Camino Real/Olive Ave	<b>F</b>	<b>73.5</b>	<b>F</b>	<b>**</b>
<i>Westbound (Olive Ave) Approach</i>	<b>F</b>	<b>**</b>	<b>F</b>	<b>**</b>
3. El Camino Real/Hansen Wy	A	8.3	A	9.6

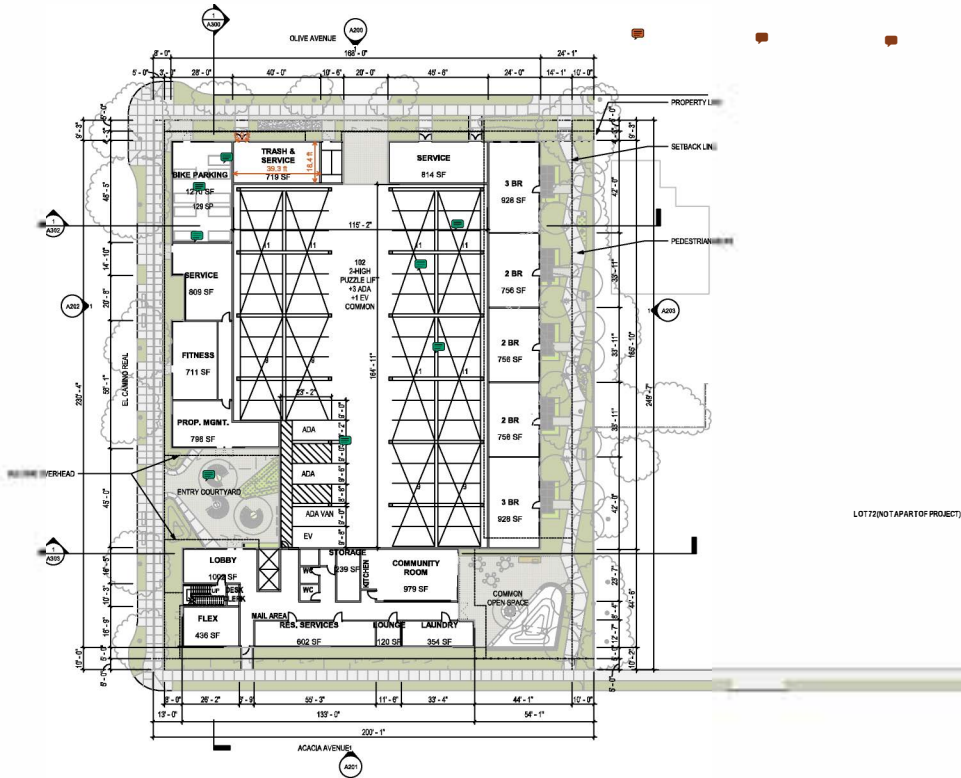
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; \*\* = delay greater than 120 seconds; **Bold** text = deficient operation

## Project Description

The project site is located at 3001 El Camino Real in the City of Palo Alto and is currently occupied by a vacant single-story building which was formerly used for retail. The project as proposed would require demolishing the existing building and constructing a new building containing 129 units of affordable rental housing. The proposed project site plan is shown in Figure 5.



Local Transportation Analysis for 3001 El Camino Real Project  
**Figure 4 – Cumulative Traffic Volumes**



Local Transportation Analysis for 3001 El Camino Real Project  
Figure 5 – Site Plan



## Trip Generation

The anticipated trip generation for the proposed project was estimated using standard rates published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual*, 11<sup>th</sup> Edition, 2021 based on "Affordable Housing – Income Limits" (ITE LU #223), as this land use most closely matches the proposed project. It is noted that no trip credits for the prior use were applied since this portion of the building has been vacant since 2017 and was not generating any trips when the data used to reflect existing conditions was collected. According to the *Transportation Impact Analysis Guidelines* published by the VTA and most recently adopted in March 2009, this project does not qualify for any additional trip reductions since it would be located beyond a 2,000-foot walk of either a Caltrain Station, LRT, BRT line or qualified major bus stop.

The expected trip generation potential for the proposed project is indicated in Table 7 and includes an average of 621 net-new vehicle trips per day, with 46 trips during the a.m. peak hour and 59 during the p.m. peak hour. These new trips represent the net increase in traffic associated with the project compared to existing volumes.

**Table 7 – Trip Generation Summary**

Land Use	Units (du)	Daily		AM Peak Hour				PM Peak Hour			
		Rate	Trips	Rate	Trips	In	Out	Rate	Trips	In	Out
Affordable Housing – Income Limits	129	4.81	621	0.36	46	13	33	0.46	59	35	24

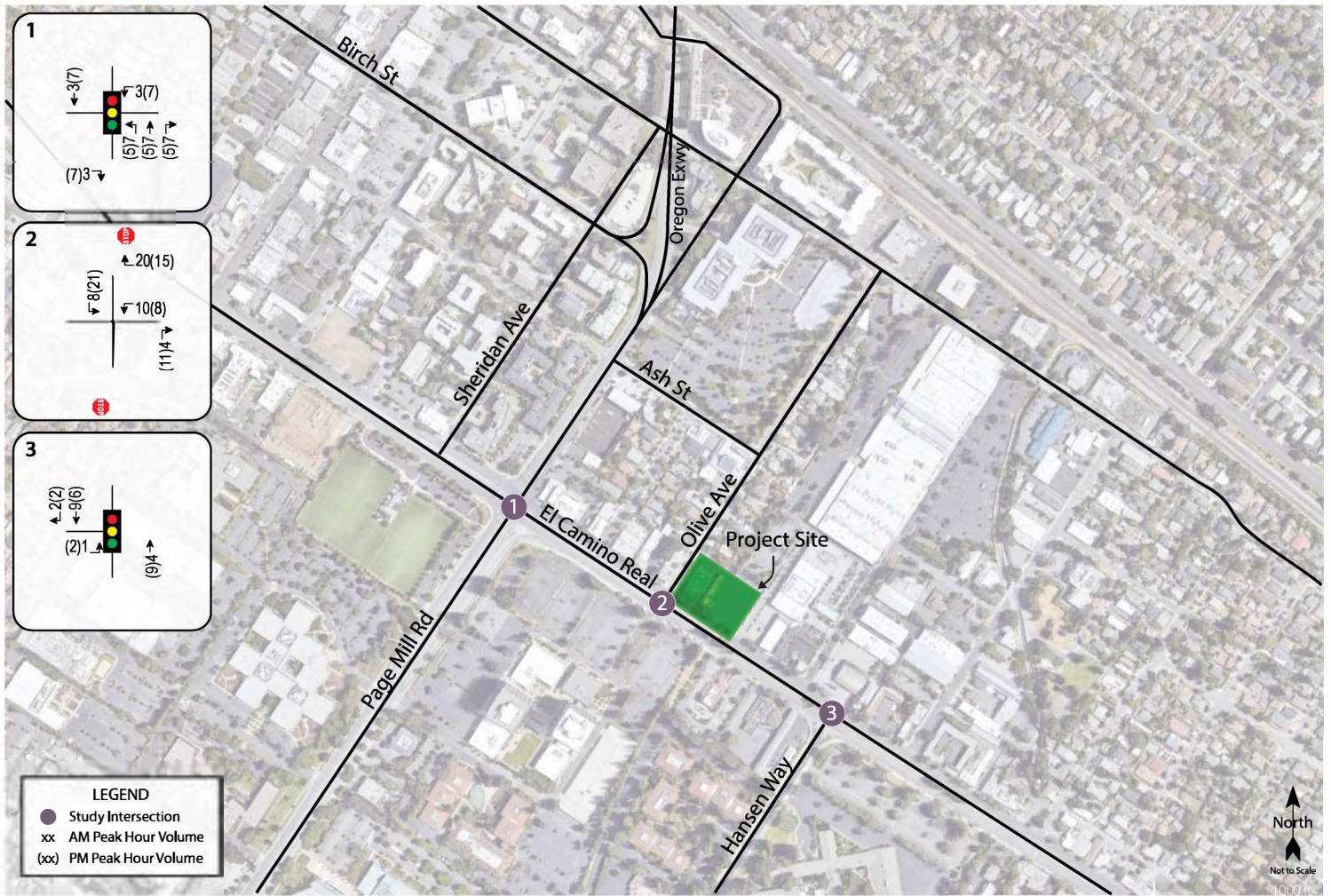
Notes: du = dwelling unit.

## Trip Distribution

The trip distribution pattern used to allocate new project trips to the street network was based on the distribution and assignment applied in the *Local Transportation Analysis for the 200 Portage Avenue Project and Development Agreement Alternative (August 2022)* and knowledge of local travel patterns. Application of these distribution assumptions (with manual adjustments for rounding) and the resulting trips are shown in Table 8. Since major modifications to the roadway network within the study area are not anticipated, the same trip distribution was used for all study periods. It is noted that trips are assumed to also use surface streets (such as Ash Street, Olive Avenue and Sheridan Avenue) to access regional facilities (like Oregon Expressway). Project traffic volumes are shown in Figure 6.

**Table 8 – Trip Distribution Assumptions**

Route	Percent	Daily	AM	PM
To/From East on Oregon Expy	25%	155	12	15
To/From West on Page Mill Rd	20%	124	9	12
To/From North on El Camino Real	20%	124	9	12
To/From South on El Camino Real	25%	156	12	14
To/From North on Park Blvd	5%	31	2	3
To/From West on Hansen Wy	5%	31	2	3
<b>Total</b>	<b>100%</b>	<b>621</b>	<b>46</b>	<b>59</b>



Local Transportation Analysis for 3001 El Camino Real Project  
**Figure 6 – Project Traffic Volumes**



## Intersection Operation

### Existing plus Project Conditions

Upon the addition of project-generated trips to the existing volumes, two of the study intersections would continue operating at acceptable Levels of Service. During the a.m. and p.m. peak hours the stop-controlled approach to the intersection of El Camino Real/Olive Avenue would operate at an unacceptable LOS F with or without the addition of project-generated vehicle trips. The intersection of El Camino Real/Olive Avenue does not satisfy the peak hour volume warrant and while it would operate at an acceptable LOS D or better overall, it would operate at an unacceptable Level of Service on the stop-controlled approach regardless of whether project-generated traffic is included or not. These results are summarized in Table 9. Existing plus Project traffic volumes are shown in Figure 7.

**Table 9 – Existing plus Project Peak Hour Intersection Levels of Service**

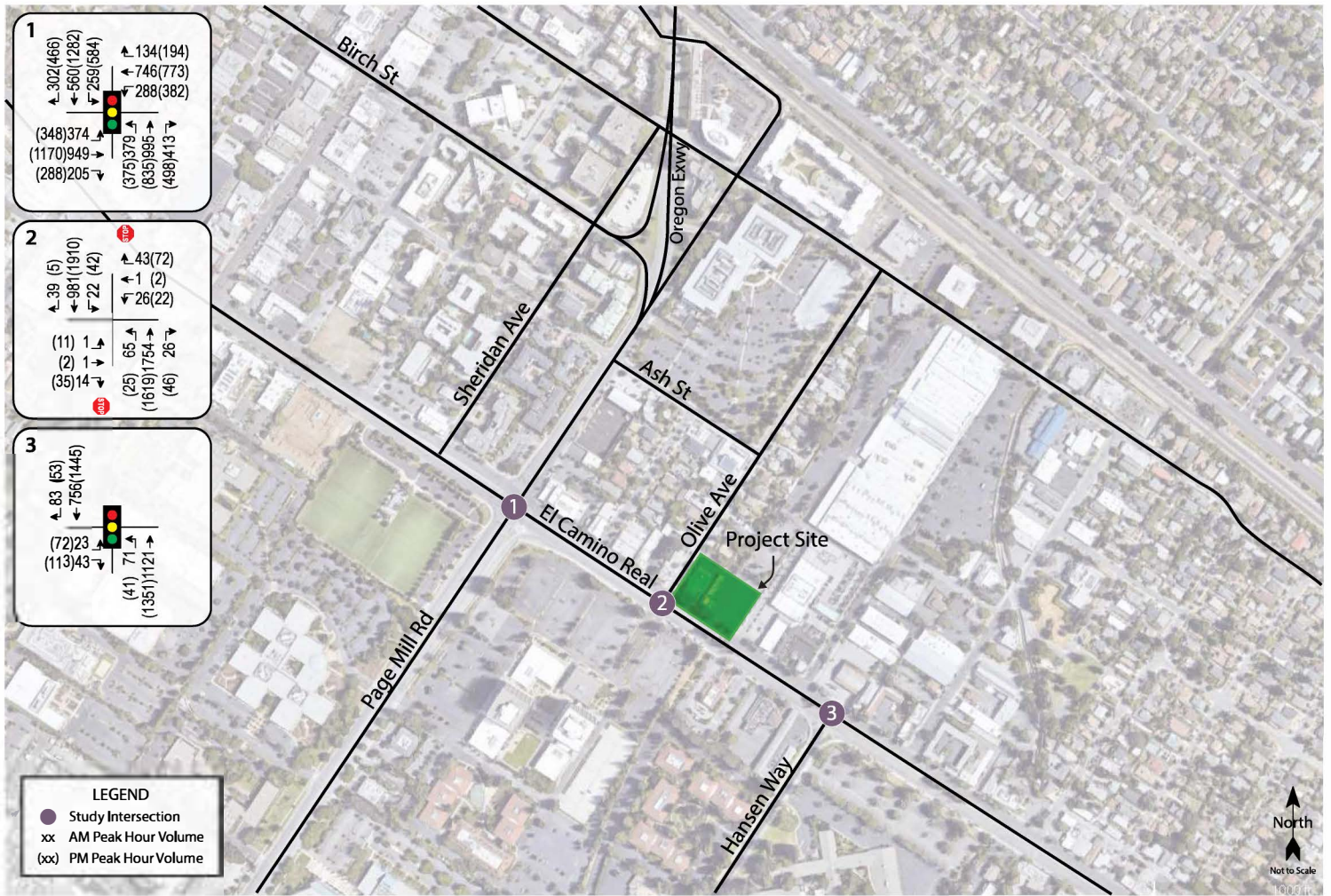
Study Intersection <i>Approach</i>	Existing Conditions				Existing plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1. El Camino Real/Page Mill Rd	D	44.5	E+	57.3	D	44.6	E+	57.9
2. El Camino Real/Olive Ave	A	4.2	B-	18.6	B	12.2	D	40.9
<i>Westbound (Olive Ave) Approach</i>	<b>F</b>	<b>**</b>	<b>F</b>	<b>**</b>	<b>F</b>	<b>**</b>	<b>F</b>	<b>**</b>
3. El Camino Real/Hansen Wy	A	8.1	A	8.9	A	8.1	A	9.0

Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; \*\* = delay greater than 120 seconds; **Bold** text = deficient operation

**Finding** – Two of the study intersections are expected to continue operating at acceptable Levels of Service upon the addition of project-generated traffic. At the intersection of El Camino Real/Olive Avenue the westbound approach would operate at LOS F during both the a.m. and p.m. peak hours with or without the addition of project-related vehicle trips. This intersection does not satisfy the peak hour volume warrant, so this condition is considered acceptable.

### Background plus Project Conditions

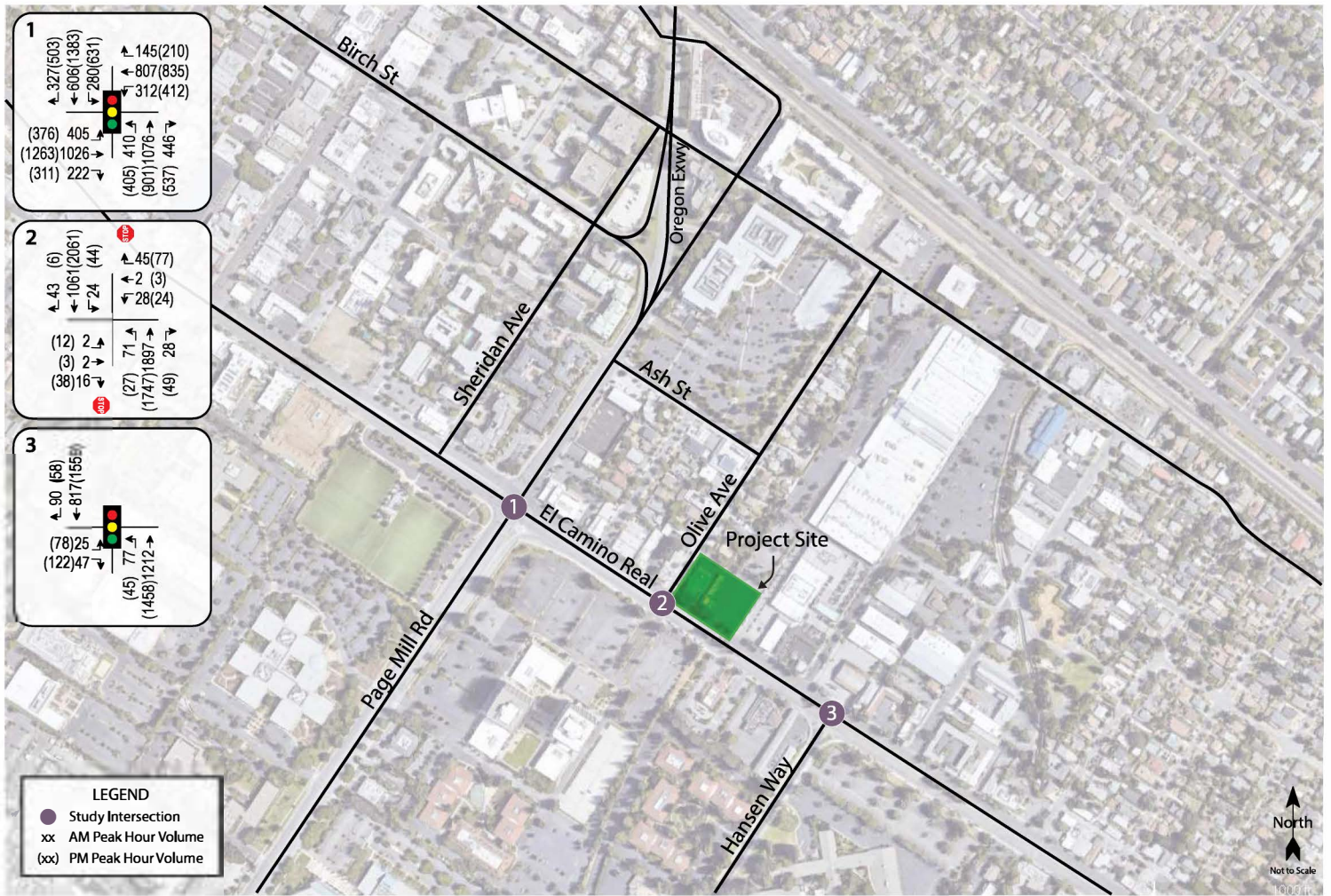
Upon the addition of project-generated traffic to the background volumes, two of the study intersections would continue operating at acceptable Levels of Service. As previously described, during the a.m. and p.m. peak hours the westbound stop-controlled approaches to the intersections of El Camino Real/Olive Avenue would operate at an unacceptable LOS F regardless of whether project-generated vehicle trips are included or not. Volumes at the intersection of El Camino Real/Olive Avenue would satisfy the peak hour volume warrant during the p.m. peak hour. Background plus Project traffic volumes are shown in Figure 8. These results are summarized in Table 10.



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Local Transportation Analysis for 3001 El Camino Real Project  
**Figure 7 – Existing Plus Project Traffic Volumes**





Local Transportation Analysis for 3001 El Camino Real Project  
**Figure 8 – Background Plus Project Traffic Volumes**

**Table 10 – Background plus Project Peak Hour Intersection Levels of Service**

Study Intersection Approach	Background Conditions				Background plus Project			
	AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1. El Camino Real/Page Mill Rd	D	46.9	E	68.4	D	47.1	E	69.2
2. El Camino Real/Olive Ave	B+	10.9	<b>F</b>	<b>**</b>	C	27.7	<b>F</b>	<b>**</b>
<i>Westbound (Olive Ave) Approach</i>	<b>F</b>	<b>**</b>	<b>F</b>	<b>**</b>	<b>F</b>	<b>**</b>	<b>F</b>	<b>**</b>
3. El Camino Real/Hansen Wy	A	8.0	A	9.1	A	8.0	A	9.2

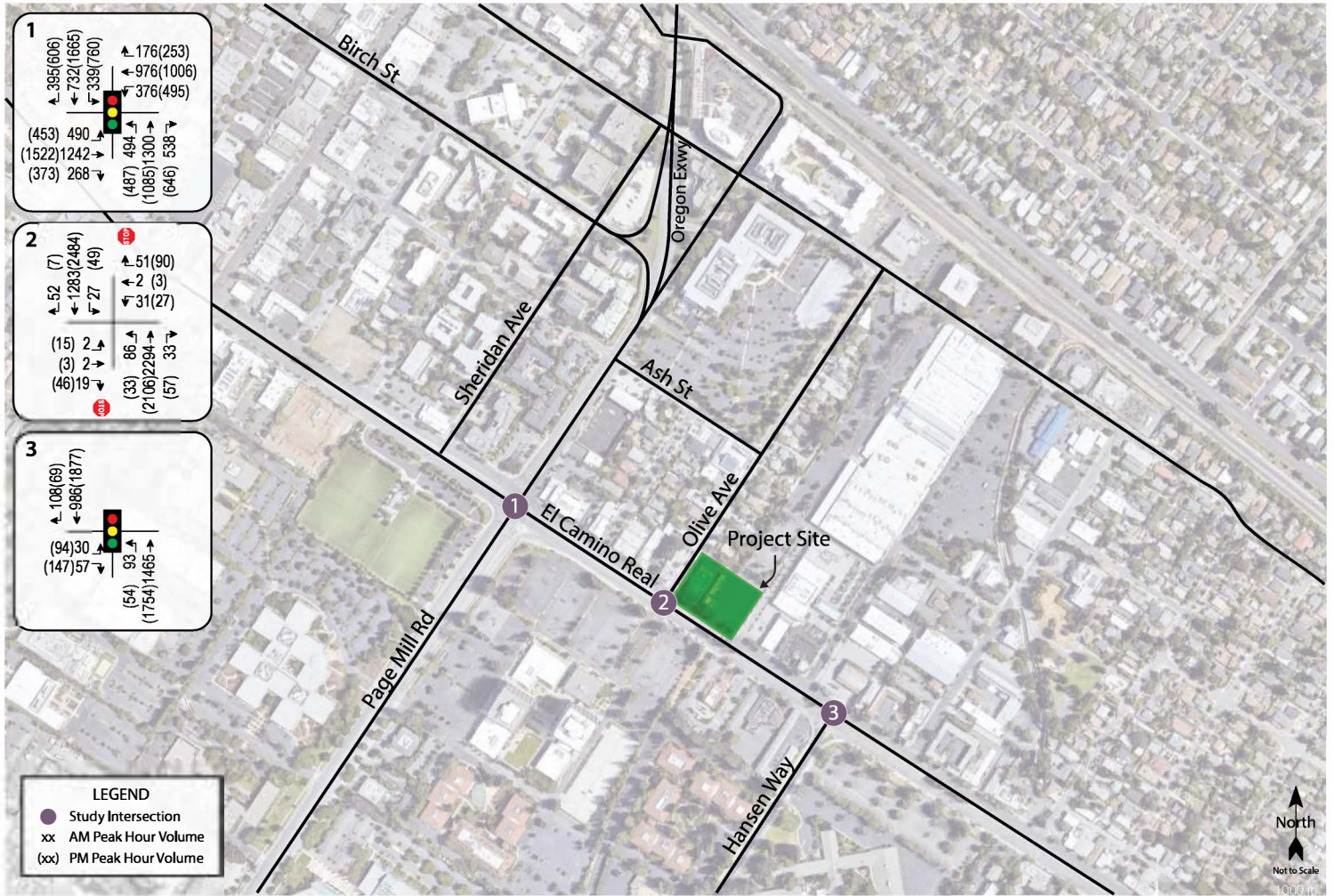
Notes: Delay is measured in average seconds per vehicle; LOS = Level of Service; Results for minor approaches to two-way stop-controlled intersections are indicated in *italics*; \*\* = delay greater than 120 seconds; **Bold** text = deficient operation

**Finding** – Two of the study intersections are expected to continue operating at acceptable Levels of Service upon the addition of project-generated traffic, except at one minor street approach to El Camino Real. At the intersection of El Camino Real/Olive Avenue the westbound approaches would operate at LOS F during both the a.m. and p.m. peak hours with or without the addition of project-related vehicle trips. The peak hour volume warrant was evaluated, and it was determined that the volumes at the intersection of El Camino Real/Olive Avenue would satisfy this warrant for the p.m. peak hour with the addition of project-related trips.

**Recommendation** – Unsignalized intersections that satisfy a peak hour traffic signal warrant and also operate at LOS F should typically be included in the City of Palo Alto's list of intersections that are considered for traffic signal installation. This intersection may need to be monitored over time to determine if volumes reach the levels projected, resulting in the deterioration of operation indicated. The City has their own criteria for ranking and prioritization, including other signal warrants and collision history, which would be employed when considering the need and timing for traffic signal installation. It is noted that Caltrans is required to approve all future modifications including for traffic signal installation since it has jurisdictional operation over this intersection.

### Cumulative plus Project Conditions

Upon the addition of project-generated traffic to the anticipated cumulative volumes, the study intersections would continue operating at the same Levels of Service as without it. During the a.m. and p.m. peak hours the intersection of El Camino Real/Olive Avenue would operate at an unacceptable LOS F with or without the addition of project-generated vehicle trips. Projected p.m. peak hour volumes at the intersection of El Camino Real/Olive Avenue would satisfy the peak hour volume warrant once project-generated traffic is added. Cumulative plus Project traffic volumes are shown in Figure 9. The Cumulative plus Project operating conditions are summarized in Table 11.



Local Transportation Analysis for 3001 El Camino Real Project  
**Figure 9 – Cumulative Plus Project Traffic Volumes**







# Non-Automobile Transportation Modes

## Pedestrian Facilities

Given the proximity of the site to surrounding residential and retail uses, as well as the California Avenue Caltrain Station, it is reasonable to assume that some residents would choose to walk to destinations near the site and use the existing sidewalk network. Sidewalk connectivity is continuous throughout the surrounding neighborhood. The project does not include any changes to the existing pedestrian network.

**Finding** – Pedestrian facilities serving the project site are adequate.

## Bicycle Facilities

Existing bicycle facilities, including the bicycle lanes on Hansen Way and Page Mill Road, together with shared use of minor streets provide adequate access for bicyclists within the vicinity of the project site. Bicycle use will be further supported through the provision of 142 bike parking spaces as part of the project.

**Finding** – Existing, proposed, and planned bicycle facilities serving the project site would be adequate.

## Transit

Development sites which are located within one-half mile of a transit stop are generally considered to be adequately served by transit. Existing transit routes are adequate to accommodate project-generated transit trips. Existing stops are within an acceptable walking distance of the site and would be accessible via the existing sidewalk network in the study area.

If 20 percent of peak hour trips were made by transit, there would be 9 (a.m.) and 12 (p.m.) additional transit riders during the peak hours, spread out over multiple buses and times. As such, the volume of transit riders expected to be generated by the project is not anticipated to exceed the carrying capacity of the existing transit services near the project site.

**Finding** – The project site is adequately served by transit since existing transit stops are less than one-half mile away.

# Access and Circulation

## Site Access

The site is currently accessed by multiple driveways along Acacia Avenue, El Camino Real and Olive Avenue. The proposed project would include the removal of all existing driveways and construction of one driveway approximately 140 feet east of El Camino Real with access onto Olive Avenue. Pedestrian access to the project site would be provided via numerous pedestrian entrances located around the building and connecting to adjacent streets. The project's driveways and internal parking lot circulation network would be designed to meet current City standards and so can be expected to accommodate the access requirements for passenger vehicles.

## Sight Distance

At driveways, a substantially clear line of sight should be maintained between the driver of a vehicle waiting to enter the street and the driver of an approaching vehicle. Sight distances along Olive Avenue at the project driveway were evaluated based on sight distance criteria contained in the *Highway Design Manual* published by Caltrans. The recommended sight distances for driveway approaches are based on stopping sight distance and use the approach travel speed as the basis for determining the recommended sight distance. Based on the posted speed limit of 25 mph, the minimum stopping sight distance required is 150 feet; a review in the field shows that sight distances at the proposed project driveways on Olive Avenue each exceed 150 feet so are adequate. To maintain this sight distance, it is suggested that any vegetation near the project's driveways should be trimmed in accordance with the Federal Highway Administration's guide on *Vegetation Control for Safety*, 2008, which states that any vegetation near the project's driveways should be trimmed to an appropriate height of three feet or less and trees should be trimmed so that nothing hangs below a height of seven feet from the surface of the roadway. This provides a gap in vegetation for drivers to observe oncoming traffic and safely maneuver from a driveway. Additionally, it is recommended that on-street parking be restricted for 20 feet on either side of the project driveway on Olive Avenue, which is consistent with guidance from the American Association of State Highway and Transportation Officials' *A Policy on Geometric Design of Highways and Streets* and the National Association of City Transportation Officials' *Urban Street Design*.

For a motorist traveling westbound on Olive Avenue intending to turn left into the project driveway, the stopping sight distance looking west along Olive Avenue is also greater than 150 feet, providing adequate visibility to allow a following driver to observe and react to a vehicle that may stop in the roadway before making a left turn into the driveway.

**Finding** – Adequate sight distance is available at the proposed project driveway location to accommodate all turns entering and exiting the site.

**Recommendations** – To achieve a minimum sight distance of 150 feet at each driveway access point, it is recommended that on-street parking be restricted for 20 feet on either side of the driveway. Also, it is recommended that planned vegetation along the project frontage on Olive Avenue be trimmed.

## Emergency Access

The *Palo Alto Municipal Code, Chapter 15.04.105*, states that vertical clearance above the entire width of the driveway shall be at least 13 feet 6 inches and that the driveway should be at least 20 feet wide. The project driveway on Olive Avenue would be 20 feet wide with 15 feet of vertical clearance. The proposed dimensions of the driveway opening would satisfy both the height and width requirements as outlined by City code. Emergency response vehicles would be able to service the site by either entering the parking lot at the driveway or via the use of ladder trucks parked on adjacent streets. Since all roadway users must yield the right-of-way to emergency

vehicles when using their sirens and lights, the added project-generated traffic would not impact access or response times for emergency vehicles.

**Finding** – The project would result in a less-than-significant impact regarding adequacy of emergency response since emergency vehicles are able to access the site from the public street and all roadway users must yield to emergency vehicles when using their lights and sirens.

# Parking

The project was analyzed to determine whether the proposed parking supply would be sufficient to satisfy City Code requirements. The project site as proposed would provide a total of 103 parking spaces comprised 97 spaces on parking lifts, five disabled access parking spaces and one space for electric vehicles.

The California Density Bonus Law (CDBL) is a state housing development mandate (Government Code, Section 65915 and Assembly Bill 1763 (AB 1763)) that supersedes local land use requirements and encourages the development of some housing units. One such incentive provided by the CDBL states that a qualified housing development shall be located within one-half mile of a major transit stop and have unobstructed access to the major transit stop from the development. If these conditions are satisfied, then, upon request of the developer, a city shall not impose a vehicular parking ratio that exceeds the pre-determined amount listed in the legislation which states that the parking ratio establishing the maximum number of required off-street parking spaces on the residential development site is calculated based on a combination of the number of dwelling units and the number of bedrooms.

A major transit stop is defined in *Section 21064.3 of the Public Resources Code* as a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a service interval of 15 minutes or less during the morning and afternoon peak commute periods. The project is located within one-half mile radius of the California Avenue Caltrain Station, a rail transit station. It should be noted that VTA Route 22 has a transit stop located within one-half mile of the project site and operates with a service interval of less than 15 minutes during the peak commute period and as such satisfies the criteria to be considered a major transit stop.

The proposed project would satisfy the criteria for the CDBL meaning the City shall not impose a vehicular parking ratio greater than the pre-determined amount according to the legislation. However, to better inform the decision-making process, a parking analysis has been conducted. It should also be noted that the City may impose parking management strategies intended to maximize efficiency of the available parking supply at their discretion.

The projected parking demand was also estimated using standard average rates published by ITE in *Parking Generation*, 5<sup>th</sup> Edition, 2019 for Affordable housing – Income Limits (ITE LU#223). According to the ITE estimates 128 parking spaces would be required to accommodate the expected demand.

Without SDBL protections, the *Palo Alto Municipal Code, Chapter 18.52.040; Off-Street Parking, Loading and Bicycle Facility* stipulates that 198 parking spaces would be required for this project, based on the numbers of units and bedroom count. The proposed parking supply of 103 spaces is lower than both the City requirement of 198 spaces and the estimated parking demand of 128 spaces. A summary describing the proposed parking supply, City requirements and expected demand is shown in Table 12.

**Table 12 – Parking Analysis Summary**

Land Use	Units	Supply (spaces)	City Requirements		ITE Parking Generation	
			Rate	Spaces Required	Rate	Est. Parking Demand
Affordable Housing		103			0.99	128
Studios/1-bdr units	60 du		1.0	60		
2 and 3-bdr units	69 du		2.0	138		
<b>Total</b>		<b>103</b>		<b>198</b>		<b>128</b>

Notes: du = dwelling unit; bdr = bedroom

The Uniform Building Code and the Federal Accessibility Guidelines require that parking spaces for the disabled must be provided. The site plan shows that out of the 103 spaces proposed there would be five stalls designated for disabled persons, each located in the immediate vicinity of the project entry points. Based on the requirements stipulated by the Federal Accessibility Guidelines, five accessible stalls are required so the project complies.

**Finding** – The proposed project satisfies the criteria for the State Density Bonus Law meaning City requirements regulating the number of off-street parking spaces provided does not apply. The five accessible stalls proposed for the project would be equal to the minimum required.

## Bicycle Storage

The *Palo Alto Municipal Code (Chapter 18.52.040 – Off-Street Parking, Loading and Bicycle Facility Requirements)* states that one bicycle space shall be provided for every unit for multi-family residential developments. Thus, the City Code requires a minimum of 129 bicycle parking spaces to be provided at the project site. The proposed project would provide 142 bicycle parking spaces located within an indoor bicycle parking room.

**Finding** – The proposed supply of 142 bicycle parking spaces is more than the required amount of 129.



# Study Participants and References

## Study Participants

<b>Principal in Charge</b>	Mark E. Spencer, PE
<b>Traffic Engineer</b>	Kenny Jeong, PE
<b>Graphics</b>	Cameron Wong
<b>Editing/Formatting</b>	Hannah Yung-Boxdell, Alex Scrobonia, Jessica Bender
<b>Quality Control</b>	Dalene J. Whitlock, PE, PTOE

## References

- A Policy on Geometric Design of Highways and Streets*, 7<sup>th</sup> Edition, American Association of State Highway and Transportation Officials, 2018
- California Manual on Uniform Traffic Control Devices for Streets and Highways*, California Department of Transportation, 2014
- California Public Resources Code Section 21064.3*, 2016
- Caltrain, <http://www.caltrain.com/schedules.html>
- City of Palo Alto Bicycle & Pedestrian Transportation Plan*, Alta Planning + Design, 2012
- City of Palo Alto Comprehensive Plan 2030*, City of Palo Alto, 2017
- Design Information Bulletin Number 89: Class IV Bikeway Guidance (Separated Bikeways/Cycle Tracks)*, California Department of Transportation, 2015
- Google Earth, <http://earth.google.com/>
- Guide for the Preparation of Traffic Impact Studies*, California Department of Transportation, 2002
- Highway Capacity Manual*, Transportation Research Board, 2000
- Highway Design Manual*, 7<sup>th</sup> Edition, California Department of Transportation, 2020
- Local Transportation Analysis for the 200 Portage Avenue Project and Development Agreement Alternative*, City of Palo Alto, 2022
- Palo Alto Municipal Code*, Municipal Code Corporation, 2017
- Parking Generation*, 5<sup>th</sup> Edition, Institute of Transportation Engineers, 2019
- Santa Clara Countywide Vehicle Miles Traveled Evaluation Tool, <https://vmttool.vta.org/>
- Santa Clara Valley Transportation Authority, <http://www.vta.org/>
- Senate Bill 743 Vehicle Miles Traveled Regional Baseline Study (RBS)*, Fehr & Peers, 2020
- Technical Advisory on Evaluating Transportation Impacts in CEQA*, Governor's Office of Planning and Research, 2018
- Traffic Level of Service Analysis Guidelines*, Santa Clara Valley Transportation Authority, 2003
- Transportation Impact Analysis Guidelines*, Santa Clara Valley Transportation Authority, 2014
- Transportation Impact Analysis Report 3001 El Camino Real Mixed-Use Development*, TJKM, 2017
- Trip Generation Manual*, 11<sup>th</sup> Edition, Institute of Transportation Engineers, 2021
- Urban Street Design Guide*, National Association of City Transportation Officials, 2013
- Vegetation Control for Safety*, Federal Highway Administration, 2008

PAL024



# Appendix A

## VTA VMT Evaluation Tool Output



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## Project Details

Timestamp of Analysis October 21, 2022, 04:40:50 PM

Project Name 3001 El Camino Real

Project Description 129 Affordable Housing Units

## Project Location Map

Jurisdiction:

Palo Alto

APN	TAZ
13237056	517
13238072	517
13237055	517



## Analysis Details

Data Version VTA Countywide Model December 2019

Analysis TAZ

Methodology

Baseline Year 2022

## Project Land Use

Residential:

Single Family DU:

Multifamily DU:

---

Total DUs: 0

Non-Residential:

Office KSF:

Local Serving Retail KSF:

Industrial KSF:

Residential Affordability (percent of all units):

Extremely Low Income: 0 %

Very Low Income: 0 %

Low Income: 0 %

Parking:

Motor Vehicle Parking:

Bicycle Parking:

## Proximity to Transit Screening

Inside a transit priority area? Yes (Pass)

## Residential Vehicle Miles Traveled (VMT) Screening Results

Land Use Type 1:	Residential
VMT Metric 1:	Home-based VMT per Capita
VMT Baseline Description 1:	County Average
VMT Baseline Value 1:	13.33
VMT Threshold Description 1 / Threshold Value 1:	-15% / 11.33
Land Use 1 has been Pre-Screened by the Local Jurisdiction:	N/A

	Without Project	With Project & Tier 1-3 VMT Reductions	With Project & All VMT Reductions
Project Generated Vehicle Miles Traveled (VMT) Rate	5.84		
Low VMT Screening Analysis	Yes (Pass)		

# Appendix B

## Traffic Count Data



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Prepared by National Data & Surveying Services

## **Page Mill Rd & El Camino Real**

**Peak Hour Turning Movement Count**

Prepared by National Data & Surveying Services

## **Olive Ave & El Camino Real**

**Peak Hour Turning Movement Count**

Location: 1 EL CAMINO REAL & HANSEN WAY AM

Date: Wednesday, May 5, 2021

Peak Hour: 07:45 AM - 08:45 AM

Peak 15-Minutes: 08:30 AM - 08:45 AM

(303) 216-2439  
www.alltrafficdata.net

### Peak Hour - Motorized Vehicles

(951)	578	0.94	791	(1,355)
EL CAMINO REAL				
HANSEN WAY				
(177)	0		0	()
101	15	N	0	0
0.80	0	W 0.96 E	0	0.00
45	30	S	0	0
(73)			0	()
HANSEN WAY				
EL CAMINO REAL				
(911)	556	0.92	825	(1,419)

### Peak Hour - Bicycles

0	0
0	
0	N
0	W
0	S
0	
0	
0	

### Peak Hour - Pedestrians

0	0
0	
N	
W	E
S	
3	
2	1

Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	HANSEN WAY Eastbound				HANSEN WAY Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	2	0	6	0	0	0	0	2	4	90	0	0	0	50	9	163	1,031	0	0	0	0
7:15 AM	0	2	0	7	0	0	0	0	0	5	121	0	0	0	73	8	216	1,242	2	0	0	0
7:30 AM	0	0	0	5	0	0	0	0	0	9	169	0	0	0	96	18	297	1,366	0	3	0	0
7:45 AM	0	2	0	12	0	0	0	0	2	6	180	0	0	0	131	22	355	1,448	2	1	2	0
8:00 AM	0	4	0	6	0	0	0	0	0	10	209	0	0	0	138	7	374	1,412	0	1	0	0
8:15 AM	0	4	0	6	0	0	0	0	4	9	180	0	0	0	122	15	340		2	0	0	0
8:30 AM	0	5	0	6	0	0	0	0	1	17	207	0	0	0	128	15	379		1	1	1	0
8:45 AM	0	0	0	6	0	0	0	0	0	14	180	0	0	0	110	9	319		3	2	1	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	2	13	0	0	0	9	0	24
Lights	0	13	0	29	0	0	0	0	7	40	741	0	0	0	495	55	1,380
Mediums	0	2	0	1	0	0	0	0	0	0	22	0	0	0	15	4	44
Total	0	15	0	30	0	0	0	0	7	42	776	0	0	0	519	59	1,448

Location: 1 EL CAMINO REAL & HANSEN WAY PM

Date: Wednesday, May 5, 2021

Peak Hour: 04:30 PM - 05:30 PM

Peak 15-Minutes: 05:00 PM - 05:15 PM

(303) 216-2439  
www.alltrafficdata.net

### Peak Hour - Motorized Vehicles

(1,875)	937	0.94	888	(1,672)
EL CAMINO REAL				
HANSEN WAY				
(91)	0		0	()
47	44	N	0	0
0.74	0	W 0.95 E	0	0.00
115	0	S	0	0
(222)	71		0	()
HANSEN WAY				
EL CAMINO REAL				
(1,974)	987	0.94	870	(1,640)

### Peak Hour - Bicycles

0	0
0	
0	N
1	W
0	S
0	
0	
0	

### Peak Hour - Pedestrians

0	0
0	
N	
W	E
S	
4	
4	0

Note: Total study counts contained in parentheses.

### Traffic Counts - Motorized Vehicles

Interval Start Time	HANSEN WAY Eastbound				HANSEN WAY Westbound				EL CAMINO REAL Northbound				EL CAMINO REAL Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	12	0	28	0	0	0	0	2	6	210	0	0	0	226	4	488	1,874	0	0	0	0
4:15 PM	0	6	0	16	0	0	0	0	2	4	168	0	0	0	233	7	436	1,891	3	0	0	0
4:30 PM	0	14	0	21	0	0	0	0	2	3	227	0	0	0	209	7	483	1,922	0	0	0	0
4:45 PM	0	7	0	14	0	0	0	0	2	4	207	0	0	0	229	4	467	1,902	2	0	0	0
5:00 PM	0	17	0	17	0	0	0	0	4	4	202	0	0	0	249	12	505	1,863	3	3	3	0
5:15 PM	0	6	0	19	0	0	0	0	3	4	208	0	0	0	218	9	467		1	1	1	0
5:30 PM	0	16	0	13	0	0	0	0	0	3	170	0	0	0	254	7	463		1	0	0	0
5:45 PM	0	4	0	12	0	0	0	0	0	7	198	0	0	0	201	6	428		2	0	0	0

### Peak Rolling Hour Flow Rates

Vehicle Type	Eastbound				Westbound				Northbound				Southbound				Total
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	
Articulated Trucks	0	0	0	0	0	0	0	0	0	0	8	0	0	0	7	0	15
Lights	0	36	0	67	0	0	0	0	11	15	832	0	0	0	896	31	1,888
Mediums	0	8	0	4	0	0	0	0	0	0	4	0	0	0	2	1	19
Total	0	44	0	71	0	0	0	0	11	15	844	0	0	0	905	32	1,922

# Appendix C

## Intersection Level of Service Analysis Summary Sheets





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Signal/Proct/Rights/Include												
Street Name:		El Camino Real						Page Mill Rd				
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
North Green:	1	10	10	10	10	10	1	10	10	10	7	7
YR:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Volume Module:												
Base Vol:	372	988	406	259	557	302	374	949	202	285	746	134
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 Base:	372	988	1.00	259	557	302	374	949	202	285	746	134
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:	372	988	406	259	557	302	374	949	202	285	746	134
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	372	988	406	259	557	302	374	949	202	285	746	134
Final Vol:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	372	988	406	259	557	302	374	949	202	285	746	134
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.09	0.91	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.69	0.31
Final Sat:	3150	3967	1630	3150	5700	1750	3150	3800	1750	3150	3136	563
----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.12	0.25	0.25	0.08	0.10	0.17	0.12	0.25	0.12	0.09	0.24	0.24
Left Moves:	23	21	22	4	11	33	7	20	44	59	68	16
Green Time:	23.12	42.7	42.7	14.1	33.7	33.7	20.4	44.9	68.0	16.3	40.8	40.8
Volume/Cap:	0.66	0.76	0.76	0.76	0.38	0.66	0.76	0.72	0.22	0.72	0.76	0.76
Delay/Veh:	52.9	40.9	40.9	65.7	39.7	46.8	59.1	39.1	16.8	61.2	43.1	43.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj DelAdj:	52.9	40.9	40.9	65.7	39.7	46.8	59.1	39.1	16.8	61.2	43.1	43.1
Left by Mov:	0	0	0	0	0	0	0	0	0	0	0	0
HCM2KvAvg0:	8	17	17	8	6	12	10	17	5	8	17	17
Note: Queue reported is the number of cars per lane.												

Signal/Uncontrolled/Right-Inducte															
El Camino Real						Olive Ave									
Approach:	North Bound			South Bound			East Bound			West Bound					
Movement:	L	T	R	L	T	R	L	T	R	L	T	R	L	T	R
Volume Module:															
Base Vol:	65	1754	22	14	981	39	1	1	14	16	1	23			
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	1.00	1.00	1.00
Initial Bse:	65	1754	22	14	981	39	1	1	14	16	1	23			
Use 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	1.00	1.00	1.00
Adj 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	1.00	1.00	1.00
PHF Volume:	65	1754	22	14	981	39	1	1	14	16	1	23			
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	65	1754	22	14	981	39	1	1	14	16	1	23			
Critical Cap Module:															
Critical Gp:	4.1	XXXXX	XXXXXX	4.1	XXXXX	XXXXXX	7.5	6.5	6.9	7.5	6.5	6.9			
FollowUpTtm:	2.2	XXXXX	XXXXXX	2.2	XXXXX	XXXXXX	3.5	4.0	3.3	3.5	4.0	3.3			
Capacity Module:															
Conflict Vol:	1020	XXXXX	XXXXXX	1776	XXXXX	XXXXXX	1744	2935	347	2251	2943	596			
Conflict Cap:	688	XXXXX	XXXXXX	355	XXXXX	XXXXXX	56	15	655	23	13	41			
Move Cap:	688	XXXXX	XXXXXX	355	XXXXX	XXXXXX	46	13	655	19	13	452			
Volume/Cap:	0.09	XXXXX	XXXXX	0.04	XXXXX	XXXXX	0.02	0.08	0.02	0.83	0.08	0.05			
Level of Service Module:															
W95p95thQ:	0.3	XXXXX	XXXXXX	0.1	XXXXX	XXXXXX	XXXXX	XXXXX	0.1	XXXXX	XXXXX	XXXXXX			
Control Del:	168	XXXXX	XXXXXX	15.6	XXXXX	XXXXXX	XXXXX	XXXXX	16.5	XXXXX	XXXXX	XXXXXX			
LWS by Move:	B	*	*	A	*	*	F	*	B	*	*	A			
Movement:	LT	-	LTR	-	RT	LT	-	LTR	-	RT	LT	-	LTR	-	RT
Shared Cap:	XXXXX	XXXXX	XXXXXX	XXXXX	XXXXX	XXXXXX	21	XXXXX	XXXXX	XXXXX	42	XXXXXX			
SharedQueue:	XXXXXX	XXXXX	XXXXXX	XXXXXX	XXXXX	XXXXXX	0.3	XXXXX	XXXXXX	XXXXXX	3.8	XXXXXX			
Share Condel:	XXXXXX	XXXXX	XXXXXX	XXXXXX	XXXXX	XXXXXX	198.3	XXXXX	XXXXX	XXXXXX	272	XXXXXX			
ApproachDel:	XXXXXXX			XXXXXXX			34.1				272.0				
ApproachLOS:	*						D				F				

```

-----|-----|-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Lanes:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   65 1754 22      14 981 39      1 1 14 16 1 23
ApproachDel:   xxxxxx      xxxxxx      34.1      272.0
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
    FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=16]
    FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2931]
    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=3.0]
    FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=40]
    FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2931]
    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 #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   65 1754 22      14 981 39      1 1 14 16 1 23
-----|-----|-----|-----|-----|-----|
Major Street Volume:      2875
Minor Approach Volume:    40
Minor Approach Volume Threshold: -79 [less than minimum of 100]
-----|-----|-----|-----|-----|-----|

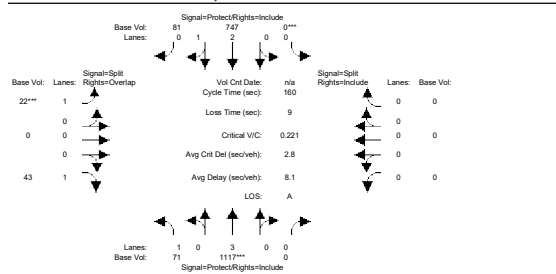
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SIGNAL WARRANT DISCLAIMER  
 This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are 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.

AM Peak Hour - Existing Condition  
 Local Transportation Analysis for 3001 El Camino Real  
 City of Palo Alto  
 Level Of Service Computation Report  
 2000 HCM Operations (Base Volume Alternative)  
 07 AM Existing

Intersection #3: El Camino Real / Hansen Way

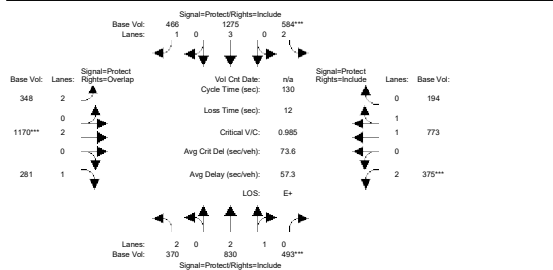


Street Name:	El Camino Real				Hansen Way			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L	T - R	L	T - R	L	T - R	L	T - R
M/Ln. Green:	7	10 10	7	10 10	10	10 10	10	10 10
Y/R:	4.0	4.0 4.0	4.0	4.0 4.0	4.0	4.0 4.0	4.0	4.0 4.0
Volume Module:								
Base Vol:	71	1117	0	0 747	81	22	0	43
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	1117	0	0 747	81	22	0	43
User Adj:	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
PHF Volume:	71	1117	0	0 747	81	22	0	43
Reduct Vol:	0	0	0	0 0	0	0	0	0
Reduced Vol:	71	1117	0	0 747	81	22	0	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	71	1117	0	0 747	81	22	0	43
Saturation Flow Module:								
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.95	0.92	1.00	0.92
Lanes:	1.00	3.00	0.00	0.00	2.70	0.30	1.00	0.00
Final Sat.:	1750	5700	0	0	5051	548	1750	0
Capacity Analysis Module:								
Vol/Sat:	0.04	0.20	0.00	0.00	0.15	0.15	0.01	0.00
Crit Moves:	0.04	0.20	0.00	0.00	0.15	0.15	0.01	0.00
Green Time:	32.2	141	0.0	0.0	109	108.8	10.0	0.0
Volume/Cap:	0.20	0.22	0.00	0.00	0.22	0.22	0.09	0.00
Delay/Veh:	53.5	1.4	0.0	0.0	9.6	9.6	72.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.5	1.4	0.0	0.0	9.6	9.6	72.1	0.0
LOS by Move:	D	A	A	A	A	A	D	A
HCM2kAvgq:	3	3	0	0	5	5	1	0

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

PM Peak Hour - Existing Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
02 PM Existing

Intersection #1: El Camino Real / Page Mill Rd

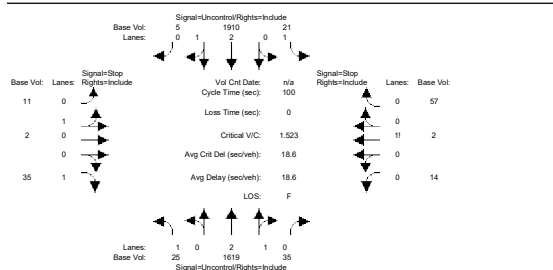


Street Name:	El Camino Real						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	370	830	493	584	1275	466	348	1170	281	375	773	194
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:	370	830	493	584	1275	466	348	1170	281	375	773	194
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:	370	830	493	584	1275	466	348	1170	281	375	773	194
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	370	830	493	584	1275	466	348	1170	281	375	773	194
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	370	830	493	584	1275	466	348	1170	281	375	773	194
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.95
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	1.59	0.41
Final Sat.:	3150	3800	1750	3150	5700	1750	3150	3800	1750	3150	2957	742
Capacity Analysis Module:												
Vol/Sat:	0.12	0.22	0.28	0.19	0.22	0.27	0.11	0.31	0.16	0.12	0.26	0.26
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	18.9	37.2	37.2	24.5	42.8	42.8	16.7	40.6	59.5	15.7	39.6	39.6
Volume/Cap:	0.81	0.76	0.98	0.98	0.68	0.81	0.86	0.98	0.35	0.98	0.86	0.86
Delay/Veh:	64.2	44.5	67.1	85.6	38.7	48.3	71.9	66.8	23.0	99.0	49.3	49.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.2	44.5	67.1	85.6	38.7	48.3	71.9	66.8	23.0	99.0	49.3	49.3
LOS by Move:	E	D	E	F	D+	D	E	E	C	F	D	D
HCM2kavgQ:	9	15	25	19	15	20	11	29	8	13	21	21

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

PM Peak Hour - Existing Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
02 PM Existing

Intersection #2: El Camino Real / Olive Ave



Street Name:	El Camino Real						Olive Ave					
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:	25	1619	35	21	1910	5	11	2	35	14	2	57
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:	25	1619	35	21	1910	5	11	2	35	14	2	57
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:	25	1619	35	21	1910	5	11	2	35	14	2	57
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	25	1619	35	21	1910	5	11	2	35	14	2	57
Critical Gap Module:												
Critical Gap:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Conflict Vol:	1915	xxxx	xxxxxx	1654	xxxx	xxxxxx	2545	3659	639	2366	3644	557
Potent Cap.:	314	xxxx	xxxxxx	395	xxxx	xxxxxx	14	5	423	19	5	479
Move Cap.:	314	xxxx	xxxxxx	395	xxxx	xxxxxx	7	4	423	10	4	479
Volume/Cap:	0.08	xxxx	xxxxxx	0.05	xxxx	xxxxxx	1.52	0.46	0.08	1.37	0.45	0.12
Level Of Service Module:												
Way95hQ:	0.3	xxxx	xxxxxx	0.2	xxxx	xxxxxx	xxxx	xxxx	0.3	xxxx	xxxx	xxxxxx
Control Del:	17.5	xxxx	xxxxxx	14.6	xxxx	xxxxxx	xxxx	xxxx	14.3	xxxx	xxxx	xxxxxx
LOS by Move:	C	*	*	B	*	*	*	*	B	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	7	xxxx	xxxxxx	xxxx	38	xxxxxx
Shared Queue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	2.6	xxxx	xxxxxx	xxxxxx	7.9	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	1505	xxxx	xxxxxx	xxxxxx	669	xxxxxx
Shared LOS:	*	*	*	*	*	*	F	*	*	*	F	*
ApproachDel:	xxxxxx	*	xxxxxx	*	xxxxxx	*	418.1	*	668.6	*	668.6	*
ApproachLOS:	*	*	*	*	*	*	F	*	F	*	F	*

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

Peak Hour Delay Signal Warrant Report

Intersection #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   25 1619 35      21 1910 5      11 2 35      14 2 57
ApproachDel:   xxxxxx      xxxxxx      418.1      668.6
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=5.6]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=48]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3736]
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=13.6]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=73]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3736]
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 #2 El Camino Real / Olive 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:          1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:    25 1619 35      21 1910 5      11 2 35      14 2 57
-----|-----|-----|-----|-----|
Major Street Volume:      3615
Minor Approach Volume:      73
Minor Approach Volume Threshold: -158 [less than minimum of 100]

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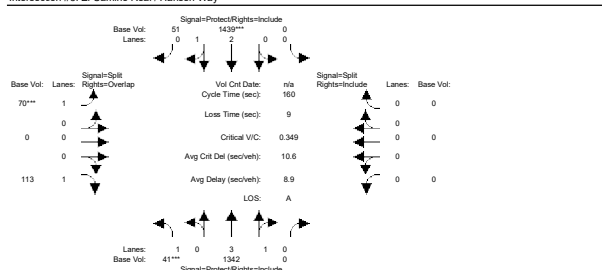
#### SIGNAL WARRANT DISCLAIMER

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.

PM Peak Hour - Existing Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
02 PM Existing

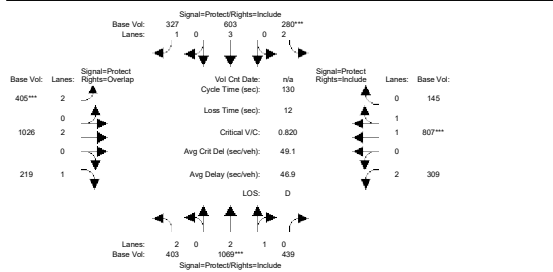
#### Intersection #3: El Camino Real / Hansen Way



Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	41	1342	0	0	1439	51	70	0	113	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Base:	41	1342	0	0	1439	51	70	0	113	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	41	1342	0	0	1439	51	70	0	113	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	1342	0	0	1439	51	70	0	113	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	41	1342	0	0	1439	51	70	0	113	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	4.00	0.00	0.00	2.89	0.11	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat:	1750	7500	0	0	5408	192	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.18	0.00	0.00	0.27	0.27	0.04	0.00	0.06	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.7	133	0.0	0.0	122	121.9	18.3	0.0	29.1	0.0	0.0	0.0
Volume/Cap:	0.35	0.22	0.00	0.00	0.35	0.35	0.36	0.00	0.36	0.00	0.00	0.00
Delay/Veh:	73.1	2.9	0.0	0.0	6.2	6.2	66.4	0.0	58.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.1	2.9	0.0	0.0	6.2	6.2	66.4	0.0	58.0	0.0	0.0	0.0
LOS by Move:	E	A	A	A	A	A	E	A	E+	A	A	A
HCM2kAvgq:	2	3	0	0	8	8	4	0	5	0	0	0
Note: Queue reported is the number of cars per lane.												

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

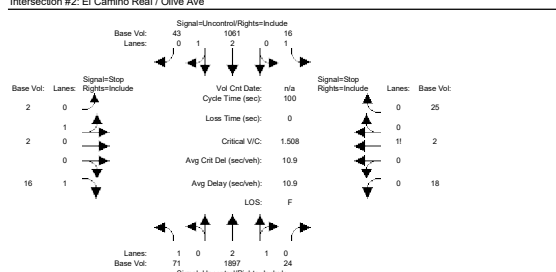
Intersection #1: El Camino Real / Page Mill Rd



Street Name:	El Camino Real				Page Mill Rd			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	R	L - T - R	R	L - T - R	R	L - T - R	R
Min. Green:	7	10	10	7	10	10	7	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:								
Base Vol:	403	1069	439	280	603	327	405	1026
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	403	1069	439	280	603	327	405	1026
User Adj:	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
PHF Volume:	403	1069	439	280	603	327	405	1026
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	403	1069	439	280	603	327	405	1026
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	403	1069	439	280	603	327	405	1026
Saturation Flow Module:								
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.95	0.83	1.00	0.92	0.83	0.98
Lanes:	2.00	2.09	0.91	2.00	3.00	1.00	2.00	1.69
Final Sat.:	3150	3968	1629	3150	5700	1750	3150	3136
Capacity Analysis Module:								
Vol/Sat:	0.13	0.27	0.27	0.09	0.11	0.19	0.13	0.27
Crit Moves:	****							
Green Time:	23.1	42.7	42.7	14.1	33.7	33.7	20.4	44.9
Volume/Cap:	0.72	0.82	0.82	0.82	0.41	0.72	0.82	0.78
Delay/Veh:	55.0	43.2	43.2	71.2	40.1	49.4	63.5	41.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.0	43.2	43.2	71.2	40.1	49.4	63.5	41.3
LOS by Move:	D	D	D	D	D	D	D	D
HCM2kAvgQ:	9	19	19	9	7	14	12	20

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

Intersection #2: El Camino Real / Olive Ave



Street Name:	El Camino Real				Olive Ave			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	R	L - T - R	R	L - T - R	R	L - T - R	R
Min. Green:	7	10	10	7	10	10	7	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:								
Base Vol:	71	1897	24	16	1061	43	2	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	1897	24	16	1061	43	2	2
User Adj:	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
PHF Volume:	71	1897	24	16	1061	43	2	2
Reduct Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	71	1897	24	16	1061	43	2	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	71	1897	24	16	1061	43	2	2
Saturation Flow Module:								
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.95	0.83	1.00	0.92	0.83	0.98
Lanes:	2.00	2.09	0.91	2.00	3.00	1.00	2.00	1.69
Final Sat.:	3150	3968	1629	3150	5700	1750	3150	3136
Capacity Analysis Module:								
Vol/Sat:	0.13	0.27	0.27	0.09	0.11	0.19	0.13	0.27
Crit Moves:	****							
Green Time:	23.1	42.7	42.7	14.1	33.7	33.7	20.4	44.9
Volume/Cap:	0.72	0.82	0.82	0.82	0.41	0.72	0.82	0.78
Delay/Veh:	55.0	43.2	43.2	71.2	40.1	49.4	63.5	41.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.0	43.2	43.2	71.2	40.1	49.4	63.5	41.3
LOS by Move:	D	D	D	D	D	D	D	D
HCM2kAvgQ:	9	19	19	9	7	14	12	20

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

Peak Hour Delay Signal Warrant Report

Intersection #2 El Camino Real / Olive Ave

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	R	L - T - R	R	L - T - R	R	L - T - R	R

```

-----|-----|-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Lanes:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   71 1897  24      16 1061  43      2  2  16      18  2  25
ApproachDel:   xxxxxx      xxxxxx      79.1      712.3
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
    FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=20]
    FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3177]
    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=8.9]
    SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=45]
    FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3177]
    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 #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   71 1897  24      16 1061  43      2  2  16      18  2  25
-----|-----|-----|-----|-----|-----|

```

Major Street Volume: 3112  
 Minor Approach Volume: 45  
 Minor Approach Volume Threshold: -106 [less than minimum of 100]

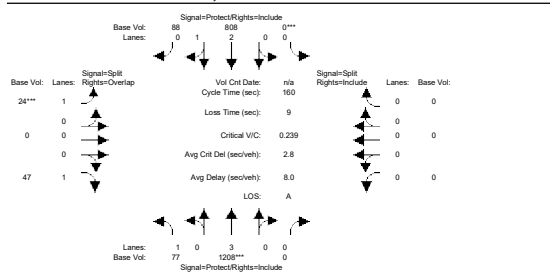
#### SIGNAL WARRANT DISCLAIMER

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.

AM Peak Hour - Background Condition  
 Local Transportation Analysis for 3001 El Camino Real  
 City of Palo Alto  
 Level Of Service Computation Report  
 2000 HCM Operations (Base Volume Alternative)  
 (3) AM Background

#### Intersection #3: El Camino Real / Hansen Way

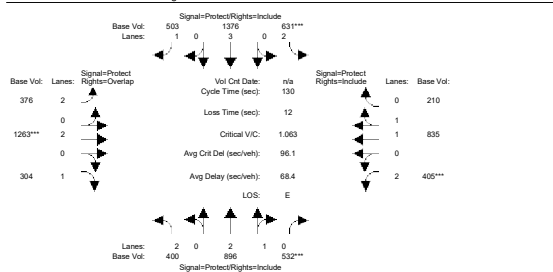


Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	77	1208	0	0	808	88	24	0	47	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	1208	0	0	808	88	24	0	47	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	1208	0	0	808	88	24	0	47	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	1208	0	0	808	88	24	0	47	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	1208	0	0	808	88	24	0	47	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	0.00	0.00	2.69	0.31	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5049	550	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.04	0.21	0.00	0.00	0.16	0.16	0.01	0.00	0.03	0.00	0.00	0.00
Crit Moves:	0.04	0.21	0.00	0.00	0.16	0.16	0.01	0.00	0.03	0.00	0.00	0.00
Green Time:	30.4	141	0.0	0.0	111	110.6	10.0	0.0	40.4	0.0	0.0	0.0
Volume/Cap:	0.23	0.24	0.00	0.00	0.23	0.23	0.22	0.00	0.11	0.00	0.00	0.00
Delay/Veh:	55.3	1.5	0.0	0.0	9.1	9.1	72.3	0.0	46.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.3	1.5	0.0	0.0	9.1	9.1	72.3	0.0	46.0	0.0	0.0	0.0
LOS by Move:	E+	A	A	A	A	A	E	A	D	A	A	A
HCM2kAvgq:	3	3	0	0	5	5	1	0	2	0	0	0
Note: Queue reported as the number of cars per lane.												

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

PM Peak Hour - Background Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
04 PM Background

Intersection #1: El Camino Real / Page Mill Rd

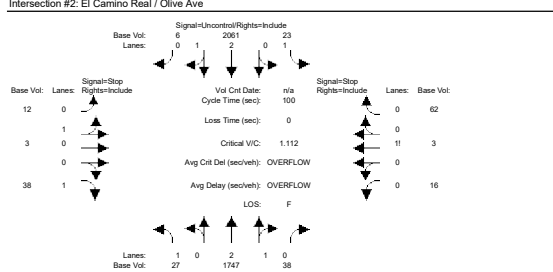


Street Name:	El Camino Real						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	400	896	532	631	1376	503	376	1263	304	405	835	210
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:	400	896	532	631	1376	503	376	1263	304	405	835	210
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:	400	896	532	631	1376	503	376	1263	304	405	835	210
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	400	896	532	631	1376	503	376	1263	304	405	835	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	400	896	532	631	1376	503	376	1263	304	405	835	210
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	1.59	0.41
Final Sat.:	3150	3800	1750	3150	5700	1750	3150	3800	1750	3150	2956	743
Capacity Analysis Module:												
Vol/Sat:	0.13	0.24	0.30	0.20	0.24	0.29	0.12	0.33	0.17	0.13	0.28	0.28
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	18.9	37.2	37.2	24.5	42.8	42.8	16.7	40.6	59.5	15.7	39.6	39.6
Volume/Cap:	0.87	0.82	1.06	1.06	0.73	0.87	0.93	1.06	0.38	1.06	0.93	0.93
Delay/Veh:	71.2	46.8	89.8	107.7	40.1	55.0	83.3	89.4	23.4	121.1	56.7	56.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.2	46.8	89.8	107.7	40.1	55.0	83.3	89.4	23.4	121.1	56.7	56.7
LOS by Move:	E	D	F	F	D	D	F	F	C	F	E	E
HCM2kavq0:	10	17	30	22	17	23	12	34	8	15	25	25

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

PM Peak Hour - Background Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
04 PM Background

Intersection #2: El Camino Real / Olive Ave



Street Name:	El Camino Real						Olive Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	27	1747	38	23	2061	6	12	3	38	16	3	62
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:	27	1747	38	23	2061	6	12	3	38	16	3	62
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:	27	1747	38	23	2061	6	12	3	38	16	3	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	27	1747	38	23	2061	6	12	3	38	16	3	62
Critical Gap Module:												
Critical Gap:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Conflict Vol:	2067	xxxx	xxxxxx	1785	xxxx	xxxxxx	2748	3949	690	2555	3933	601
Potent Cap:	274	xxxx	xxxxxx	352	xxxx	xxxxxx	10	3	392	14	3	448
Move Cap:	274	xxxx	xxxxxx	352	xxxx	xxxxxx	0	3	392	0	3	448
Volume/Cap:	0.10	xxxx	xxxx	0.07	xxxx	xxxx	xxxx	1.11	0.10	xxxx	1.08	0.14
Level Of Service Module:												
Way95h0:	0.3	xxxx	xxxxxx	0.2	xxxx	xxxxxx	xxxx	xxxx	0.3	xxxx	xxxx	xxxxxx
Control Del:	19.6	xxxx	xxxxxx	15.9	xxxx	xxxxxx	xxxxxx	xxxx	15.2	xxxxxx	xxxx	xxxxxx
LOS by Move:	C	*	*	C	*	*	*	*	C	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0	xxxx	xxxxxx	xxxx	0	xxxxxx
Shared Queue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx	*	xxxxxx	*	xxxxxx	*	+Inf	*	xxxxxx	*	xxxxxx	*
ApproachLOS:	*	*	*	*	*	*	F	*	*	F	*	*

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

Peak Hour Delay Signal Warrant Report  
Intersection #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   27 1747  38      23 2061  6      12  3  38      16  3  62
ApproachDel:   xxxxxx      xxxxxx      +Inf      xxxxxx
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=53]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=4036]
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=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=81]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=4036]
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 #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   27 1747  38      23 2061  6      12  3  38      16  3  62
-----|-----|-----|-----|-----|
Major Street Volume:      3902
Minor Approach Volume:      81
Minor Approach Volume Threshold: -184 [less than minimum of 100]

```

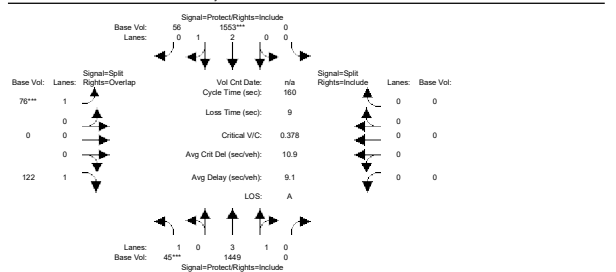
#### SIGNAL WARRANT DISCLAIMER

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.

PM Peak Hour - Background Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
04 PM Background

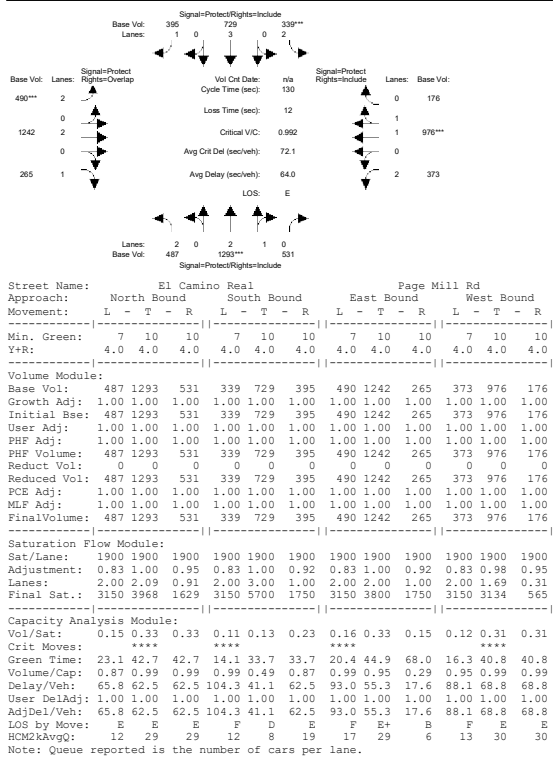
#### Intersection #3: El Camino Real / Hansen Way



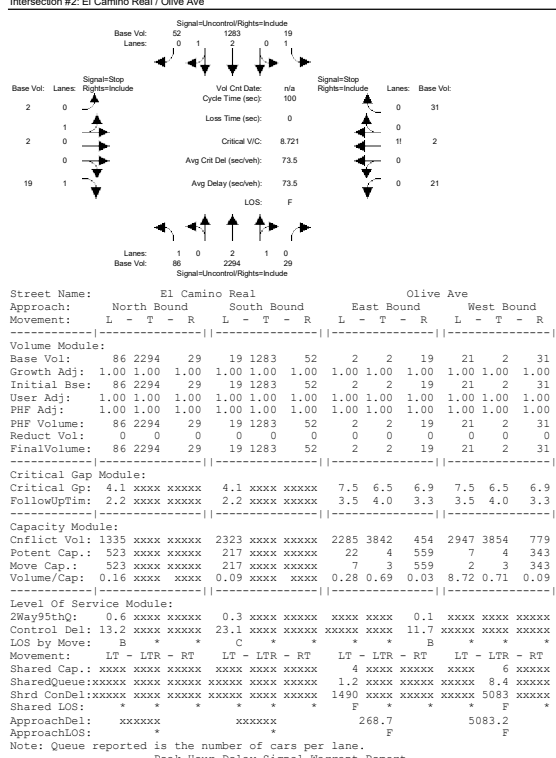
Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
----- ----- ----- ----- ----- -----												
M/N. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
----- ----- ----- ----- ----- -----												
Volume Module:												
Base Vol:	45	1449	0	0	1553	56	76	0	122	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	45	1449	0	0	1553	56	76	0	122	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	45	1449	0	0	1553	56	76	0	122	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	1449	0	0	1553	56	76	0	122	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	45	1449	0	0	1553	56	76	0	122	0	0	0
----- ----- ----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	4.00	0.00	0.00	2.89	0.11	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	7500	0	0	5405	195	1750	0	1750	0	0	0
----- ----- ----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.03	0.19	0.00	0.00	0.29	0.29	0.04	0.00	0.07	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.9	133	0.0	0.0	122	121.7	18.4	0.0	29.3	0.0	0.0	0.0
Volume/Cap:	0.38	0.23	0.00	0.00	0.38	0.38	0.38	0.00	0.38	0.00	0.00	0.00
Delay/Veh:	73.3	2.9	0.0	0.0	6.5	6.5	66.7	0.0	58.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.3	2.9	0.0	0.0	6.5	6.5	66.7	0.0	58.2	0.0	0.0	0.0
LOS by Move:	E	A	A	A	A	A	E	A	E	A	A	A
HCM2kAvgq:	3	4	0	0	9	9	4	0	6	0	0	0
Note: Queue reported is the number of cars per lane.												

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

Intersection #1: El Camino Real / Page Mill Rd



Intersection #2: El Camino Real / Olive Ave



```

-----|-----|-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Lanes:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   86 2294  29      19 1283  52      2  2  19      21  2  31
ApproachDel:   xxxxxx      xxxxxx      268.7      5083.2
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=1.7]
FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=23]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3840]
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=76.2]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=54]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3840]
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 #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   86 2294  29      19 1283  52      2  2  19      21  2  31
-----|-----|-----|-----|-----|-----|
Major Street Volume:      3763
Minor Approach Volume:    54
Minor Approach Volume Threshold: -172 [less than minimum of 100]

```

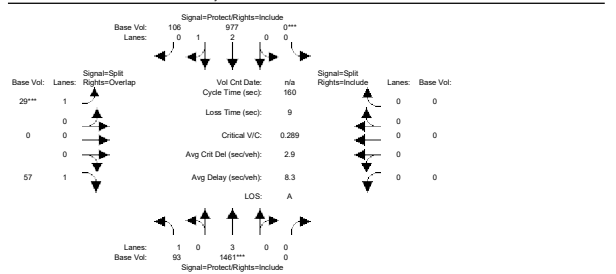
#### SIGNAL WARRANT DISCLAIMER

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.

AM Peak Hour - Cumulative Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
05 AM Cumulative

#### Intersection #3: El Camino Real / Hansen Way

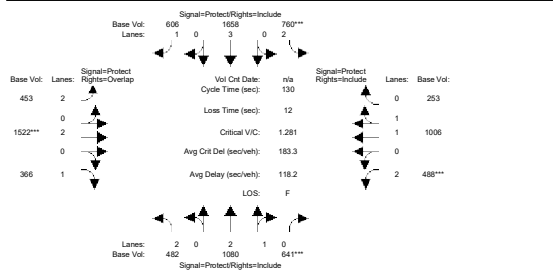


Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:			10			10			10			10
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	93	1461	0	0	977	106	29	0	57	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	93	1461	0	0	977	106	29	0	57	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	93	1461	0	0	977	106	29	0	57	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	1461	0	0	977	106	29	0	57	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	93	1461	0	0	977	106	29	0	57	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	0.00	0.00	2.70	0.30	1.00	0.00	1.00	0.00	0.00	1.00
Final Sat.:	1750	5700	0	0	5051	548	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.26	0.00	0.00	0.19	0.19	0.02	0.00	0.03	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	30.4	141	0.0	0.0	111	110.6	10.0	0.0	40.4	0.0	0.0	0.0
Volume/Cap:	0.28	0.29	0.00	0.00	0.28	0.28	0.27	0.00	0.13	0.00	0.00	0.00
Delay/Veh:	55.9	1.5	0.0	0.0	9.5	9.5	72.8	0.0	46.3	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.9	1.5	0.0	0.0	9.5	9.5	72.8	0.0	46.3	0.0	0.0	0.0
LOS by Move:	E+	A	A	A	A	A	E	A	D	A	A	A
HCM2kAvgq:	4	4	0	0	7	7	2	0	2	0	0	0
Note: Queue reported is the number of cars per lane.												

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

PM Peak Hour - Cumulative Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
06 PM Cumulative

Intersection #1: El Camino Real / Page Mill Rd

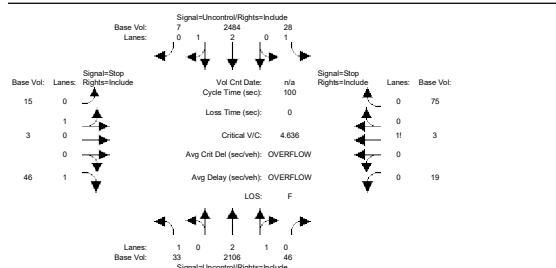


Street Name:	El Camino Real						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
----- ----- ----- ----- ----- -----												
Volume Module:												
Base Vol:	482	1080	641	760	1658	606	453	1522	366	488	1006	253
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 Base:	482	1080	641	760	1658	606	453	1522	366	488	1006	253
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:	482	1080	641	760	1658	606	453	1522	366	488	1006	253
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	482	1080	641	760	1658	606	453	1522	366	488	1006	253
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	482	1080	641	760	1658	606	453	1522	366	488	1006	253
----- ----- ----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	1.59	0.41
Final Sat.:	3150	3800	1750	3150	5700	1750	3150	3800	1750	3150	2856	743
----- ----- ----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.15	0.28	0.37	0.24	0.29	0.35	0.14	0.40	0.21	0.15	0.34	0.34
Crit Moves:	0.15	0.28	0.37	0.24	0.29	0.35	0.14	0.40	0.21	0.15	0.34	0.34
Green Time:	18.9	37.2	37.2	24.5	42.8	42.8	16.7	40.6	59.5	17.5	39.6	39.6
Volume/Cap:	1.05	0.99	1.28	1.28	0.88	1.05	1.12	1.28	0.46	1.28	1.12	1.12
Delay/Veh:	112.3	66.5	178.8	191.9	46.7	95.8	137.0	178	24.6	202.5	110	110.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	112.3	66.5	178.8	191.9	46.7	95.8	137.0	178	24.6	202.5	110	110.1
LOS by Move:	F	E	F	F	D	F	F	F	C	F	E	C
HCM2kAvgQ:	15	26	47	33	24	35	18	52	11	22	38	38
Note: Queue reported is the number of cars per lane.												

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

PM Peak Hour - Cumulative Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
06 PM Cumulative

Intersection #2: El Camino Real / Olive Ave



Street Name:	El Camino Real						Olive Ave					
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:	33	2106	46	28	2484	7	15	3	46	19	3	75
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 Base:	33	2106	46	28	2484	7	15	3	46	19	3	75
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:	33	2106	46	28	2484	7	15	3	46	19	3	75
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	33	2106	46	28	2484	7	15	3	46	19	3	75
Critical Gap Module:												
Critical Gap:	4.1	XXXXX	XXXXXX	4.1	XXXXX	XXXXXX	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTime:	2.2	XXXXX	XXXXXX	2.2	XXXXX	XXXXXX	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Conflict Vol:	2491	XXXXX	XXXXXX	2152	XXXXX	XXXXXX	3313	4762	832	3081	4742	725
Potent Cap:	187	XXXXX	XXXXXX	254	XXXXX	XXXXXX	3	1	317	5	1	372
Move Cap:	187	XXXXX	XXXXXX	254	XXXXX	XXXXXX	0	1	317	0	1	372
Volume/Cap:	0.18	XXXXX	XXXXXX	0.11	XXXXX	XXXXXX	XXXXX	4.64	0.15	XXXXXX	4.49	0.20
Level of Service Module:												
2Way95thQ:	0.6	XXXXX	XXXXXX	0.4	XXXXX	XXXXXX	XXXXX	XXXXX	0.5	XXXXX	XXXXX	XXXXXX
Control Del:	28.4	XXXXX	XXXXXX	20.9	XXXXX	XXXXXX	XXXXXX	XXXXX	18.3	XXXXXX	XXXXX	XXXXXX
LOS by Move:	D	*	*	C	*	*	*	*	C	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap:	XXXXX	XXXXX	XXXXXX	XXXXXX	XXXXX	XXXXXX	0	XXXXX	XXXXXX	XXXXX	0	XXXXXX
SharedQueue/MaxQueue	XXXXX	XXXXX	XXXXXX	XXXXXX	XXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXX	XXXXXX
Shrd ConDel:	XXXXXX	XXXXX	XXXXXX	XXXXXX	XXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXXX	XXXXX	XXXXXX
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	XXXXXX	*	XXXXXX	*	XXXXXX	*	+Inf	*	XXXXXX	*	XXXXXX	*
ApproachLOS:	*	*	*	*	*	*	F	*	*	F	*	*
Note: Queue reported is the number of cars per lane.												

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

Peak Hour Delay Signal Warrant Report

Intersection #2 El Camino Real / Olive Ave
Base Volume Alternative: Peak Hour Warrant NOT Met
Approach:
Movement:

```

-----|-----|-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Lanes:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   33 2106 46      28 2484 7      15 3 46      19 3 75
ApproachDel:   xxxxxx      xxxxxx      +Inf      xxxxxx
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=64]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=4865]
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=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=97]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=4865]
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).

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#### Peak Hour Volume Signal Warrant Report [Urban]

Intersection #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   33 2106 46      28 2484 7      15 3 46      19 3 75
-----|-----|-----|-----|-----|

```

Major Street Volume: 4704  
Minor Approach Volume: 97  
Minor Approach Volume Threshold: -249 [less than minimum of 100]

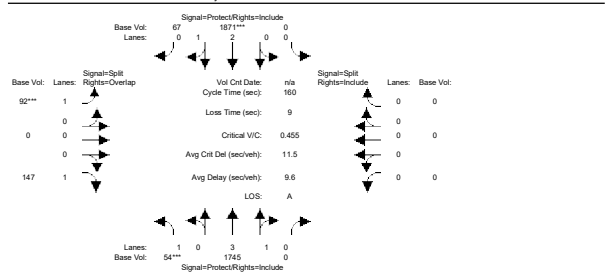
#### SIGNAL WARRANT DISCLAIMER

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.

PM Peak Hour - Cumulative Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
08 PM Cumulative

#### Intersection #3: El Camino Real / Hansen Way

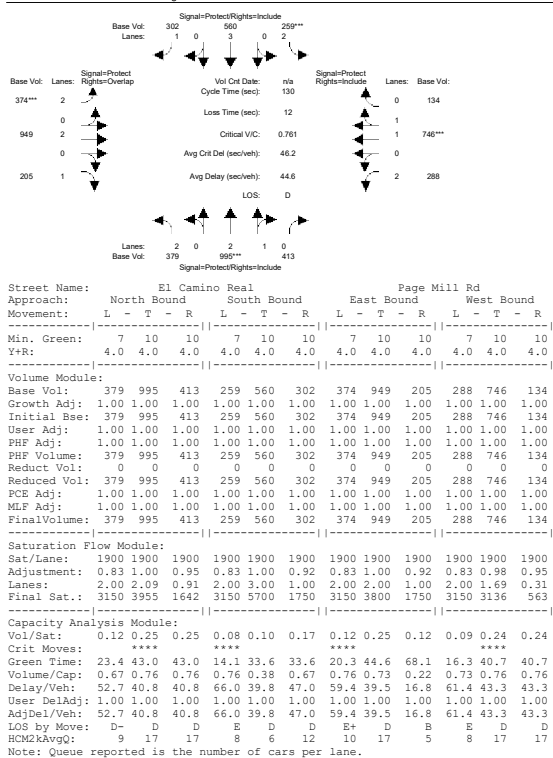


Street Name:	El Camino Real				Hansen Way				
Approach:	North Bound		South Bound		East Bound		West Bound		
Movement:	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:									
Base Vol:	54	1745	0	0	1871	67	92	0	147
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	54	1745	0	0	1871	67	92	0	147
User Adj:	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
PHF Volume:	54	1745	0	0	1871	67	92	0	147
Reduct Vol:	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	1745	0	0	1871	67	92	0	147
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	1745	0	0	1871	67	92	0	147
Saturation Flow Module:									
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.92	0.92	0.98	0.95	0.92	1.00	0.92
Lanes:	1.00	4.00	0.00	0.00	2.89	0.11	1.00	0.00	0.00
Final Sat.:	1750	7500	0	0	5406	194	1750	0	0
Capacity Analysis Module:									
Vol/Sat:	0.03	0.23	0.00	0.00	0.35	0.35	0.05	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****
Green Time:	10.8	133	0.0	0.0	122	121.7	18.5	0.0	29.3
Volume/Cap:	0.46	0.28	0.00	0.00	0.46	0.46	0.46	0.00	0.00
Delay/Veh:	74.5	3.1	0.0	0.0	7.1	7.1	67.7	0.0	59.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.5	3.1	0.0	0.0	7.1	7.1	67.7	0.0	59.3
LOS by Move:	E	A	A	A	A	A	E	A	A
HCM2kAvgq:	3	5	0	0	11	11	5	0	7
Note: Queue reported is the number of cars per lane.									

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

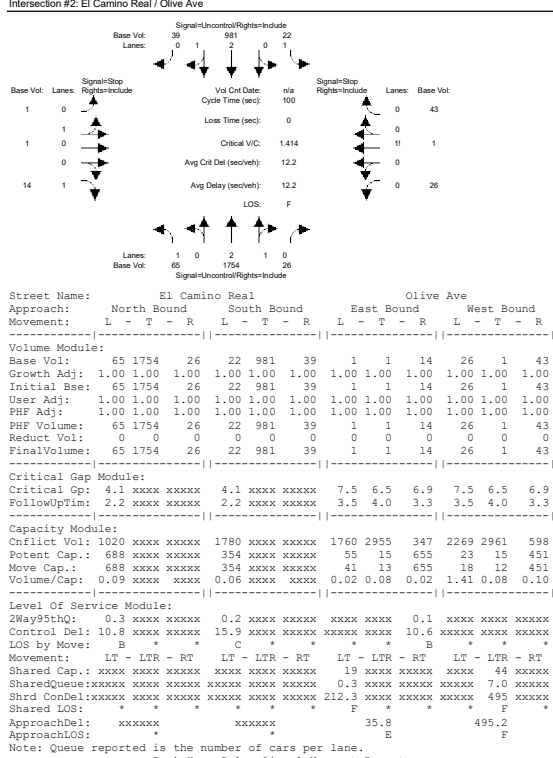
AM Peak Hour - Existing + Project Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
07 AM Ex Proj

Intersection #1: El Camino Real / Page Mill Rd



AM Peak Hour - Existing + Project Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
07 AM Ex Proj

Intersection #2: El Camino Real / Olive Ave



```

-----|-----|-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Lanes:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   65 1754 26      22 981 39      1 1 14 26      1 43
ApproachDel:   xxxxxx      xxxxxx      35.8      495.2
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
    FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=16]
    FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2973]
    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=9.6]
    SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=70]
    FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=2973]
    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 #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   65 1754 26      22 981 39      1 1 14 26      1 43
-----|-----|-----|-----|-----|
Major Street Volume:      2887
Minor Approach Volume:    70
Minor Approach Volume Threshold: -80 [less than minimum of 100]
-----|-----|-----|-----|-----|

```

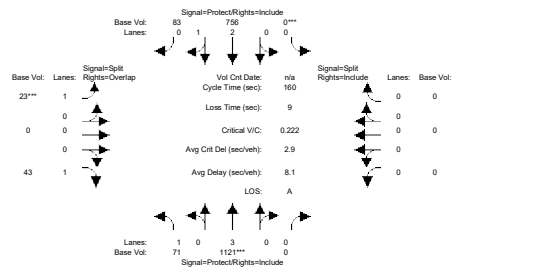
#### SIGNAL WARRANT DISCLAIMER

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.

AM Peak Hour - Existing + Project Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
07 AM Ex. Pkg

#### Intersection #3: El Camino Real / Hansen Way

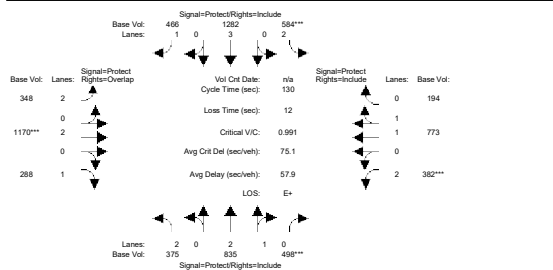


Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
M/N. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	71	1121	0	0	756	83	23	0	43	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	71	1121	0	0	756	83	23	0	43	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	71	1121	0	0	756	83	23	0	43	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	1121	0	0	756	83	23	0	43	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	71	1121	0	0	756	83	23	0	43	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	0.00	0.00	2.69	0.31	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5045	554	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.04	0.20	0.00	0.00	0.15	0.15	0.01	0.00	0.02	0.00	0.00	0.00
Crit Moves:	0.04	0.20	0.00	0.00	0.15	0.15	0.01	0.00	0.02	0.00	0.00	0.00
Green Time:	31.9	141	0.0	0.0	109	109.1	10.0	0.0	41.9	0.0	0.0	0.0
Volume/Cap:	0.20	0.22	0.00	0.00	0.22	0.22	0.21	0.00	0.09	0.00	0.00	0.00
Delay/Veh:	53.8	1.4	0.0	0.0	9.5	9.5	72.2	0.0	44.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	53.8	1.4	0.0	0.0	9.5	9.5	72.2	0.0	44.8	0.0	0.0	0.0
LOS by Move:	D	A	A	A	A	A	E	A	D	A	A	A
HCM2kAvgQ:	3	3	0	0	5	5	1	0	2	0	0	0
Note: Queue reported is the number of cars per lane.												

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

PM Peak Hour - Existing + Project Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
08 PM Ex Proj

Intersection #1: El Camino Real / Page Mill Rd

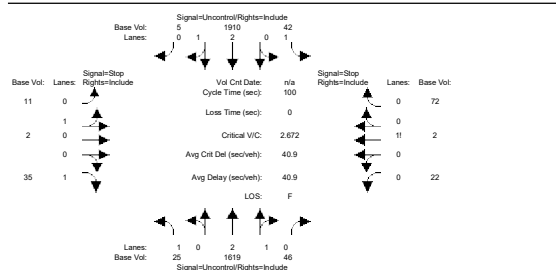


Street Name:	El Camino Real				Page Mill Rd			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Min. Green:	7	10	10	7	10	10	7	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:								
Base Vol:	375	835	498	584	1282	466	348	1170
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	375	835	498	584	1282	466	348	1170
User Adj:	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
PHF Volume:	375	835	498	584	1282	466	348	1170
Reduced Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	375	835	498	584	1282	466	348	1170
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	375	835	498	584	1282	466	348	1170
Saturation Flow Module:								
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	1.59
Final Sat:	3150	3800	1750	3150	5700	1750	3150	2957
Capacity Analysis Module:								
Vol/Sat:	0.12	0.22	0.28	0.19	0.22	0.27	0.11	0.31
Crit Moves:	0.12	0.22	0.28	0.19	0.22	0.27	0.11	0.31
Green Time:	19.1	37.3	37.3	24.3	42.6	42.6	16.7	40.4
Volume/Cap:	0.81	0.76	0.99	0.99	0.69	0.81	0.86	0.99
Delay/Veh:	64.2	44.4	68.4	87.3	39.0	48.6	72.0	68.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.2	44.4	68.4	87.3	39.0	48.6	72.0	68.4
LOS by Move:	E	D	E	F	D+	D	E	E
HCMS2kAvgQ:	9	16	25	19	15	20	11	29

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

PM Peak Hour - Existing + Project Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Unsignalized (Base Volume Alternative)  
08 PM Ex Proj

Intersection #2: El Camino Real / Olive Ave



Street Name:	El Camino Real				Olive Ave			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Min. Green:	7	10	10	7	10	10	7	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:								
Base Vol:	25	1619	46	42	1910	5	11	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	1619	46	42	1910	5	11	2
User Adj:	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
PHF Volume:	25	1619	46	42	1910	5	11	2
Reduced Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	25	1619	46	42	1910	5	11	2
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	25	1619	46	42	1910	5	11	2
Saturation Flow Module:								
Sat/Lane:	1915	1915	1915	1665	1915	1915	2587	3712
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	1.59
Final Sat:	3150	3800	1750	3150	5700	1750	3150	2957
Capacity Analysis Module:								
Vol/Sat:	0.12	0.22	0.28	0.19	0.22	0.27	0.11	0.31
Crit Moves:	0.12	0.22	0.28	0.19	0.22	0.27	0.11	0.31
Green Time:	19.1	37.3	37.3	24.3	42.6	42.6	16.7	40.4
Volume/Cap:	0.81	0.76	0.99	0.99	0.69	0.81	0.86	0.99
Delay/Veh:	64.2	44.4	68.4	87.3	39.0	48.6	72.0	68.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.2	44.4	68.4	87.3	39.0	48.6	72.0	68.4
LOS by Move:	E	D	E	F	D+	D	E	E
HCMS2kAvgQ:	9	16	25	19	15	20	11	29

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

Peak Hour Delay Signal Warrant Report

Intersection #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   25 1619 46      42 1910 5      11 2 35      22 2 72
ApproachDel:   xxxxxx      xxxxxx      533.7      1335.1
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=7.1]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=48]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3791]
SUCCEED - Total volume greater than or equal to 800 for intersection
with four or more approaches.
-----|-----|-----|-----|-----|
Approach[westbound][lanes=1][control=Stop Sign]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=96]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3791]
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).

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#### Peak Hour Volume Signal Warrant Report [Urban]

#### Intersection #2 El Camino Real / Olive 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:          1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:    25 1619 46      42 1910 5      11 2 35      22 2 72
-----|-----|-----|-----|-----|
Major Street Volume:      3647
Minor Approach Volume:    96
Minor Approach Volume Threshold: -161 [less than minimum of 100]
-----|-----|-----|-----|-----|

```

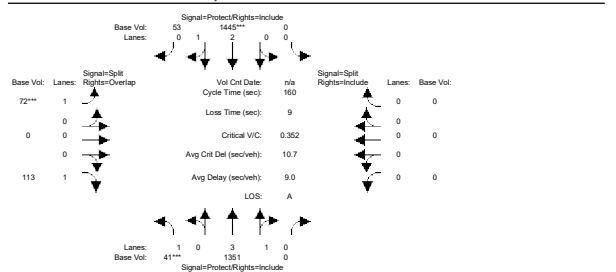
#### SIGNAL WARRANT DISCLAIMER

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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PM Peak Hour - Existing + Project Condition  
Local Transportation Analysis for 2001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
(8 PM Ex. Pkg)

#### Intersection #3: El Camino Real / Hansen Way

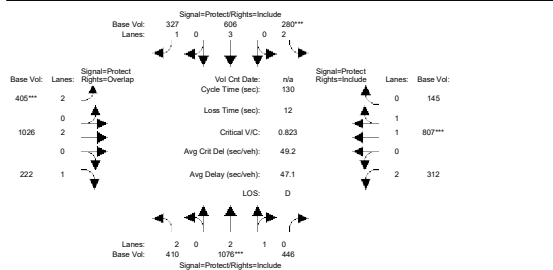


Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
----- ----- ----- ----- ----- -----												
M/N. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
----- ----- ----- ----- ----- -----												
Volume Module:												
Base Vol:	41	1351	0	0	1445	53	72	0	113	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	41	1351	0	0	1445	53	72	0	113	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	41	1351	0	0	1445	53	72	0	113	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	1351	0	0	1445	53	72	0	113	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	41	1351	0	0	1445	53	72	0	113	0	0	0
----- ----- ----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	4.00	0.00	0.00	2.89	0.11	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	7500	0	0	5402	198	1750	0	1750	0	0	0
----- ----- ----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.02	0.18	0.00	0.00	0.27	0.27	0.04	0.00	0.06	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.7	132	0.0	0.0	122	121.6	18.7	0.0	29.4	0.0	0.0	0.0
Volume/Cap:	0.35	0.22	0.00	0.00	0.35	0.35	0.35	0.00	0.35	0.00	0.00	0.00
Delay/Veh:	73.2	2.9	0.0	0.0	6.3	6.3	66.1	0.0	57.7	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.2	2.9	0.0	0.0	6.3	6.3	66.1	0.0	57.7	0.0	0.0	0.0
LOS by Move:	E	A	A	A	A	A	E	A	A	A	A	A
HCM2kAvgq:	2	3	0	0	8	8	4	0	5	0	0	0
Note: Queue reported is the number of cars per lane.												

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

AM Peak Hour - Project Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
09 AM Project

Intersection #1: El Camino Real / Page Mill Rd

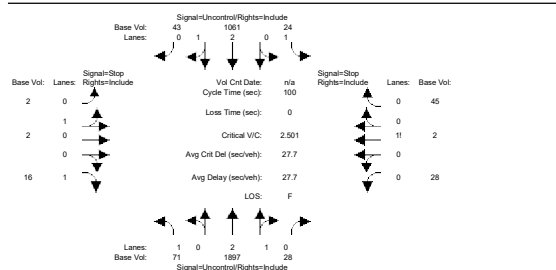


Street Name:	El Camino Real						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	410	1076	446	280	606	327	405	1026	222	312	807	145
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:	410	1076	446	280	606	327	405	1026	222	312	807	145
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:	410	1076	446	280	606	327	405	1026	222	312	807	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	410	1076	446	280	606	327	405	1026	222	312	807	145
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	410	1076	446	280	606	327	405	1026	222	312	807	145
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.95	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.09	0.91	2.00	2.00	1.00	2.00	2.00	1.00	2.00	1.69	0.31
Final Sat.:	3150	3957	1640	3150	5700	1750	3150	3800	1750	3150	3136	563
Capacity Analysis Module:												
Vol/Sat:	0.13	0.27	0.27	0.09	0.11	0.19	0.13	0.27	0.13	0.10	0.26	0.26
Crit Moves:	****											
Green Time:	23.4	43.0	43.0	14.0	33.6	33.6	20.3	44.6	68.0	16.4	40.7	40.7
Volume/Cap:	0.72	0.82	0.82	0.82	0.41	0.72	0.82	0.79	0.24	0.79	0.82	0.82
Delay/Veh:	54.8	43.1	43.1	71.6	40.2	49.6	63.8	41.7	17.1	65.2	46.2	46.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.8	43.1	43.1	71.6	40.2	49.6	63.8	41.7	17.1	65.2	46.2	46.2
LOS by Move:	D	D	D	E	D	D	E	D	B	E	D	D
HCM2kAvgQ:	9	20	20	9	7	14	12	20	5	9	20	20

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

AM Peak Hour - Project Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
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2000 HCM Unsignalized (Base Volume Alternative)  
09 AM Project

Intersection #2: El Camino Real / Olive Ave



Street Name:	El Camino Real						Olive Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	71	1897	28	24	1061	43	2	2	16	28	2	45
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:	71	1897	28	24	1061	43	2	2	16	28	2	45
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:	71	1897	28	24	1061	43	2	2	16	28	2	45
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	71	1897	28	24	1061	43	2	2	16	28	2	45
Critical Gap Module:												
Critical Gap:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Conflict Vol:	1104	xxxx	xxxxxx	1925	xxxx	xxxxxx	1906	3198	375	2456	3205	646
Potent Cap:	640	xxxx	xxxxxx	311	xxxx	xxxxxx	43	10	628	16	10	419
Move Cap:	640	xxxx	xxxxxx	311	xxxx	xxxxxx	27	8	628	11	8	419
Volume/Cap:	0.11	xxxx	xxxx	0.08	xxxx	xxxx	0.07	0.24	0.03	2.50	0.24	0.11
Level Of Service Module:												
2Way95thQ:	0.4	xxxx	xxxxxx	0.2	xxxx	xxxxxx	xxxx	xxxx	0.1	xxxx	xxxx	xxxxxx
Control Del:	11.3	xxxx	xxxxxx	17.6	xxxx	xxxxxx	xxxxxx	xxxx	10.9	xxxxxx	xxxx	xxxxxx
LOS by Move:	B	*	*	C	*	*	*	*	B	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	13	xxxx	xxxxxx	xxxx	26	xxxxxx
Shared Queue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	0.8	xxxx	xxxxxx	xxxxxx	9.2	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	383.6	xxxx	xxxxxx	xxxxxx	1148	xxxxxx
Shared LOS:	*	*	*	*	*	*	F	*	*	*	F	*
ApproachDel:	xxxxxx	*	xxxxxx	*	xxxxxx	*	85.4	*	*	1148.0	*	*
ApproachLOS:	*	*	*	*	*	*	F	*	*	F	*	*

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

Peak Hour Delay Signal Warrant Report

Intersection #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   71 1897  28      24 1061  43      2  2  16      28  2  45
ApproachDel:   xxxxxx      xxxxxx      85.4      1148.0
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.5]
    FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=20]
    FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3219]
    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=23.9]
    SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=75]
    FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3219]
    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 #2 El Camino Real / Olive 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   71 1897  28      24 1061  43      2  2  16      28  2  45

```

Major Street Volume: 3124  
 Minor Approach Volume: 75  
 Minor Approach Volume Threshold: -108 [less than minimum of 100]

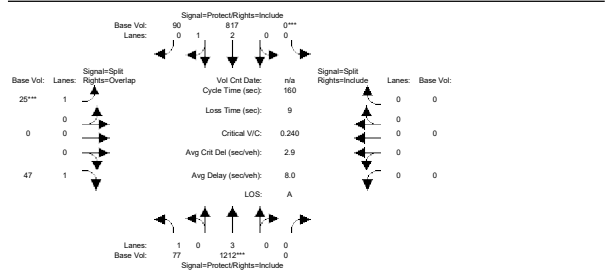
#### SIGNAL WARRANT DISCLAIMER

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.

AM Peak Hour - Project Condition  
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 2000 HCM Operations (Base Volume Alternative)  
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#### Intersection #3: El Camino Real / Hansen Way

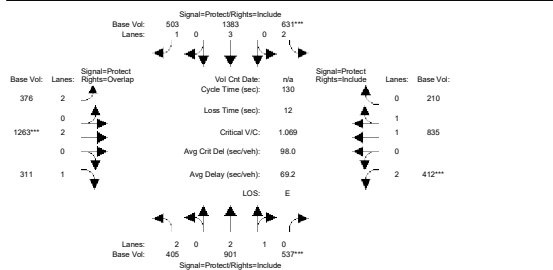


Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10			10			10			10		
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	77	1212	0	0	817	90	25	0	47	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	77	1212	0	0	817	90	25	0	47	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	1212	0	0	817	90	25	0	47	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	1212	0	0	817	90	25	0	47	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	1212	0	0	817	90	25	0	47	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	0.00	0.00	2.69	0.31	1.00	0.00	1.00	0.00	0.00	1.00
Final Sat.:	1750	5700	0	0	5044	556	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.04	0.21	0.00	0.00	0.16	0.16	0.01	0.00	0.03	0.00	0.00	0.00
Crit Moves:	0.04	0.21	0.00	0.00	0.16	0.16	0.01	0.00	0.03	0.00	0.00	0.00
Green Time:	30.1	141	0.0	0.0	111	110.9	10.0	0.0	40.1	0.0	0.0	0.0
Volume/Cap:	0.23	0.24	0.00	0.00	0.23	0.23	0.00	0.00	0.11	0.00	0.00	0.00
Delay/Veh:	55.5	1.5	0.0	0.0	9.0	9.0	72.4	0.0	46.3	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.5	1.5	0.0	0.0	9.0	9.0	72.4	0.0	46.3	0.0	0.0	0.0
LOS by Move:	E+	A	A	A	A	A	E	A	D	A	A	A
HCM2kAvgq:	3	3	0	0	5	5	1	0	2	0	0	0
Note: Queue reported is the number of cars per lane.												

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

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Intersection #1: El Camino Real / Page Mill Rd

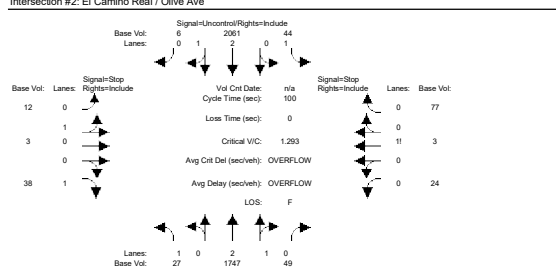


Street Name:	El Camino Real						Page Mill Rd					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	405	901	537	631	1383	503	376	1263	311	412	835	210
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:	405	901	537	631	1383	503	376	1263	311	412	835	210
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:	405	901	537	631	1383	503	376	1263	311	412	835	210
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	405	901	537	631	1383	503	376	1263	311	412	835	210
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	405	901	537	631	1383	503	376	1263	311	412	835	210
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98	0.95
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00	2.00	1.59	0.41
Final Sat.:	3150	3800	1750	3150	5700	1750	3150	3800	1750	3150	2956	743
Capacity Analysis Module:												
Vol/Sat:	0.13	0.24	0.31	0.20	0.24	0.29	0.12	0.33	0.18	0.13	0.28	0.28
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	19.1	37.3	37.3	24.4	42.6	42.6	16.7	40.4	59.5	15.9	39.6	39.6
Volume/Cap:	0.88	0.83	1.07	1.07	0.74	0.88	0.93	1.07	0.39	1.07	0.93	0.93
Delay/Veh:	71.4	46.7	91.6	109.7	40.4	55.5	83.4	91.5	23.6	122.5	56.7	56.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	71.4	46.7	91.6	109.7	40.4	55.5	83.4	91.5	23.6	122.5	56.7	56.7
LOS by Move:	E	D	F	F	D	E+	F	F	C	F	E+	E+
HCM2kAvgQ:	11	18	30	22	17	23	12	35	9	16	25	25

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

PM Peak Hour - Project Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
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2000 HCM Unsignalized (Base Volume Alternative)  
10 PM Project

Intersection #2: El Camino Real / Olive Ave



Street Name:	El Camino Real						Olive Ave					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	27	1747	49	44	2061	6	12	3	38	24	3	77
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:	27	1747	49	44	2061	6	12	3	38	24	3	77
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:	27	1747	49	44	2061	6	12	3	38	24	3	77
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Final Volume:	27	1747	49	44	2061	6	12	3	38	24	3	77
Critical Gap Module:												
Critical Gap:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5	6.9	7.5	6.5	6.9
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0	3.3	3.5	4.0	3.3
Capacity Module:												
Conflict Vol:	2067	xxxx	xxxxxx	1796	xxxx	xxxxxx	2790	4002	690	2602	3981	607
Potent Cap.:	274	xxxx	xxxxxx	349	xxxx	xxxxxx	9	3	392	13	3	444
Move Cap.:	274	xxxx	xxxxxx	349	xxxx	xxxxxx	0	2	392	0	2	444
Volume/Cap:	0.10	xxxx	xxxxxx	0.13	xxxx	xxxxxx	xxxxx	1.29	0.10	xxxxx	1.25	0.17
Level Of Service Module:												
Way95hQ:	0.3	xxxx	xxxxxx	0.4	xxxx	xxxxxx	xxxx	xxxx	0.3	xxxx	xxxx	xxxxxx
Control Del:	19.6	xxxx	xxxxxx	16.8	xxxx	xxxxxx	xxxxxx	15.2	xxxxxx	xxxxxx	xxxxxx	xxxxxx
LOS by Move:	C	*	*	C	*	*	*	*	C	*	*	*
Movement:	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	0	xxxx	xxxxxx	xxxx	0	xxxxxx
Shared Queue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxxxx	xxxxxx
Shared LOS:	*	*	*	*	*	*	*	*	*	*	*	*
ApproachDel:	xxxxxx	*	xxxxxx	*	xxxxxx	*	+Inf	*	xxxxxx	*	xxxxxx	*
ApproachLOS:	*	*	*	*	*	*	F	*	F	*	F	*

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

Peak Hour Delay Signal Warrant Report

Intersection #2 El Camino Real / Olive Ave												
Base Volume Alternative: Peak Hour Warrant 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   27 1747  49      44 2061  6      12  3  38      24  3  77
ApproachDel:   xxxxxx      xxxxxx      +Inf      xxxxxx
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=53]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=4091]
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=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=104]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=4091]
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).

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#### Peak Hour Volume Signal Warrant Report [Urban]

```

*****
Intersection #2 El Camino Real / Olive Ave
*****
Base Volume Alternative: Peak Hour Warrant 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   27 1747  49      44 2061  6      12  3  38      24  3  77
-----|-----|-----|-----|-----|
Major Street Volume:      3934
Minor Approach Volume:      104
Minor Approach Volume Threshold: -187 [less than minimum of 100]

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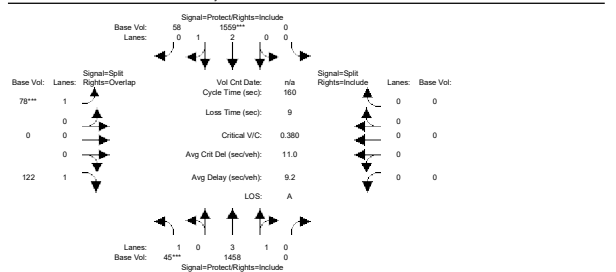
#### SIGNAL WARRANT DISCLAIMER

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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PM Peak Hour - Project Condition  
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Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
10 PM Project

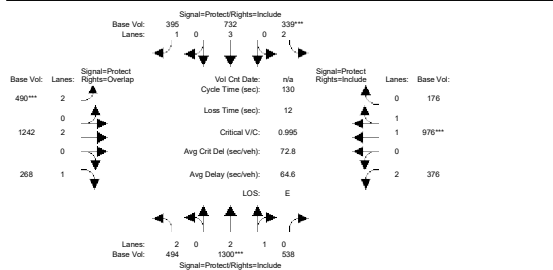
#### Intersection #3: El Camino Real / Hansen Way



Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
----- ----- ----- ----- ----- -----												
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
----- ----- ----- ----- ----- -----												
Volume Module:												
Base Vol:	45	1458	0	0	1559	58	78	0	122	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	45	1458	0	0	1559	58	78	0	122	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	45	1458	0	0	1559	58	78	0	122	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	1458	0	0	1559	58	78	0	122	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	45	1458	0	0	1559	58	78	0	122	0	0	0
----- ----- ----- ----- ----- -----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	4.00	0.00	0.00	2.89	0.11	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	7500	0	0	5399	201	1750	0	1750	0	0	0
----- ----- ----- ----- ----- -----												
Capacity Analysis Module:												
Vol/Sat:	0.03	0.19	0.00	0.00	0.29	0.29	0.04	0.00	0.07	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.8	132	0.0	0.0	121	121.4	18.7	0.0	29.6	0.0	0.0	0.0
Volume/Cap:	0.38	0.24	0.00	0.00	0.38	0.38	0.38	0.00	0.38	0.00	0.00	0.00
Delay/Veh:	73.4	3.0	0.0	0.0	6.6	6.6	66.4	0.0	57.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	73.4	3.0	0.0	0.0	6.6	6.6	66.4	0.0	57.9	0.0	0.0	0.0
LOS by Move:	E	A	A	A	A	A	E	A	E	A	A	A
HCM2kAvgq:	3	4	0	0	9	9	4	0	6	0	0	0
Note: Queue reported is the number of cars per lane.												

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

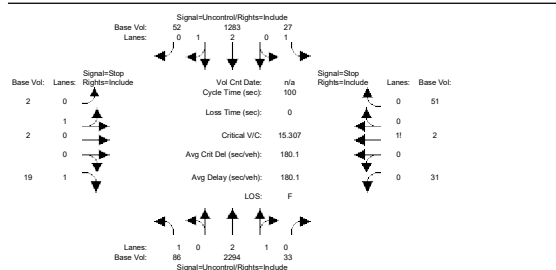
Intersection #1: El Camino Real / Page Mill Rd



Street Name:	El Camino Real				Page Mill Rd			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Min. Green:	7	10	10	7	10	10	7	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:								
Base Vol:	494	1300	538	339	732	395	490	1242
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	494	1300	538	339	732	395	490	1242
User Adj:	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
PHF Volume:	494	1300	538	339	732	395	490	1242
Reduced Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	494	1300	538	339	732	395	490	1242
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	494	1300	538	339	732	395	490	1242
Saturation Flow Module:								
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.95	0.83	1.00	0.92	0.83	0.98
Lanes:	2.00	2.09	0.91	2.00	2.00	1.00	2.00	1.69
Final Sat.:	3150	3959	1638	3150	5700	1750	3150	3134
Capacity Analysis Module:								
Vol/Sat:	0.16	0.33	0.33	0.11	0.13	0.23	0.16	0.33
Crit Moves:	****							
Green Time:	23.4	42.9	42.9	14.1	33.6	33.6	20.3	44.7
Volume/Cap:	0.87	0.99	0.99	0.99	0.50	0.87	0.99	0.95
Delay/Veh:	65.8	63.1	63.1	105.2	41.3	62.9	93.9	56.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.8	63.1	63.1	105.2	41.3	62.9	93.9	56.3
LOS by Move:	E	E	E	F	D	E	F	E
HCM2kAvgQ:	13	29	29	12	8	19	17	29

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

Intersection #2: El Camino Real / Olive Ave



Street Name:	El Camino Real				Olive Ave			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Volume Module:								
Base Vol:	86	2294	33	27	1283	52	2	2
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	86	2294	33	27	1283	52	2	2
User Adj:	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
PHF Volume:	86	2294	33	27	1283	52	2	2
Reduced Vol:	0	0	0	0	0	0	0	0
Final Volume:	86	2294	33	27	1283	52	2	2
Critical Gap Module:								
Critical Gap:	4.1	xxxx	xxxxxx	4.1	xxxx	xxxxxx	7.5	6.5
FollowUpTim:	2.2	xxxx	xxxxxx	2.2	xxxx	xxxxxx	3.5	4.0
Capacity Module:								
Conflict Vol:	1335	xxxx	xxxxxx	2327	xxxx	xxxxxx	2301	3862
Potent Cap.:	523	xxxx	xxxxxx	217	xxxx	xxxxxx	21	4
Move Cap.:	523	xxxx	xxxxxx	217	xxxx	xxxxxx	6	3
Volume/Cap:	0.16	xxxx	xxxxxx	0.12	xxxx	xxxxxx	0.35	0.75
Level Of Service Module:								
2Way95thQ:	0.6	xxxx	xxxxxx	0.4	xxxx	xxxxxx	0.1	xxxx
Control Del:	13.2	xxxx	xxxxxx	24.0	xxxx	xxxxxx	11.7	xxxx
LOS by Move:	B	*	*	C	*	*	B	*
Movement:	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT	LT - LTR - RT
Shared Cap.:	xxxx	xxxx	xxxxxx	xxxx	xxxx	xxxxxx	4	xxxx
Shared Queue:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	1.2	xxxx
Shrd ConDel:	xxxxxx	xxxx	xxxxxx	xxxxxx	xxxx	xxxxxx	1713	xxxx
Shared LOS:	*	*	*	*	F	*	*	F
ApproachDel:	xxxxxx	*	xxxxxx	*	xxxxxx	*	307.6	*
ApproachLOS:	*	*	*	*	*	*	F	*

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

Peak Hour Delay Signal Warrant Report

Intersection #2 El Camino Real / Olive 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	L - T - R	L - T - R	L - T - R	L - T - R

```

-----|-----|-----|-----|-----|-----|
Control:      Uncontrolled      Uncontrolled      Stop Sign      Stop Sign
Lanes:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   86 2294 33      27 1283 52      2 2 19 31      2 51
ApproachDel:   xxxxxx      xxxxxx      307.6      8219.5
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=2.0]
    FAIL - Vehicle-hours less than 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=23]
    FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3882]
    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=191.8]
    SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=84]
    FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=3882]
    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 #2 El Camino Real / Olive Ave  
\*\*\*\*\*  
Base 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   86 2294 33      27 1283 52      2 2 19 31      2 51
-----|-----|-----|-----|-----|

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Major Street Volume: 3775  
Minor Approach Volume: 84  
Minor Approach Volume Threshold: -173 [less than minimum of 100]

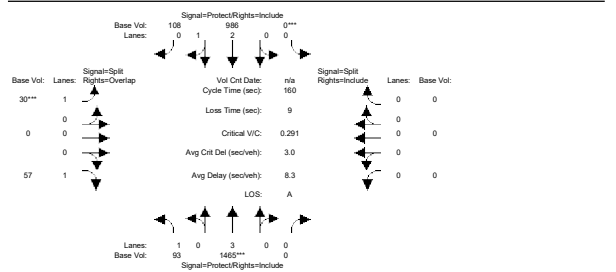
#### SIGNAL WARRANT DISCLAIMER

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.

AM Peak Hour - Cumulative - Project Condition  
Local Transportation Analysis for 2001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
11 AM Cumulative Phg

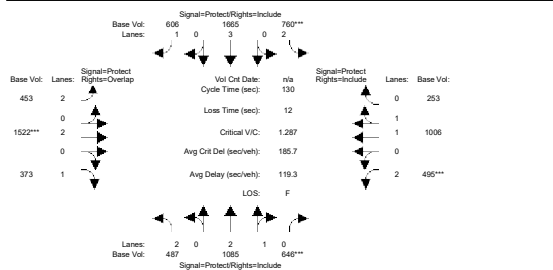
#### Intersection #3: El Camino Real / Hansen Way



Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10			10			10			10		
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	93	1465	0	0	986	108	30	0	57	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	93	1465	0	0	986	108	30	0	57	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	93	1465	0	0	986	108	30	0	57	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	1465	0	0	986	108	30	0	57	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	93	1465	0	0	986	108	30	0	57	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	0.99	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	3.00	0.00	0.00	2.69	0.31	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	5700	0	0	5046	553	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.05	0.26	0.00	0.00	0.20	0.20	0.02	0.00	0.03	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	30.2	141	0.0	0.0	111	110.8	10.0	0.0	40.2	0.0	0.0	0.0
Volume/Cap:	0.28	0.29	0.00	0.00	0.28	0.28	0.27	0.00	0.13	0.00	0.00	0.00
Delay/Veh:	56.1	1.6	0.0	0.0	9.4	9.4	72.9	0.0	46.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	56.1	1.6	0.0	0.0	9.4	9.4	72.9	0.0	46.5	0.0	0.0	0.0
LOS by Move:	E+	A	A	A	A	A	E	A	D	A	A	A
HCM2kAvgQ:	4	4	0	0	7	7	2	0	2	0	0	0
Note: Queue reported is the number of cars per lane.												

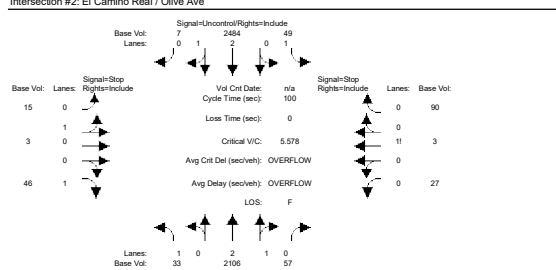
Note: Queue reported is the number of cars per lane.

Intersection #1: El Camino Real / Page Mill Rd



Street Name:	El Camino Real				Page Mill Rd			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Min. Green:	7	10	10	7	10	10	7	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:								
Base Vol:	487	1085	646	760	1665	606	453	1522
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	487	1085	646	760	1665	606	453	1522
User Adj:	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
PHF Volume:	487	1085	646	760	1665	606	453	1522
Reduced Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	487	1085	646	760	1665	606	453	1522
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	487	1085	646	760	1665	606	453	1522
Saturation Flow Module:								
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	1.59
Final Sat.:	3150	3800	1750	3150	5700	1750	3150	2956
Capacity Analysis Module:								
Vol/Sat:	0.15	0.29	0.37	0.24	0.29	0.35	0.14	0.40
Crit Moves:	0.15	0.29	0.37	0.24	0.29	0.35	0.14	0.40
Green Time:	19.0	37.3	37.3	24.4	42.6	42.6	16.7	40.5
Volume/Cap:	1.06	1.00	1.29	1.29	0.89	1.06	1.12	1.29
Delay/Veh:	112.9	66.7	181.2	194.4	47.3	96.9	137.1	180
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	112.9	66.7	181.2	194.4	47.3	96.9	137.1	180
LOS by Move:	F	E	F	F	D	F	F	F
HCM2kavgQ:	15	26	47	33	24	35	18	52
Note:	Queue reported is the number of cars per lane.							

Intersection #2: El Camino Real / Olive Ave



Street Name:	El Camino Real				Olive Ave			
Approach:	North Bound		South Bound		East Bound		West Bound	
Movement:	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R	L - T - R
Min. Green:	7	10	10	7	10	10	7	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:								
Base Vol:	33	2106	57	49	2484	7	15	3
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	33	2106	57	49	2484	7	15	3
User Adj:	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
PHF Volume:	33	2106	57	49	2484	7	15	3
Reduced Vol:	0	0	0	0	0	0	0	0
Reduced Vol:	33	2106	57	49	2484	7	15	3
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	33	2106	57	49	2484	7	15	3
Saturation Flow Module:								
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.83	1.00	0.92	0.83	0.98
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	1.59
Final Sat.:	3150	3800	1750	3150	5700	1750	3150	2956
Capacity Analysis Module:								
Vol/Sat:	0.15	0.29	0.37	0.24	0.29	0.35	0.14	0.40
Crit Moves:	0.15	0.29	0.37	0.24	0.29	0.35	0.14	0.40
Green Time:	19.0	37.3	37.3	24.4	42.6	42.6	16.7	40.5
Volume/Cap:	1.06	1.00	1.29	1.29	0.89	1.06	1.12	1.29
Delay/Veh:	112.9	66.7	181.2	194.4	47.3	96.9	137.1	180
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	112.9	66.7	181.2	194.4	47.3	96.9	137.1	180
LOS by Move:	F	E	F	F	D	F	F	F
HCM2kavgQ:	15	26	47	33	24	35	18	52
Note:	Queue reported is the number of cars per lane.							

Peak Hour Delay Signal Warrant Report  
Intersection #2 El Camino Real / Olive Ave  
Base Volume Alternative: Peak Hour Warrant 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   33 2106 57      49 2484 7      15 3 46      27 3 90
ApproachDel:   xxxxxx      xxxxxx      +Inf      xxxxxx
-----|-----|-----|-----|-----|
Approach[eastbound][lanes=2][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=OVERFLOW]
SUCCEED - Vehicle-hours >= 5 for two or more lane approach.
Signal Warrant Rule #2: [approach volume=64]
FAIL - Approach volume less than 150 for two or more lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=4920]
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=OVERFLOW]
SUCCEED - Vehicle-hours greater than or equal to 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=120]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=4][total volume=4920]
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 #2 El Camino Real / Olive Ave
*****
Base Volume Alternative: Peak Hour Warrant 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:        1 0 2 1 0      1 0 2 1 0      0 1 0 0 1      0 0 1 0 0
Initial Vol:   33 2106 57      49 2484 7      15 3 46      27 3 90
-----|-----|-----|-----|-----|
Major Street Volume:      4736
Minor Approach Volume:    120
Minor Approach Volume Threshold: -251 [less than minimum of 100]
-----|-----|-----|-----|-----|

```

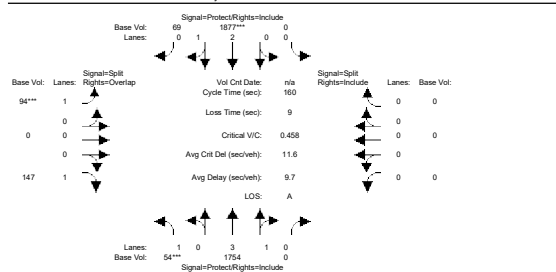
#### SIGNAL WARRANT DISCLAIMER

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.

PM Peak Hour - Cumulative - Project Condition  
Local Transportation Analysis for 3001 El Camino Real  
City of Palo Alto  
Level Of Service Computation Report  
2000 HCM Operations (Base Volume Alternative)  
12 PM Cumulative Phg

#### Intersection #3: El Camino Real / Hansen Way



Street Name:	El Camino Real						Hansen Way					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y/R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module:												
Base Vol:	54	1754	0	0	1877	69	94	0	147	0	0	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Base:	54	1754	0	0	1877	69	94	0	147	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	54	1754	0	0	1877	69	94	0	147	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	1754	0	0	1877	69	94	0	147	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	54	1754	0	0	1877	69	94	0	147	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.99	0.92	0.92	0.98	0.95	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	1.00	4.00	0.00	0.00	2.89	0.11	1.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1750	7500	0	0	5401	199	1750	0	1750	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.23	0.00	0.00	0.35	0.35	0.05	0.00	0.08	0.00	0.00	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.8	132	0.0	0.0	121	121.4	18.8	0.0	29.6	0.0	0.0	0.0
Volume/Cap:	0.46	0.28	0.00	0.00	0.46	0.46	0.00	0.00	0.45	0.00	0.00	0.00
Delay/Veh:	74.6	3.2	0.0	0.0	7.2	7.2	67.5	0.0	59.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	74.6	3.2	0.0	0.0	7.2	7.2	67.5	0.0	59.1	0.0	0.0	0.0
LOS by Move:	E	A	A	A	A	A	E	A	E*	A	A	A
HCM2kAvgq:	3	5	0	0	11	11	5	0	7	0	0	0
Note: Queue reported is the number of cars per lane.												

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

# Appendix D

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## Signal Warrant Worksheets



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## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Existing AM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 3.02 vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 40 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 2931 vph

#### Condition B

The plotted point falls above the curve

No

Not Met

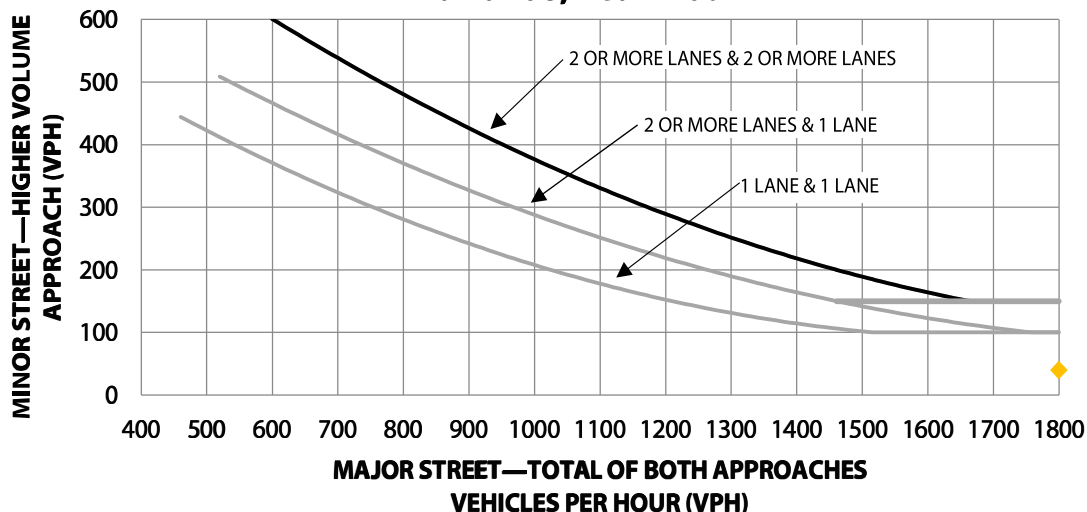
Not Met

Not Met

Met

Not Met

### Warrant 3, Peak Hour



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Existing PM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 13.56 vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 73 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 3736 vph

#### Condition B

The plotted point falls above the curve

No

Not Met

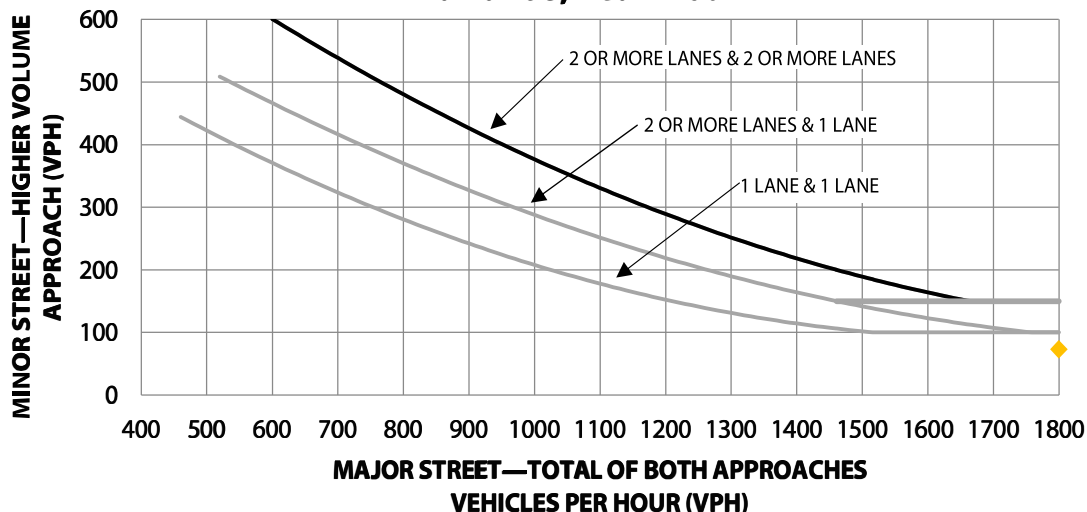
Met

Not Met

Met

Not Met

### Warrant 3, Peak Hour



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Background AM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 8.9 vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 45 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 3177 vph

#### Condition B

The plotted point falls above the curve

No

Not Met

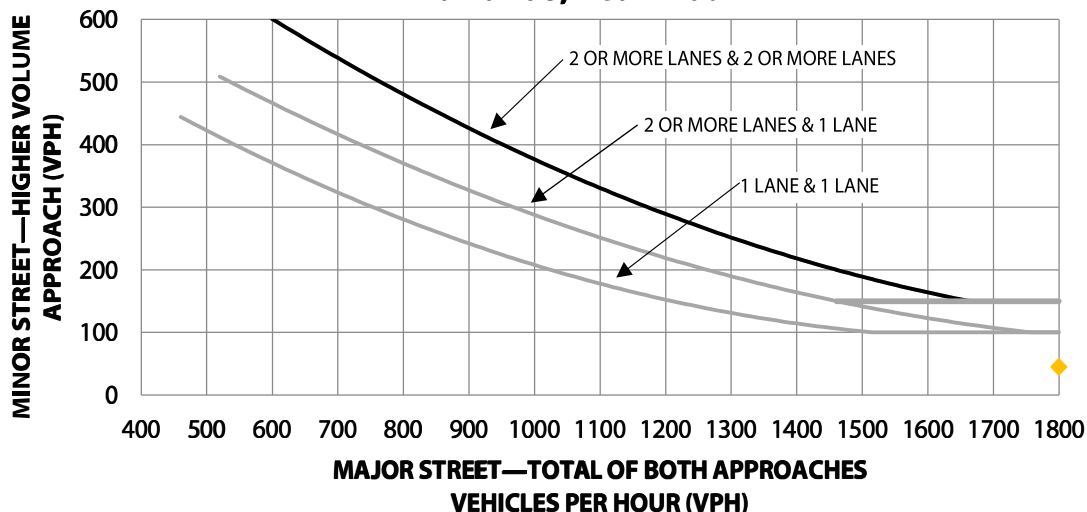
Met

Not Met

Met

Not Met

### Warrant 3, Peak Hour



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Background PM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: Unlimited vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 81 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 4036 vph

#### Condition B

The plotted point falls above the curve

No

Not Met

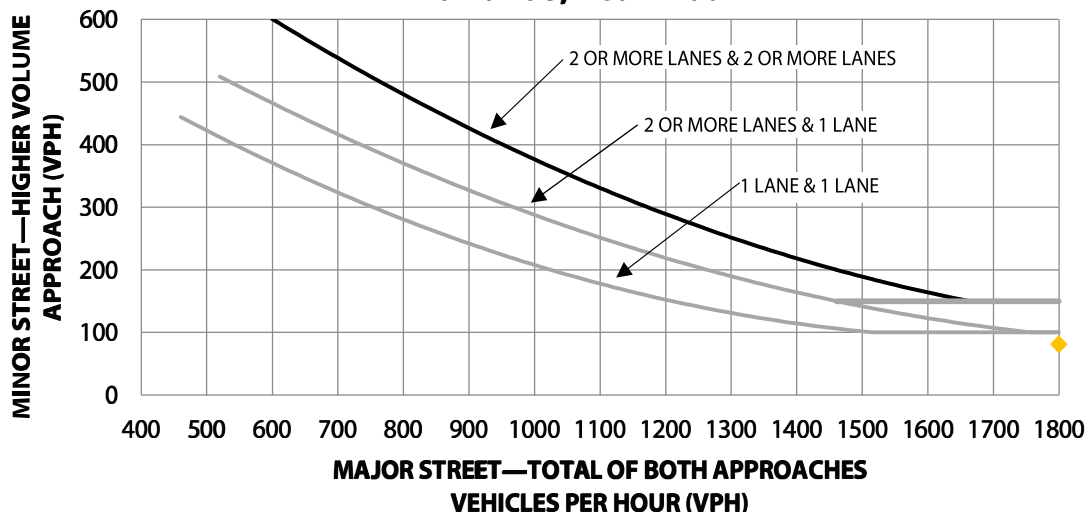
Met

Not Met

Met

Not Met

### Warrant 3, Peak Hour



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Cumulative AM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 76.25 vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 54 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 3840 vph

#### Condition B

The plotted point falls above the curve

No

Not Met

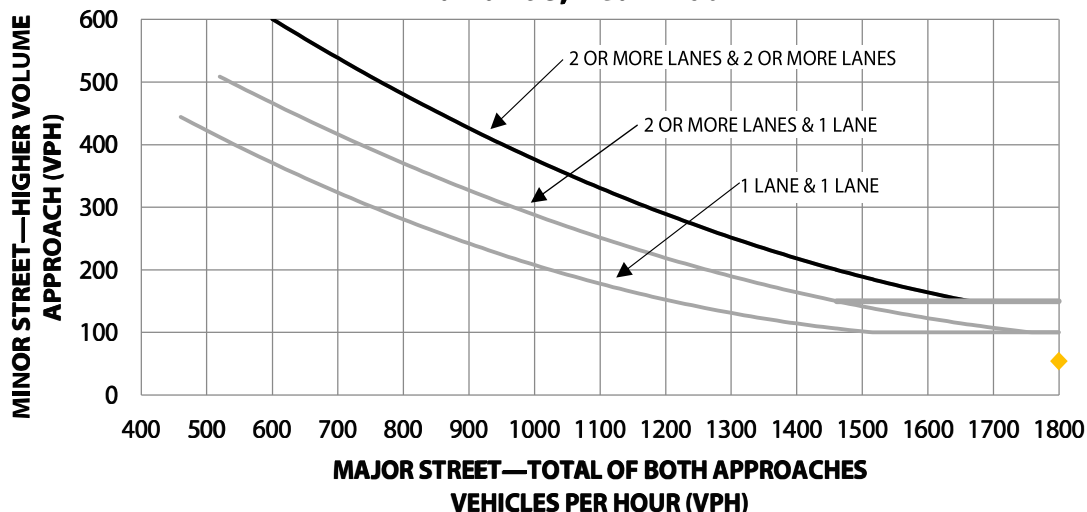
Met

Not Met

Met

Not Met

### Warrant 3, Peak Hour



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Cumulative PM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: Unlimited vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 97 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 4865 vph

#### Condition B

The plotted point falls above the curve

No

Not Met

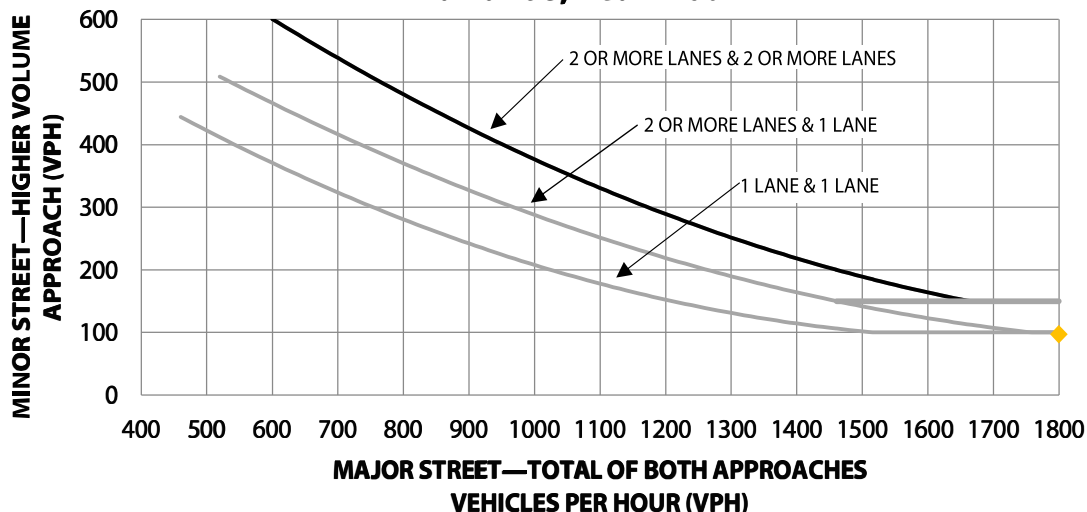
Met

Not Met

Met

Not Met

### Warrant 3, Peak Hour



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Existing plus Project AM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 9.63 vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 70 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 2973 vph

#### Condition B

The plotted point falls above the curve

No

Not Met

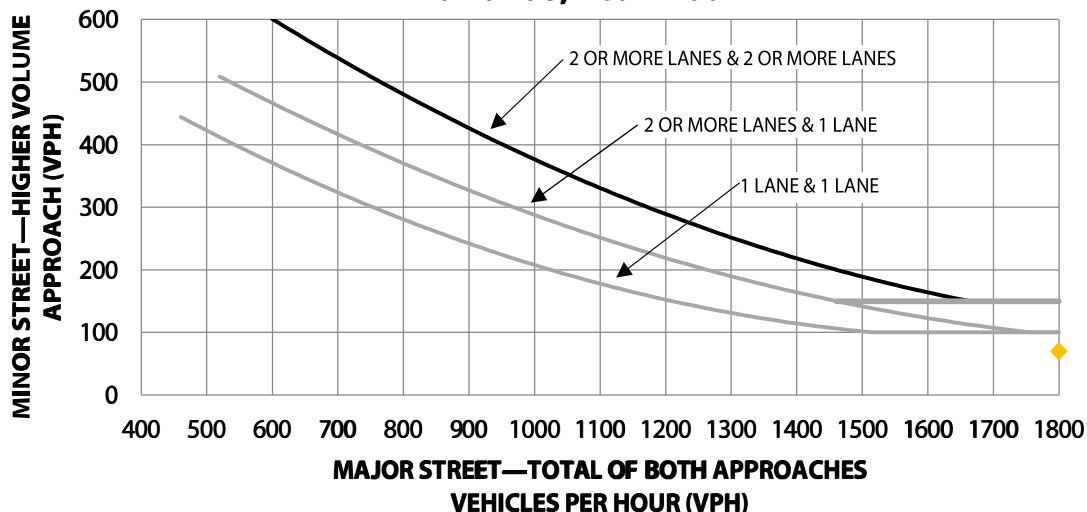
Met

Not Met

Met

Not Met

### Warrant 3, Peak Hour



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Existing plus Project PM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 35.6 vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 96 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 3791 vph

#### Condition B

The plotted point falls above the curve

No

Not Met

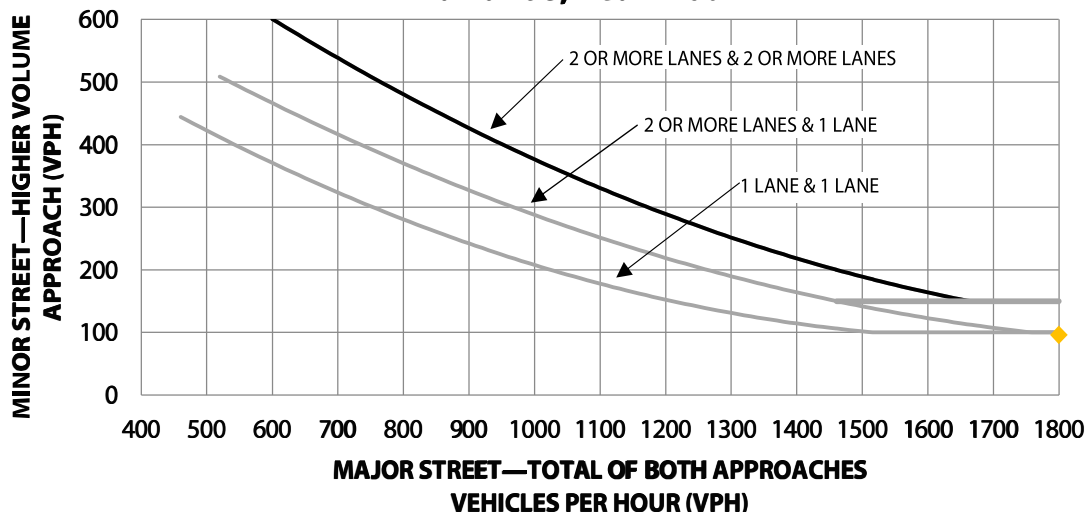
Met

Not Met

Met

Not Met

### Warrant 3, Peak Hour



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Background plus Project AM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 23.92 vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 75 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 3219 vph

#### Condition B

The plotted point falls above the curve

No

Not Met

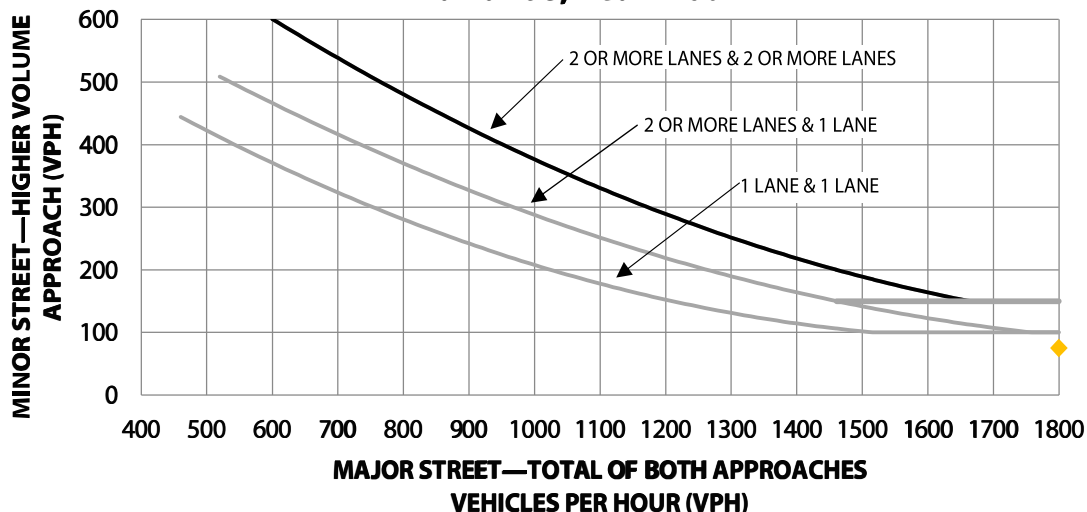
Met

Not Met

Met

Not Met

### Warrant 3, Peak Hour



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Background plus Project PM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: Unlimited vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 104 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 4091 vph

#### Condition B

The plotted point falls above the curve

**Yes**

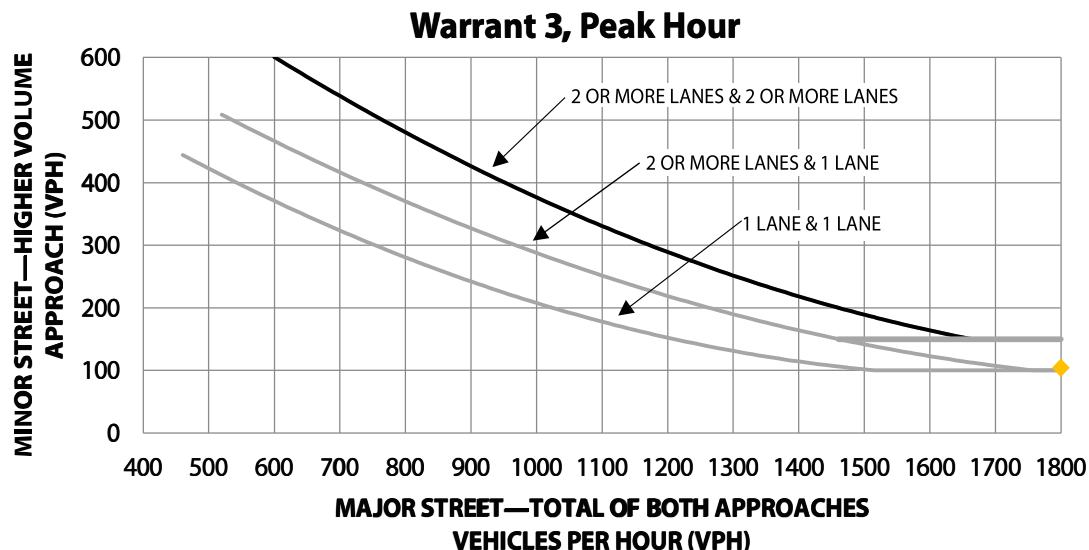
Met

Met

Met

Met

Not Met



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Cumulative plus Project AM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: 191.79 vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 84 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 3882 vph

#### Condition B

The plotted point falls above the curve

No

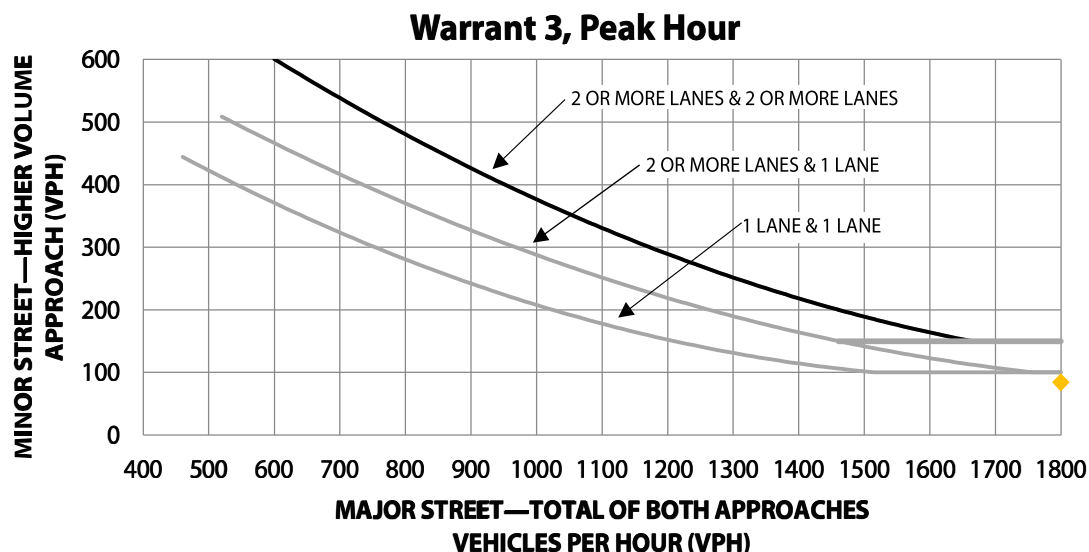
Not Met

Met

Not Met

Met

Not Met



## Warrant 3: Peak-Hour Volumes and Delay

El Camino Real & Olive Avenue  
Palo Alto

**Project Name:** 3001 El Camino Real Project

### Intersection: 2

	Major Street	Minor Street
<b>Street Name</b>	El Camino Real	Olive Avenue
<b>Direction</b>	N-S	E-W
<b>Number of Lanes</b>	6	1
<b>Approach Speed</b>	35	25

**Population less than 10,000?** No  
**Date of Count:** Thursday, November 4, 2021  
**Scenario:** Cumulative plus Project PM

### Warrant 3 Met?: Met when either Condition A or B is met

Condition A: Met when conditions A1, A2, and A3 are met

#### Condition A1

The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one lane approach, or five vehicle-hours for a two-lane approach

Minor Approach Delay: Unlimited vehicle-hours

#### Condition A2

The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic of 150 vph for two moving lanes

Minor Approach Volume: 120 vph

#### Condition A3

The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches

Total Entering Volume: 4920 vph

#### Condition B

The plotted point falls above the curve

**Yes**

**Met**

**Met**

**Met**

**Met**

**Not Met**

### Warrant 3, Peak Hour

