



HEXAGON TRANSPORTATION CONSULTANTS, INC.



# Winchester Boulevard Office Development

Transportation Impact Analysis (TIA)



*Prepared for:*

**Valley Oak Partners, L.L.C.**



*September 13, 2016*



Hexagon Office: 4 North Second Street, Suite 400, San Jose, CA 95113

Hexagon Phone: 408-971-6100

Job Number: 16OZ03

Client Name: Mr. Doug Rich

Document Name: Winchester Office Building TIA 2016-09-13.doc

**San Jose • Gilroy • Pleasanton • Phoenix**

[www.hextrans.com](http://www.hextrans.com)

Areawide Circulation Plans Corridor Studies Pavement Delineation Plans Traffic Handling Plans Impact Fees Interchange Analysis Parking Studies  
Transportation Planning Neighborhood Traffic Calming Traffic Operations Traffic Impact Analysis Traffic Signal Design Travel Demand Forecasting





# Table of Contents

Executive Summary..... iii

1. Introduction ..... 1

2. Existing Conditions ..... 8

3. Background Conditions..... 19

4. Project Conditions..... 22

5. Cumulative plus Project Conditions ..... 33

6. Other Transportation Issues ..... 37

7. Conclusions ..... 44



## Appendices

- Appendix A: New Traffic Counts
- Appendix B: Town of Los Gatos Approved and Pending Projects
- Appendix C: Volume Summary Tables
- Appendix D: Intersection Level of Service Calculations



## List of Tables

Table ES-1 Intersection Level of Service Summary.....viii

Table 1 Signalized Intersection Level of Service Definitions Based on Average Delay..... 5

Table 2 Unsignalized Intersection Level of Service Definitions Based ..... 6

Table 3 Freeway Segment Capacity Evaluation ..... 7

Table 4 Existing Roadway Average Daily Traffic ..... 11

Table 5 Existing Intersection Levels of Service Summary ..... 15

Table 6 Background Intersection Levels of Service Summary..... 21

Table 7 Surveyed General Office Buildings..... 23

Table 8 Trip Generation Summary ..... 24

Table 9 Background Plus Project Intersection Levels of Service Summary ..... 29

Table 10 Existing Plus Project Intersection Levels of Service Summary ..... 30

Table 11 Intersection Levels of Service Summary - Cumulative plus Project Conditions..... 36

Table 12 Queuing Analysis..... 39



## List of Figures

Figure 1 Project Site and Adjacent Study Area ..... 2

Figure 2 Project Site Plan ..... 3

Figure 3 Existing Bike Facilities ..... 10

Figure 4 Existing Transit Facilities ..... 12

Figure 5 Existing Lane Geometry ..... 13

Figure 6 Existing Traffic Volumes ..... 14

Figure 7 Background Traffic Volumes ..... 20

Figure 8 Project Trip Distribution ..... 25

Figure 9 Project Trip Assignment ..... 26

Figure 10 Existing plus Project Traffic Volumes ..... 27

Figure 11 Background plus Project Traffic Volumes ..... 28

Figure 12 Cumulative Plus Project Traffic Volumes ..... 35

Figure 13 Offsite Improvement Conceptual Drawing ..... 41



## Executive Summary

---

This report presents the results of the Transportation Impact Analysis (TIA) prepared for the proposed office development located at Winchester Boulevard and Shelburne Way in Los Gatos, CA. The project site is located on the 1.31-acre lot southwest of the intersection of Winchester Boulevard and Shelburne Way. Currently, the project site is comprised of three houses. The project proposes to replace the existing houses with a 30,070-s.f. office building with 128 parking spaces. Access to the project site would be provided by two driveways, one on Winchester Boulevard and the other on Shelburne Way.

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the Town of Los Gatos and the Santa Clara County Congestion Management Program (CMP). The traffic analysis is based on the AM and PM peak hour levels of service for nine (9) signalized intersections, two unsignalized intersections, and three freeway segments. Of the nine study intersections, two are CMP intersections.

Per CMP technical guidelines, a freeway segment LOS analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. Given that the number of project trips added to the freeways in the area is estimated to be less than the one percent threshold of freeway capacity, a detailed analysis of freeway segment levels of service was not performed.

Project impacts on other transportation categories, such as vehicle queuing, pedestrian, bicycle and transit facilities, site access and on-site circulation, were determined on the basis of engineering judgment.

### Project Trip Generation

To better represent an office building in Los Gatos, driveway counts of three comparable office buildings in Los Gatos were collected. Comparable office buildings were selected based on the size of the buildings as well as the tenant types. The trip generation counts were conducted on a regular weekday in March 2016 recording vehicle volumes at driveways of office buildings. Compared to the average peak hour trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9<sup>th</sup> Edition* for a general office building, local data yielded 9% higher trip rates during the PM peak hour. Therefore, the project trip generation was estimated using trip rates derived from local surveys.

Based on local trip generation rates, the proposed new building is expected to generate 41 trips (33 in and 8 out) during the AM peak hour, and 50 trips (4 in and 46 out) during the PM peak hour. Given that there are existing buildings that are generating traffic already on the proposed project site, some of the trips from the site will not be new trips. Trips generated by the existing houses on site were estimated using the average trip generation rates published in the ITE *Trip Generation Manual, 9<sup>th</sup> Edition* for a single-family detached house. Based on the ITE trip rates, the existing houses on site currently generate 2 trips (0 in and 2 out) during the AM peak hour, and 3 trips (2 in and 1 out) during the PM peak hour.

Crediting the trips generated by the existing uses on the site, the project would generate an estimate of 303 net new daily trips, 38 (32 in and 6 out) net new AM trips, and 46 (2 in and 44 out) net new PM trips.

Trip generation using the average ITE rates for an office building would result in 7 additional project trips during the AM peak hour, and 4 fewer project trips during the PM peak hour.

## Intersection Levels of Service

The intersection LOS analysis concluded that all study intersections would operate at acceptable levels of service under all studied conditions. The unsignalized intersections would operate at LOS B and LOS C for their respective worst approaches during both peak hours under all studied conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections thus was not performed.

Intersection levels of service results are summarized in Table ES-1.

## Operations Analysis

Operational issues are not considered CEQA impacts. They are included for informational purposes.

A queuing analysis was provided to determine whether the addition of project trips would exacerbate peak hour queues and delays, as well as estimating future storage requirements at intersections. The following turn movements were analyzed for vehicles queues:

- University Avenue and Lark Avenue – the westbound left-turn movement
- SR17 northbound ramps and Lark Avenue – the eastbound left-turn movement
- N. Santa Cruz and Los Gatos-Saratoga Road – the eastbound left-turn movement
- University Avenue and Los Gatos-Saratoga Road – the southbound left-turn movement
- Winchester Boulevard and Shelburne Way – the southbound left-turn and westbound movement  
Winchester Boulevard and Project Driveway – the southbound left-turn movement

Hexagon performed field observations at these intersections to determine the average queue length. The reported existing queue lengths match our observations.

Under existing and background conditions, volumes on all studied movements are contained within the provided storage space, except at the following turn pockets where the 95<sup>th</sup> percentile queues exceed the provided storage space:

- University Avenue & Lark Avenue – westbound left-turn pocket – AM & PM Peak Hours
- University Avenue & Los Gatos-Saratoga Road – southbound left-turn pocket – PM Peak Hour

Under existing plus project and background plus project conditions, the 95<sup>th</sup> percentile queues at the above mentioned two overflowing movements would continue to exceed the provided storage space. The project would not cause additional turn pockets to overflow. As shown on Table 12, the project is expected to add fewer than 10 vehicles per hour to the overflowing movements and is not expected to extend the 95<sup>th</sup> percentile queues.

The project driveway on Shelburne Way is proposed at approximately 130 feet east of Winchester Boulevard. The 95<sup>th</sup> percentile queue length for westbound Shelburne Way at Winchester Boulevard is estimated at 25 feet, which indicates that vehicles turning out of the Shelburne Way driveway would not be blocked.

The project driveway on Winchester Boulevard is proposed at approximately 250 feet south of Shelburne Way. There is an existing two-way left-turn median on Winchester Boulevard for southbound inbound vehicles to wait and turn into the driveway. Based on the queuing analysis results, it is expected that the southbound left-turn project traffic on Winchester Boulevard turning into the driveway would be contained within the two-way left-turn median.

## Project Impact on Bicycle, Pedestrian and Transit Facilities

The project site is well served by existing bicycle facilities. There is an existing Class III bikeway on Shelburne Way between Winchester Boulevard and University Avenue. Nearby bicycle facilities within the project vicinity include bike lanes on Daves Avenue, Winchester Boulevard north of Daves Avenue, and on University Avenue north of Blossom Road, as well as the Los Gatos Creek trail. The Los Gatos Creek Trail is a Class I bike facility that runs in a north-south direction just west of Highway 17.

Pedestrian activity could occur between the site and downtown Los Gatos, located approximately a mile south, as well as the closest bus stops, located about 200 feet north and 700 feet to the south of the project site. There are existing sidewalks on Winchester Boulevard that connect the site to the bus stops and to downtown Los Gatos. Several sections of Shelburne Way lack sidewalks, including the project frontage. The project would improve the situation by adding a sidewalk along its frontage. There are no crosswalks at the intersection of Winchester Boulevard and Shelburne Way. The project would not create sufficient pedestrian demand to warrant the installation of a crosswalk. The nearest crosswalk is at the signalized intersection of Winchester Boulevard and Daves Avenue, which is located approximately 575 feet, from the project site.

As shown on Figure 2 in Chapter 1, the project proposes to provide detached sidewalks with a landscape buffer on Winchester Boulevard and Shelburne Way along the building frontage. Detached sidewalks with a landscape buffer would provide a wider buffer area between pedestrians and on-street vehicles.

The project would be required to pay a Traffic Impact Fee, as does all new development in the Town of Los Gatos. The Town's Traffic Impact Fee is unrelated to whether or not a project has any impacts under CEQA, and is required of all new development projects that generate additional trips on the Town's roadway network. Among the projects that will be funded with Traffic Impact Fees that are within the study area are the complete street improvements on Winchester Boulevard from Blossom Hill Road to Lark Avenue. It is expected that the complete street improvements would enhance the bicycle and pedestrian facilities along Winchester Boulevard.

There is transit service on Winchester Boulevard adjacent to the site. The closest bus stop for northbound service is approximately 450 feet north at Winchester Boulevard and Farley Road, and less than 200 feet north at Winchester Boulevard and Via Sereno for southbound service. It is not expected that the proposed project would generate a significant amount of transit ridership, or create a significant impact to intersection levels of service along transit routes. Therefore, the project would not significantly impact transit facilities and transit travel times.

As shown on Figure 2 in Chapter 1, as requested by the Valley Transportation Authority (VTA) the project proposes to provide an additional VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection. The proposed bus stop would provide direct transit access to the project site.

### **Recommendations**

While not required to improve Level of Service or to mitigate impacts related to traffic, it is recommended that the proposed project implement detached sidewalks on Winchester Boulevard and on Shelburne Way along the building frontages, and implement the proposed VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection.

## Site Access and Circulation

Site access was evaluated to determine the adequacy of site driveways with regards to corner sight distance and traffic volumes. The proposed project would have two full-access driveways, one each on Winchester Boulevard and Shelburne Way. The northern access driveway from Shelburne Way would provide access to an 87-space below-grade parking garage. The Winchester Boulevard access driveway would connect to a 41-space surface parking lot. Both access driveways serve as the entrance and exit to that specific grade-level parking area. Queuing analysis indicates that the Shelburne Way driveway would not be blocked by the westbound traffic queues at the intersection of Winchester Boulevard and Shelburne Way. Therefore, access to the project driveways would be adequate under all analyzed scenarios.

### **Driveway Sight Distance**

The project access points should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic and see oncoming pedestrians and bicyclists. Adequate corner sight distance (sight distance triangles) should be provided at all site access points in accordance with the Town's standards. Sight distance triangles should be measured approximately 15 feet back from the traveled way.

Sight distance requirements vary depending on the roadway speeds. The speed limit on Winchester Boulevard and Shelburne Way is 25 mph. The Caltrans recommended stopping sight distance for this roadway is 150 feet.

### ***Recommendations***

At both the Winchester Boulevard driveway as well as the Shelburne Way driveway, on-street parking should be prohibited within 15 feet of the driveway to ensure adequate sight distance.

### ***On-Site Circulation***

All driveway and drive-aisle widths are at least 25 feet wide, and comply with the minimum requirements established in the Town of Los Gatos Code of Ordinances Section 29.10.155. All parking stalls within the parking garage are 18 feet in length (16 feet with 2 feet overhang) and 8 feet 6 inches in width, which meet the town's requirements.

The building lobby and entrance is proposed to front Winchester Boulevard. Pedestrians would access the project site through the main lobby and entrance area. Sidewalks are proposed to be installed on Winchester Boulevard and Shelburne Way fronting the project site. The proposed project would provide adequate pedestrian access and circulation.

### ***Emergency Vehicles, Truck Access and Circulation***

The site plan proposes a dedicated trash enclosure on Shelburne Way just east of the main access driveway. Trash bins would be picked up from and returned to the dedicated trash enclosure on the day of garbage collection. All driveways and drive-aisles are at least 25 feet wide, which are adequate for emergency vehicle access and circulation.

## **Parking**

For office use at the project site, the Town of Los Gatos Municipal Code Section 29.10.150 requires parking to be provided at the rate of one parking space per 235 square feet of gross floor area. The project proposes an office building totaling 30,070 square feet, which by code would be required to provide 128 parking spaces. The project site plan provides 128 parking spaces. Therefore, the parking provision as shown on the current project site plans would meet the Town standards.

Per the California Building Code (CBC) Table 11B-208.2, four accessible spaces are required for parking garages with 76 to 100 parking spaces and two accessible spaces are required for parking lots with 26 to 50 parking spaces. Of the required accessible parking spaces, one van accessible space is required. As shown on the site plan, the project would provide six accessible parking spaces, of which four are accessed via the northern driveway on the below-grade level near the elevators, and the remaining two are accessed via the western driveway on the ground floor. The project site plan also labels one of the accessible parking spaces in both the underground garage and the surface parking lot to be van accessible. Therefore, the accessible parking provisions as shown on the current project site plans would meet the CBC requirements.

As discussed above, to ensure adequate sight distance for vehicles turning out of the driveways, Hexagon recommends on-street parking on Winchester Boulevard and Shelburne Way within 15 feet of the driveway be prohibited.

The Town of Los Gatos does not have requirements for bicycle parking spaces. According to VTA's *Bicycle Technical Guidelines*, which is VTA's general guide for local agencies in planning, design and maintenance of bicycle facilities and bicycle-friendly roadways, offices should provide one bicycle parking space per 6,000 s.f. and 75 percent of the bicycle parking spaces should be secured (Class I) spaces. The proposed project is 30,070 s.f. and would be recommended to provide 5 bicycle parking spaces (4 secured bike parking spaces and 1 bike rack.) Comparatively, the California Green Building Code (CGBC) Section 5.106.4 requires short-term bike parking equivalent to 5 percent of the visitor parking spaces and long-term bike parking equivalent to 5 percent of the employee parking spaces. This equates to a total of 6 long-term bicycle parking spaces. The project does not identify specific visitor parking spaces, but the project should provide at least one two-bike capacity rack near the visitor entrance to the building. The proposed project is proposing in its underground garage a secured bike storage room that can hold 36 bicycles. The proposed bicycle storage facility exceeds the recommended secured bike storage quantity by VTA and the CGBC. Based on both the VTA guidelines and CGBC requirements, it is recommended that one two-bike capacity bike rack be provided near the visitor entrance to the building.

The bike storage room will be located next to the driveway and can be accessed from ground level via a set of stairs approximately 30 feet to the north and via elevators approximately 100 feet to the south. Bicyclist access to the bike storage is adequate.

**Table ES-1  
Intersection Levels of Service Summary**

#	Intersection	Peak Hour	Count Date	Existing		Existing + Project				Background		Background + Project				Cumulative + Project	
				Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. Delay (sec)	Incr. In Crit. V/C	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. Delay (sec)	Incr. In Crit. V/C	Avg. Delay (sec)	LOS
1	Winchester Blvd. and Lark Ave.	AM	03/08/16	21.2	C	21.2	C	0.1	0.001	21.9	C	21.9	C	0.1	0.002	22.2	C
		PM	03/08/16	18.7	B	18.8	B	0.1	0.002	20.7	C	20.8	C	0.2	0.002	21.5	C
2	University Ave. and Lark Ave.	AM	03/08/16	21.9	C	23.2	C	12.3	0.071	22.0	C	22.2	C	0.0	0.001	22.9	C
		PM	03/08/16	25.7	C	25.7	C	0.1	0.002	27.2	C	27.3	C	0.1	0.002	29.0	C
3	SR17 Southbound Ramps and Lark Ave.	AM	03/08/16	27.4	C	27.4	C	0.0	0.000	28.9	C	28.9	C	0.0	0.000	31.8	C
		PM	03/08/16	33.4	C	33.5	C	0.1	0.004	38.3	D	38.6	D	0.4	0.004	46.8	D
4	SR17 Northbound Ramps and Lark Ave.	AM	03/08/16	18.1	B	18.1	B	0.1	0.001	18.7	B	18.8	B	0.1	0.001	21.6	C
		PM	03/08/16	12.9	B	13.0	B	0.2	0.004	13.6	B	13.7	B	0.0	0.000	15.2	B
5	Winchester Blvd. and Daves Ave.	AM	03/08/16	30.8	C	30.9	C	0.1	0.007	30.7	C	30.8	C	0.1	0.007	31.1	C
		PM	03/08/16	26.1	C	26.1	C	0.1	0.003	27.3	C	27.3	C	0.2	0.003	29.9	C
6	Winchester Blvd. and Shelburne Ave. <sup>1</sup>	AM	03/08/16	0.7	A	0.8	A	-	-	0.7	A	0.8	A	-	-	0.7 (12.7)	A(B)
		PM	03/08/16	(10.9) (B)	(11.4) (B)	-	-	(11.3) (B)	(11.8) (B)	0.5 (13)	(B)	(15.7) (C)	-	-	0.7 (17.7)	A(C)	
7	University Ave. and Shelburne Ave. <sup>1</sup>	AM	03/08/16	1.5	A	1.6	A	-	-	1.5	A	1.6	A	-	-	1.5 (13)	A(B)
		PM	03/08/16	(12.1) (B)	(12.2) (B)	-	-	(12.1) (B)	(12.3) (B)	1.3	A	1.6	A	-	-	1.5 (14.6)	A(B)
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	03/08/16	25.0	C	25.1	C	0.2	0.004	26.0	C	26.1	C	0.2	0.004	28.4	C
		PM	03/08/16	23.0	C	23.1	C	0.1	0.003	23.5	C	25.0	C	-10.0	0.006	28.1	C
9	University Ave and Blossom Hill Rd.	AM	03/08/16	21.4	C	21.5	C	0.2	0.004	21.4	C	21.5	C	0.2	0.004	21.7	C
		PM	03/08/16	30.0	C	30.0	C	0.0	0.003	30.0	C	30.1	C	0.0	0.003	30.3	C
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	03/02/16	41.5	D	41.5	D	0.0	0.000	42.0	D	42.1	D	0.1	0.002	44.2	D
		PM	03/02/16	48.3	D	48.3	D	0.0	0.000	48.6	D	48.6	D	0.0	0.000	50.3	D
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	03/02/16	33.7	C	33.7	C	-0.1	0.000	33.7	C	33.7	C	0.0	0.001	34.2	C
		PM	03/02/16	39.7	D	39.8	D	0.2	0.003	39.7	D	39.8	D	0.2	0.003	39.8	D

**Notes:**

\* Denotes CMP intersection

1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

# 1. Introduction

---

This report presents the results of the Transportation Impact Analysis (TIA) prepared for the proposed office development located at Winchester Boulevard and Shelburne Way in Los Gatos, CA. The project site is located on the 1.31-acre lot southwest of the intersection of Winchester Boulevard and Shelburne Way. Currently, the project site is comprised of three houses. The project proposes to replace the existing houses with a 30,070-s.f. office building with 128 parking spaces. Access to the project site would be provided by two driveways, one on Winchester Boulevard and the other on Shelburne Way. Figure 1 shows the study area and project site location. Figure 2 shows the proposed site plan.

## Scope of Study

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the Town of Los Gatos and the Santa Clara County Congestion Management Program (CMP). The traffic analysis is based on the AM and PM peak hour levels of service for nine signalized intersections, two unsignalized intersections, and three freeway segments. Of the nine study intersections, two are CMP intersections.

### *Study Intersections*

1. Winchester Boulevard & Lark Avenue
2. University Avenue & Lark Avenue
3. SR17 Southbound Ramps & Lark Avenue
4. SR17 Northbound Ramps & Lark Avenue
5. Winchester Boulevard & Daves Avenue
6. Winchester Boulevard & Shelburne Way (unsignalized)
7. University Avenue & Shelburne Way (unsignalized)
8. Santa Cruz Avenue & Blossom Hill Road
9. University Avenue & Blossom Hill Road
10. Santa Cruz Avenue & Los Gatos-Saratoga Road\*
11. University Avenue & Los Gatos-Saratoga Road\*

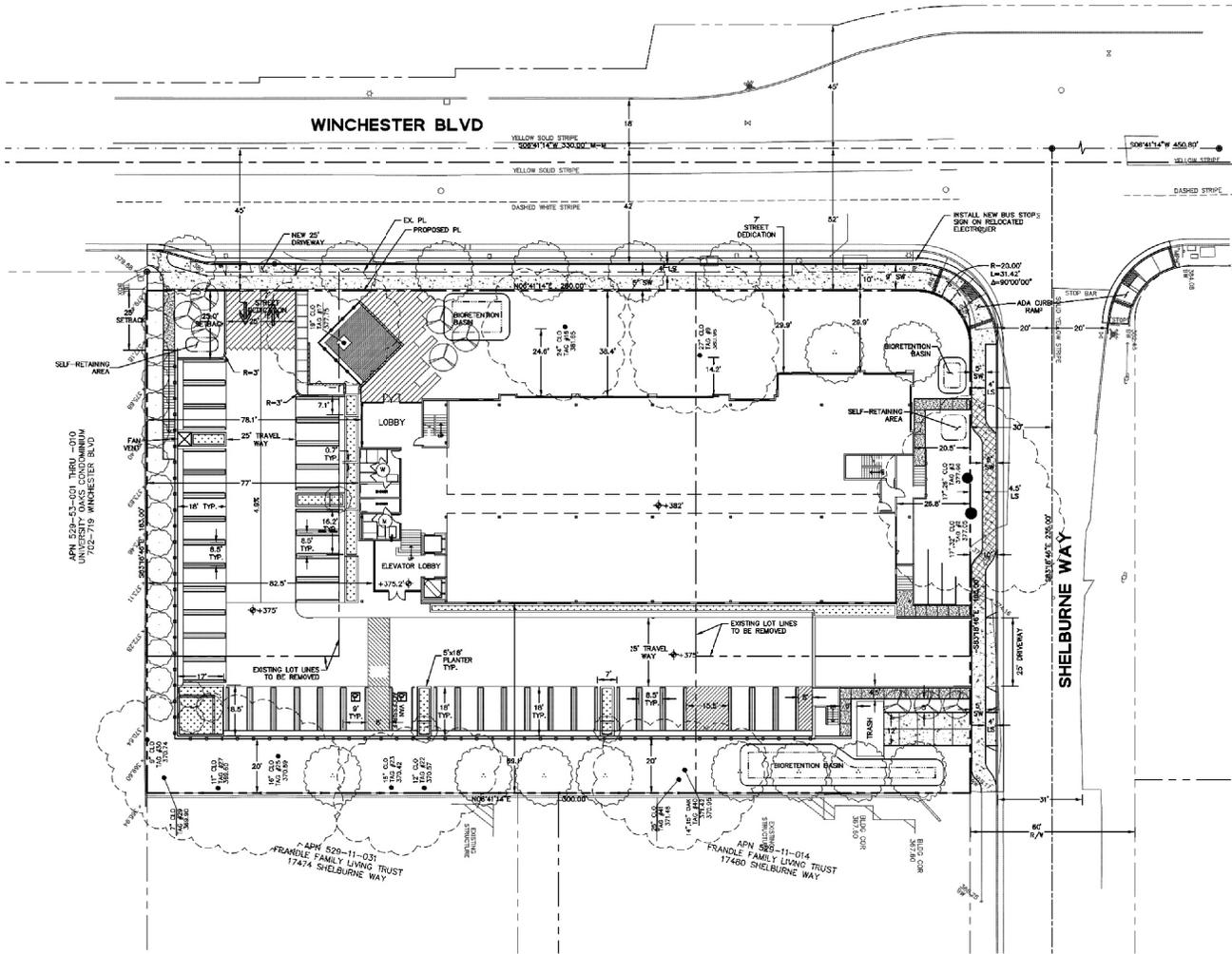
\* Denotes CMP Intersections

### *Study Freeway Segments*

1. SR 17, south of Hwy 9
2. SR 17, between Hwy 9 and Lark Avenue
3. SR 17, between Lark Avenue and SR 85

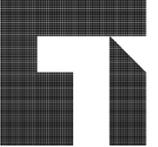


**Figure 1**  
**Site Location and Study Intersections**



**LEGEND**

PROJECT BOUNDARY  
 LOT LINE  
 ADJACENT LOT LINE  
 STREET CENTERLINE  
 MONUMENT LINE  
 EASEMENT LINE



**STUDIO  
T SQUARE**

Architecture  
 Planning  
 Urban Design

THIS DOCUMENT CONTAINS INFORMATION PRELIMINARY TO DESIGN, PERMITTING, CONSTRUCTION AND OPERATION. THE INFORMATION IS FOR INFORMATIONAL PURPOSES ONLY AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. WITHOUT PERMISSION IN WRITING FROM STUDIO T SQUARE, INC., ALL RIGHTS ARE RESERVED. COPYRIGHT © 2016.



**BKF**  
 1730 N. FIRST STREET  
 SUITE 600  
 SAN JOSE, CA 95112  
 408-467-9100  
 408-467-9199 (FAX)

Winchester Blvd. Office  
 Winchester Blvd. and Shelburne Way, Los Gatos, CA

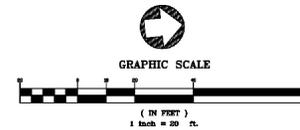
Valley Oak Partners  
 734 The Alameda  
 San Jose, California

Sheet Title:  
**PRELIMINARY  
 SITE PLAN**

BKF Job No. 20128028  
 Date: 8/1/2016  
 Scale:  
 Drawn By: PK

Sheet No:

**C3.0**



**Figure 2  
 Site Plan**

Traffic conditions at the study intersections were analyzed for the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour of adjacent street traffic is generally between 7:00 AM and 9:00 AM, and the PM peak hour of adjacent street traffic is typically between 4:00 PM and 6:00 PM. It is during these periods on an average weekday that the most congested traffic conditions occur. Traffic conditions were evaluated for the following scenarios:

- Scenario 1:** *Existing Conditions.* Existing traffic volumes are based on new traffic counts conducted in the year 2016, while schools were in session.
- Scenario 2:** *Existing Plus Project Conditions.* Existing traffic volumes with the project are estimated by adding to existing traffic volumes the traffic generated by the proposed project. Existing plus Project conditions are evaluated relative to existing conditions in order to determine the effects the project would have on the existing roadway network.
- Scenario 3:** *Background Conditions.* Background traffic volumes are estimated by adding to existing peak hour volumes the projected volumes from approved but not yet completed developments. The added traffic from approved but not yet completed developments was provided by the Town of Los Gatos.
- Scenario 4:** *Background Plus Project Conditions.* Background traffic volumes with the project are estimated by adding to background traffic volumes the traffic generated by the proposed project. Background plus project conditions are evaluated relative to background conditions in order to determine potential project impacts.
- Scenario 5:** *Cumulative Conditions.* Cumulative conditions include traffic growth projected to occur due to the approved development projects and other proposed but not yet approved (pending) development projects. The added traffic from pending development projects was provided by the Town of Los Gatos.
- Scenario 6:** *Cumulative Plus Project Conditions.* Cumulative plus project traffic volumes are estimated by adding to cumulative traffic volumes the trips associated with the proposed project. Cumulative plus project conditions are evaluated relative to cumulative conditions in order to determine potential project impacts.

## Methodology

This section describes the methods used to determine the traffic conditions for each scenario described above. It includes descriptions of the data requirements, the analysis methodologies, and the applicable level of service standards.

### *Data Requirements*

The data required for the analysis were obtained from new traffic counts, the Town of Los Gatos, VTA's CMP database, and field observations. The following data were collected from these sources:

- Existing traffic volumes
- Approved and pending project trips
- Intersection lane configurations
- Signal timing and phasing

### *Analysis Methodologies and Level of Service Standards*

Traffic conditions at the study intersections were evaluated using level of service (LOS). *Level of Service* is a qualitative description of operating conditions ranging from LOS A, or free-flow conditions with little or no delay, to LOS F, or jammed conditions with excessive delays. The various analysis methods are described below.

### Town of Los Gatos Intersections

The Town of Los Gatos LOS methodology for signalized intersections is the 2000 *Highway Capacity Manual* (HCM) method. This method is applied using the TRAFFIX software. The 2000 HCM operations method evaluates signalized and unsignalized intersection operations on the basis of average control delay time for all vehicles at the intersection. Since TRAFFIX is also the CMP-designated intersection LOS tool, the Town of Los Gatos methodology employs the CMP default values for the analysis parameters. The Town of Los Gatos LOS standard for all signalized intersections is LOS D or better. The correlation between average control delay and LOS for signalized intersections is shown in Table 1.

**Table 1**  
**Signalized Intersection Level of Service Definitions Based on Average Delay**

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Signal progression is extremely favorable. Most vehicles arrive during the green phase and do not stop at all. Short cycle lengths may also contribute to the very low vehicle delay.	10.0 or less
B	Operations characterized by good signal progression and/or short cycle lengths. More vehicles stop than with LOS A, causing higher levels of average vehicle delay.	10.1 to 20.0
C	Higher delays may result from fair signal progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant, though many still pass through the intersection without stopping.	20.1 to 35.0
D	The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable signal progression, long cycle lengths, or high volume-to-capacity (V/C) ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
E	This is considered to be the limit of acceptable delay. These high delay values generally indicate poor signal progression, long cycle lengths, and high volume-to-capacity (V/C) ratios. Individual cycle failures occur frequently.	55.1 to 80.0
F	This level of delay is considered unacceptable by most drivers. This condition often occurs with oversaturation, that is, when arrival flow rates exceed the capacity of the intersection. Poor progression and long cycle lengths may also be major-contributing causes of such delay levels.	greater than 80.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p10-16.

### CMP Intersections

The designated LOS methodology for the CMP also is the 2000 HCM operations method for signalized intersections, using TRAFFIX. The only difference in LOS standards is that in the Town of Los Gatos the standard is LOS D or better, and the CMP level of service standard for signalized intersections is LOS E or better. However, CMP intersections within the Town of Los Gatos are evaluated according to Town of Los Gatos standards.

### Unsignalized Intersections

The Town of Los Gatos *Traffic Impact Study Guidelines* do not outline the preferred analysis method for unsignalized intersections. However, it is standard practice for traffic engineers to report the intersection's overall LOS as well as the LOS for the worst approach. This study uses the 2000 *Highway Capacity Manual* (HCM) method for unsignalized intersections. This method is applied using the TRAFFIX software. The 2000 HCM operations method evaluates unsignalized intersection operations on the basis of average control delay for all vehicles, as well as the critical delay for the worst approach at the intersection. Given that the Town of Los Gatos does not have a LOS standard for unsignalized intersections, intersection levels of service for unsignalized intersections are reported for information purposes only. The correlation between average control delay and LOS for unsignalized intersections is shown in Table 2.

**Table 2**  
**Unsignalized Intersection Level of Service Definitions Based**

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
A	Little or no traffic delay	10.0 or less
B	Short Traffic delays	10.1 to 15.0
C	Average traffic delays	15.1 to 25.0
D	Long traffic delays	25.1 to 35.0
E	Very long traffic delays	35.1 to 50.0
F	Extreme traffic delays	greater than 50.0

Source: Transportation Research Board, *2000 Highway Capacity Manual* (Washington, D.C., 2000) p17-2.

## Freeway Segments

Per CMP technical guidelines, a freeway segment LOS analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. Given that the number of project trips added to the freeways in the area is estimated to be less than the one percent threshold of freeway capacity, a detailed analysis of freeway segment levels of service was not performed. A simple freeway segment capacity evaluation to substantiate this determination is presented in Table 3.

**Table 3**  
**Freeway Segment Capacity Evaluation**

Freeway	Segment	Direction	Peak Hour	Existing Conditions <sup>1</sup>			Project Conditions		
				Capacity	Volume	LOS	Project Trips <sup>2</sup>	% Capacity Impact	
SR 17	Bear Creek Rd to Los Gatos-Saratoga Rd	NB	AM	<b>4,400</b>	<b>3,910</b>	<b>F</b>	6	0.14%	No
			PM	4,400	2,780	C	0	0.00%	No
SR 17	Los Gatos-Saratoga Rd to Lark Ave	NB	AM	4,400	4,110	E	0	0.00%	No
			PM	4,400	3,040	C	0	0.00%	No
SR 17	Lark Ave to SR 85	NB	AM	4,400	4,330	D	2	0.05%	No
			PM	4,400	2,910	C	13	0.30%	No
SR 17	SR 85 to Lark Ave	SB	AM	4,400	2,400	B	10	0.23%	No
			PM	<b>4,400</b>	<b>3,770</b>	<b>F</b>	1	0.02%	No
SR 17	Lark Ave to Los Gatos-Saratoga Rd	SB	AM	4,400	4,030	D	0	0.00%	No
			PM	<b>4,400</b>	<b>3,760</b>	<b>F</b>	0	0.00%	No
SR 17	Los Gatos-Saratoga Rd to Bear Creek Rd	SB	AM	4,400	3,170	C	1	0.02%	No
			PM	4,400	4,330	E	9	0.20%	No

Notes:

- Existing freeway conditions referenced the *Santa Clara Valley Transportation Authority Congestion Management Program Monitoring Study, 2014*.
- Project trips are estimated via manual trip assignment.

**BOLD** indicates a substandard level of service.

## Report Organization

This report has a total of seven chapters. Chapter 2 describes existing conditions including the existing roadway network, transit service, bicycle and pedestrian facilities. Chapter 3 presents the traffic conditions in the study area under background conditions. Chapter 4 describes the methods used to estimate the project traffic on the roadway network and presents the intersection operations under background plus project and existing plus project conditions. The cumulative conditions with and without the project are presented in Chapter 5. Chapter 6 provides an evaluation of other transportation-related issues, such as vehicle queuing, potential project impacts on bicycle, pedestrian, and transit facilities, site access, on-site circulation, and parking. Lastly, Chapter 7 presents the study's conclusions, including a summary of any proposed mitigation measures and recommended improvements.

## 2. Existing Conditions

---

This chapter describes the existing conditions for all of the major transportation facilities in the vicinity of the project site, including the roadway network, transit service, and bicycle and pedestrian facilities. Also included are the existing levels of service of the study intersections.

### Existing Roadway Network

Regional access to the project site is provided by SR 17. Local access to the project site is provided via Los Gatos-Saratoga Road (SR 9), N. Santa Cruz Avenue, University Avenue, Blossom Hill Road, Shelburne Way and Daves Avenue. These facilities are described below.

**SR 17** is a four-lane freeway that provides a north-south regional access to the project site. It extends south to Santa Cruz and north to I-280 in San Jose, at which point it makes a transition into I-880, which extends to Oakland. Access to the project site is provided via SR 17's interchange with Los Gatos-Saratoga Road (SR 9) and Lark Avenue.

**Los Gatos-Saratoga Road (SR 9)** is a four-lane arterial roadway that provides regional access to the project site. Los Gatos-Saratoga Road extends from Los Gatos Boulevard in a northwesterly direction where it ultimately transitions to Saratoga-Sunnyvale Road at the intersection of Big Basin Way (which is the continuation of SR 9) and Saratoga Avenue. Los Gatos-Saratoga Road provides access to the project site via N. Santa Cruz Avenue, University Avenue, and Daves Avenue.

**N. Santa Cruz Avenue (Winchester Boulevard)** is a two-lane roadway that runs in a north-south direction and serves as the primary commercial street in downtown Los Gatos. Santa Cruz Avenue extends from SR 17 in the south to Blossom Hill Road, where it transitions to Winchester Boulevard, which continues north as a four-lane arterial through Los Gatos, Campbell, and San Jose to its terminus in Santa Clara. Within the Los Gatos central business district, N. Santa Cruz Avenue has two lanes and on-street parking. The Winchester Boulevard portion of the roadway serves as the western boundary of the project site.

**University Avenue** is a two-lane collector street that runs parallel to N. Santa Cruz Avenue. It extends from Main Street to Lark Avenue. The project site can be accessed from University Avenue via Shelburne Way.

**Blossom Hill Road** is generally a two- to four-lane arterial roadway that extends eastward from N. Santa Cruz Avenue into San Jose. Within the project vicinity, the roadway is three lanes wide (one lane in the eastbound direction and two lanes in the westbound direction). Blossom Hill Road provides access to the project site via Winchester Boulevard and University Avenue.

**Shelburne Way** is a two-lane collector street that runs parallel to Blossom Hill Road, extending from N. Santa Cruz Avenue to University Avenue. Shelburne Way provides direct access and serves as the northern boundary of the project site.

**Daves Avenue** is a two-lane neighborhood collector street that operates primarily east-west, extending from Winchester Boulevard to Saratoga-Los Gatos Road. Daves Avenue provides access to the project site via Winchester Boulevard.

## Existing Bicycle and Pedestrian Facilities

Trails and bikeways are categorized in the Transportation Element of the town's 2020 General Plan. These facilities are described below.

**Class I Multi-Use Trail** is an off-street path with exclusive right-of-way for non-motorized transportation used for commuting as well as recreation. The Los Gatos Creek Trail is a Class I facility located near the project site, running in a north-south direction just west of Highway 17. Within the project vicinity, the Los Gatos Creek Trail has a short connector trail that provides trail access at the intersection of University Avenue and Blossom Hill Road.

**Class II Bike Lanes** are preferential use areas within a roadway designated for bicycles. Within the project vicinity, a Class II bikeway is present on Los Gatos-Saratoga Road, extending westward from just east of the University Avenue intersection, and along Blossom Hill Road, beginning just west of University Avenue and extending eastward. Bike lanes are also present within the vicinity of the project on Daves Avenue, as well as University Avenue north of Blossom Road.

**Class III Bike Routes** are signed bike routes that provide a connection through residential, downtown, and rural/hillside areas to Class I and Class II facilities. Bike Routes serve as transportation routes within neighborhoods to parks, schools, and other community amenities. Shelburne Way, between Winchester Boulevard and University Avenue, is designated as a Class III bikeway. Although none of the residential streets near the project site are designated as bike routes, due to their low traffic volumes, many of them are conducive to bicycle usage.

Existing bicycle facilities are shown on Figure 3.

Pedestrian facilities consist mostly of sidewalks along both the commercial and residential streets in the vicinity of the project site. Crosswalks with pedestrian signal heads and push buttons are located at all of the signalized intersections in the study area, except on Lark Avenue at the intersection with SR17 southbound ramps. Crosswalks with pedestrian signal heads and push buttons are present only on the north and south legs of the intersection of Lark Avenue and SR17 southbound ramps. At both unsignalized study intersections, there are no crosswalk markings for pedestrians. Sidewalks are located on both sides of all roadways within the project vicinity, except Winchester Boulevard between Lark Avenue and Daves Avenue, where sidewalks are largely lacking.



**Figure 3**  
**Existing Bicycle Facilities**

## Existing Transit Services

Existing transit service to the project site is provided by the Santa Clara Valley Transportation Authority (VTA). VTA provides bus service near the project area via Route 48. Existing transit services are shown on Figure 4.

*Local Route 48* operates primarily on N. Santa Cruz Avenue and Los Gatos-Saratoga Road in the study area. It runs from the Los Gatos Civic Center to the Winchester Transit Center in Campbell with 30-minute headways in the AM and PM peak hours. Route 48 operates between 6:30 AM and 8:30 PM. The closest Route 48 bus stops are approximately 200 feet to the north and south of the project site.

The Winchester Transit Center, the northern terminus of Route 48, also provides VTA's light rail transit (LRT) service. The LRT line that terminates at the Winchester Transit Center provides service to downtown Mountain View, via downtown San Jose, Santa Clara, and Sunnyvale.

## Existing Intersection Lane Configurations

The existing lane configurations at the study intersections were confirmed by observations in the field and are shown on Figure 5.

## Existing Traffic Volumes

Existing traffic volumes were obtained from new traffic counts conducted in March 2016. The existing traffic volumes at the study intersections are reflective of traffic generated by the existing buildings in the study area. The existing AM and PM peak hour intersection volumes are shown graphically on Figure 6.

The traffic count data are included in Appendix A.

Hexagon also obtained the existing average daily traffic (ADT) on Winchester Boulevard and Shelburne Way near the project site. The existing ADT is shown in Table 4.

It should be noted that only peak hour traffic conditions within the study area were analyzed, and the daily traffic volumes are presented for informational purposes only.

**Table 4**  
**Existing Roadway Average Daily Traffic**

Street	Direction	ADT <sup>1</sup>	
		Weekday	Weekend
Winchester Boulevard	Northbound	6,200	4,200
	Southbound	6,700	4,500
Shelburne Way	Eastbound	600	200
	Westbound	400	100

**Notes:**  
1. Average Daily Traffic (ADT) volumes based on 7-day tube counts conducted in March 2016.

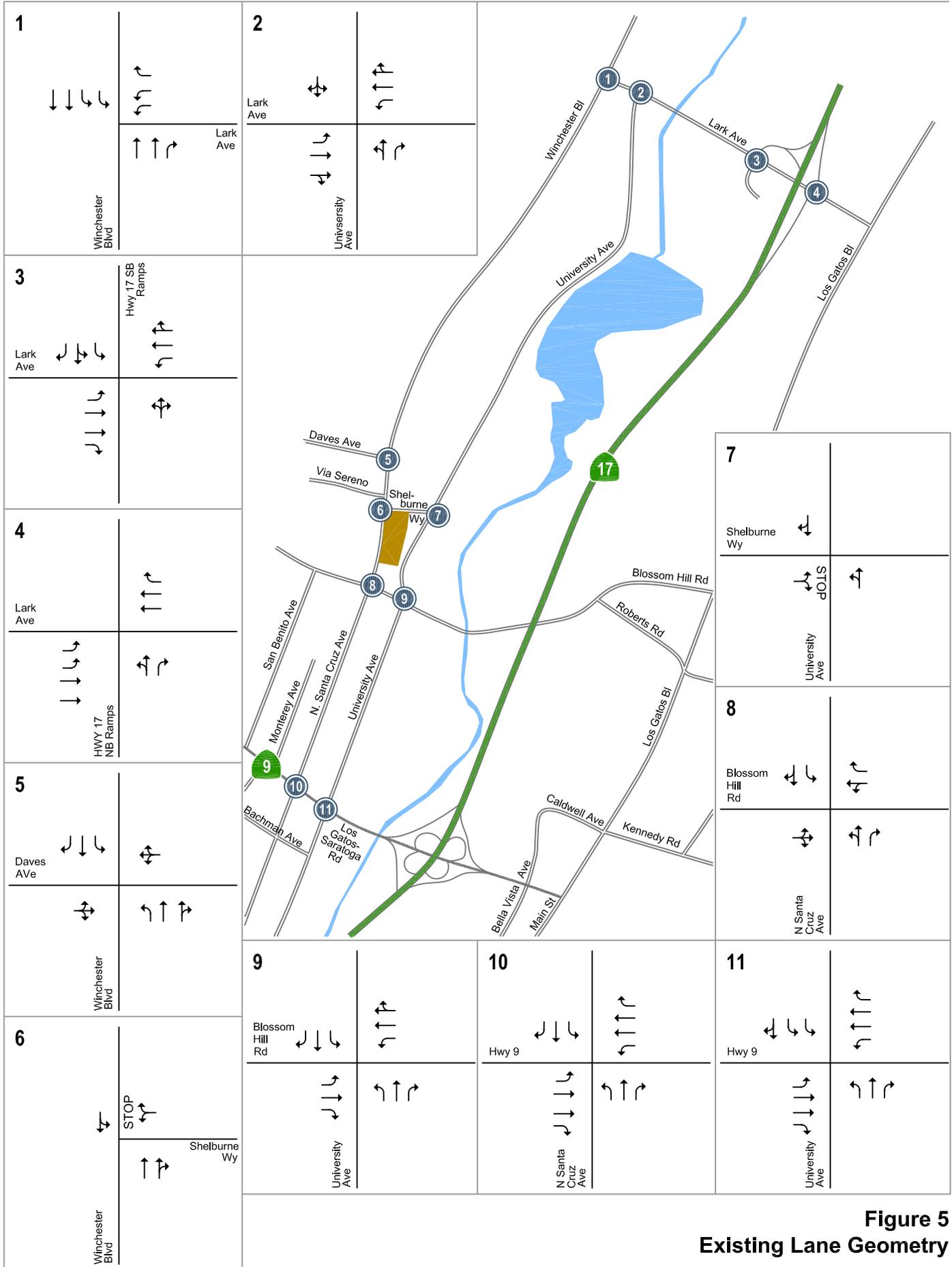


**LEGEND**

-  = Project Site Location
-  = Study Intersection
-  = Local Bus Route 48
-  = Local Bus Route 49
-  = Transit Stops

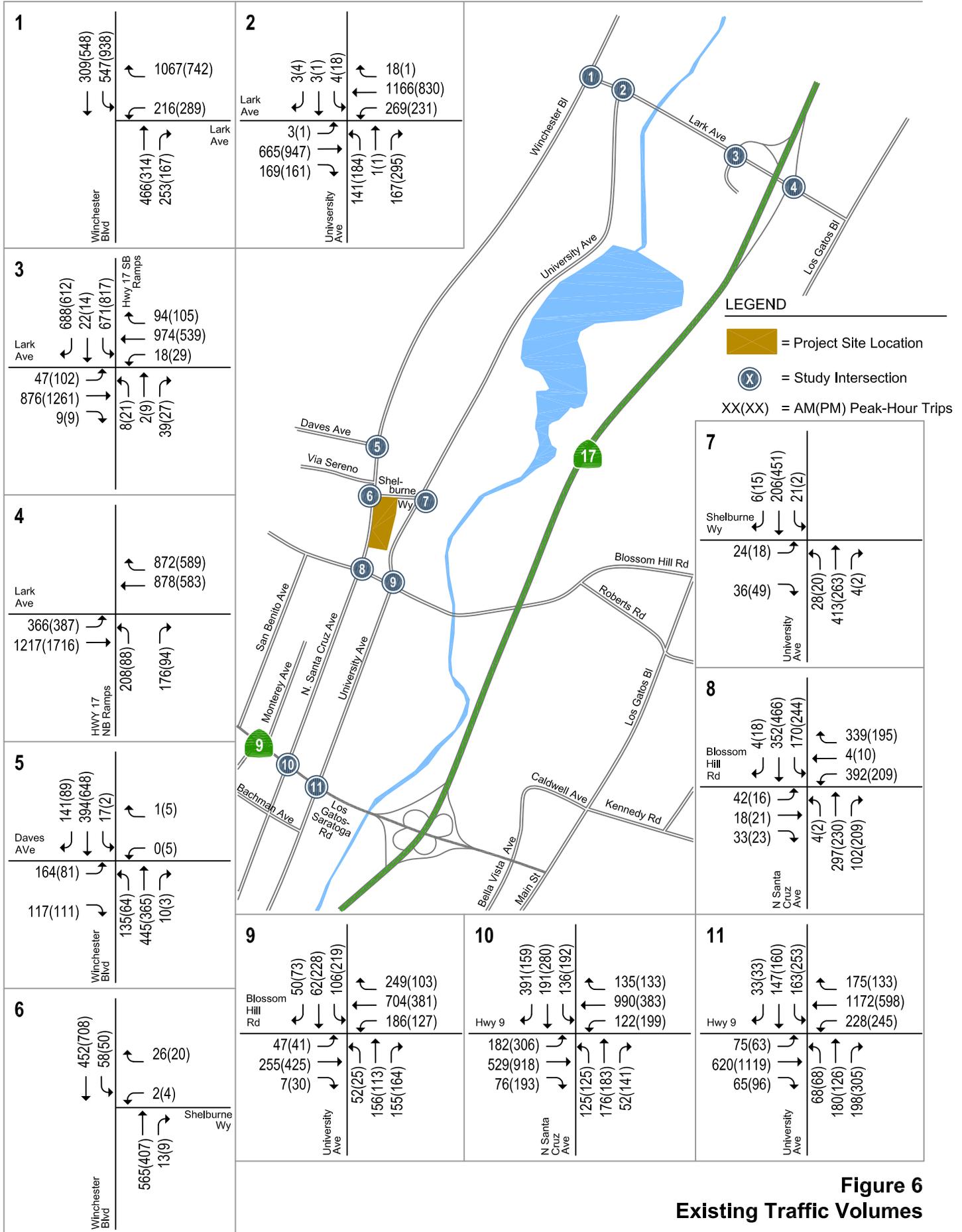
**Figure 4**  
**Existing Transit Service**

Winchester Boulevard Office



**Figure 5**  
Existing Lane Geometry

Winchester Boulevard Office



**Figure 6**  
**Existing Traffic Volumes**

## Existing Intersection Levels of Service

The intersection LOS analysis shows that all study intersections currently operate at acceptable levels of service (LOS D or better). The unsignalized intersections currently operate at LOS B for their respective worst approaches during both peak hours. The levels of service results indicate that these two unsignalized intersections are operating at near free-flow condition. A signal warrant check for these two intersections under existing conditions is thus not performed.

Results of the intersection LOS analysis under existing conditions are summarized in Table 5. LOS calculation sheets of each study intersection are included in Appendix D.

**Table 5**  
**Existing Intersection Levels of Service Summary**

Study Number	Intersection	Peak Hour	Count Date	Avg. Delay (sec)	LOS
1	Winchester Blvd. and Lark Ave.	AM	3/8/2016	21.2	C
		PM	3/8/2016	18.7	B
2	University Ave. and Lark Ave.	AM	3/8/2016	21.9	C
		PM	3/8/2016	25.7	C
3	SR17 Southbound Ramps and Lark Ave.	AM	3/8/2016	27.4	C
		PM	3/8/2016	33.4	C
4	SR17 Northbound Ramps and Lark Ave.	AM	3/8/2016	18.1	B
		PM	3/8/2016	12.9	B
5	Winchester Blvd. and Daves Ave.	AM	3/8/2016	30.8	C
		PM	3/8/2016	26.1	C
6	Winchester Blvd. and Shelburne Ave. <sup>1</sup>	AM	3/8/2016	0.7 (10.9)	A (B)
		PM	3/8/2016	0.6 (12)	A (B)
7	University Ave. and Shelburne Ave. <sup>1</sup>	AM	3/8/2016	1.5 (12.1)	A (B)
		PM	3/8/2016	1.3 (13)	A (B)
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	3/8/2016	25.0	C
		PM	3/8/2016	23.0	C
9	University Ave and Blossom Hill Rd.	AM	3/8/2016	21.4	C
		PM	3/8/2016	30.0	C
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	3/2/2016	41.5	D
		PM	3/2/2016	48.3	D
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	3/2/2016	33.7	C
		PM	3/2/2016	39.7	D

**Notes:**  
 \* Denotes CMP intersection  
 1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

## Observations of Existing Traffic Conditions

Traffic conditions were observed in the field to identify existing operational deficiencies and to confirm the accuracy of calculated levels of service. The purpose of this effort was (1) to identify any existing traffic problems that may not be directly related to LOS, and (2) to identify any locations where the LOS analysis does not accurately reflect actual existing traffic conditions. Field observations at the study intersections were conducted on a regular weekday during the AM and PM peak hours in March 2016. The intersections on Los Gatos-Saratoga Road at Santa Cruz Avenue and at University Avenue were observed in July 2016.

### *Lark Avenue at Winchester Boulevard and University Avenue*

For the AM peak hour, there are minor queues on Winchester Boulevard at the intersection with Lark Avenue. Extensive congestion at the intersection is observed on Lark Avenue for the westbound right-turn movement. The westbound right-turn queue fills the right-turn lane storage, and spills back into the intersection of University Avenue and Lark Avenue. However, spillback does not occur for every signal cycle, allowing vehicles to clear the intersection primarily in one signal cycle.

At the intersection of University Avenue and Lark Avenue, there are also long queues for the westbound left-turn movement on Lark Avenue onto southbound University Avenue. Due to the short green time, vehicles turning left often require two signal cycles to clear the intersection, and traffic queues into the through lanes slightly past Charter Oaks Drive.

For the PM peak hour, there is congestion on Lark Avenue at both the intersections with Winchester Boulevard and with University Avenue. Congestion on westbound Lark Avenue is due to the short intersection spacing. The queues are able to clear the intersection in one signal cycle before vehicles from the University Avenue and Lark Avenue intersection cause any spillback. Observed congestion on Winchester Boulevard stems from both the northbound through movement and the southbound left-turn movement. However, signal timing for both movements allow queues to dissipate within one signal cycle. At the intersection of University Avenue and Lark Avenue, eastbound congestion on Lark Avenue causes spillback into the northbound right-turn lane at the Winchester Boulevard and Lark Avenue intersection. However, both eastbound and northbound right-turn queues are able to clear within one signal cycle, and before the next platoon of southbound left-turn vehicles arrive from the upstream intersection.

### *Lark Avenue at SR17 Southbound Ramps and SR17 Northbound Ramps*

In the AM peak hour, the intersection of Lark Avenue and the SR17 southbound ramps has extensive queues on the off-ramp that fill both left-turn lanes. However, the queue usually clears within one signal cycle.

At the intersection of Lark Avenue and the SR17 northbound ramps, only minor congestion was observed for the eastbound left-turn movement and the westbound through movement on Lark Avenue. Due to coordination with upstream and downstream signals, both movements were able to clear within one signal cycle.

In the PM peak hour, the Lark Avenue and SR17 southbound ramps intersection has significant congestion for the eastbound direction. Long queues for both the eastbound left-turn and the eastbound through movements on Lark Avenue cause sizable spillback to the upstream intersection at Oka Road, requiring at least two signal cycles to clear. Similar to the AM peak hour, there are long vehicle queues in the southbound left-turn lanes on the SR 17 southbound off-ramp, but they are able to clear within one signal cycle.

At the Lark Avenue and the SR17 northbound ramps intersection, there is minor congestion for the eastbound left-turn movement, as well as in the westbound direction. However, vehicles are able to clear the intersection within one signal cycle.

### ***Daves Avenue at Winchester Boulevard***

During the AM peak hour, there is minor congestion on northbound Winchester Boulevard and on eastbound Daves Avenue. Vehicular queues primarily stem from a pedestrian only phase that lasts approximately 20 seconds. This phase allows children attending the nearby Daves Elementary School to cross the street safely. Nevertheless, eastbound and northbound queues are able to clear within one signal cycle.

During the PM peak hour, there are no significant operational issues. All vehicles clear within one signal cycle. When the south crosswalk is called no vehicular movements are allowed at the intersection. This pedestrian-only phase lasts approximately twenty seconds. Occasionally when the south crosswalk is called, southbound through movement queues up to twenty vehicles, but all vehicles clear within one signal cycle.

### ***Daves Avenue in Front of the School***

Daves Avenue was also observed during the morning drop-off period and afternoon pick-up period for Daves Avenue Elementary School. During the AM drop-off peak period of 30 minutes, only minor congestion is observed on eastbound Daves Avenue. The Poppy Lane and Daves Avenue intersection, which is all-way stop-controlled, functions as a congestion point, as queues from the western drop-off driveway spill back onto eastbound Daves Avenue towards Kavin Lane. This peak in traffic only lasts a period of approximately thirty minutes.

During the afternoon peak pick-up period, minor congestion occurs on eastbound Daves Avenue at the Winchester Boulevard intersection, but all vehicles are able to clear the intersection in one signal cycle. Hexagon observed that the peak afternoon school traffic lasts approximately twenty minutes.

### ***Shelburne Avenue at Winchester Boulevard and University Avenue***

At the intersections of Shelburne Way and Winchester Boulevard, as well as Shelburne Way and University Avenue, there are no operational issues during either the AM or PM peak hours. Vehicles on Shelburne Way turning onto Winchester Boulevard encounter minimal delays waiting for sufficient gaps to turn.

### ***Blossom Hill Road at N. Santa Cruz Avenue and University Avenue***

During the AM peak hour, minor congestion occurs in the westbound direction on Blossom Hill Road at the intersections with N. Santa Cruz Avenue and with University Avenue. When the westbound left-turn movement on Blossom Hill Road at N. Santa Cruz Avenue receives the green ball, the westbound left-turn movement queue backs up past University Avenue. However, westbound queues are able to clear the intersection in one signal cycle. All other movements on University Avenue and on N. Santa Cruz Avenue are able to clear the intersection within one signal cycle.

During the PM peak hour, eastbound Blossom Hill Road between N. Santa Cruz Avenue and University Avenue is often queued. As a result, southbound left-turn vehicles on N. Santa Cruz Avenue often require two signal cycles to clear. Some of these left-turn vehicles even turn into the intersection to avoid waiting an extra cycle. This interferes with the subsequent northbound through movement on N. Santa Cruz Avenue. Only minor congestion occurs on the other movements at these two intersections.

***N. Santa Cruz Avenue and Los Gatos-Saratoga Road (SR 9)***

During the PM peak period, there is very heavy traffic flow in the eastbound direction, heading towards Highway 17, on Los Gatos-Saratoga Road. Because the intersections at University Avenue and at N. Santa Cruz Avenue are only approximately 500 feet apart, there is potential for eastbound “spillback” from University Avenue at the N. Santa Cruz Avenue intersection during the PM peak hour. Spillback can occur between closely spaced intersections when there is insufficient storage space for all the queued vehicles at a downstream intersection, thereby preventing vehicles from an upstream intersection from proceeding during their green phase. During the most recent field observations, however, no spillback issues were observed. With the current signal timing implemented by Caltrans, all movements cleared within one signal cycle.

***University Avenue and Los Gatos-Saratoga Road (SR 9)***

During the AM peak hour, there is very heavy traffic flow in the westbound direction on Los Gatos-Saratoga Road. Therefore, spillback from the N. Santa Cruz Avenue intersection is more likely to occur at the University Avenue intersection during the morning peak period. However, no spillback issues were observed during the most recent field observations at this intersection.

### 3.

## Background Conditions

---

This chapter presents background traffic conditions, which are defined as conditions just prior to completion of the proposed project. Traffic volumes for background conditions comprise of volumes from existing traffic counts plus traffic generated by other approved developments in the vicinity of the site. This chapter describes the procedure used to determine background traffic volumes and the resulting traffic conditions. The background scenario predicts a realistic traffic condition that would occur as approved development projects are built and occupied.

### Background Traffic Volumes

Approved developments are those developments that have been approved by local agencies, are under construction, or are built but not yet occupied. The approved project list was obtained from the Town of Los Gatos and is included in Appendix B. Based on a review of traffic studies prepared for these projects, a recent TRAFFIX file provided by the Town of Los Gatos, the types and sizes of these developments, and their distances from the project site, the following approved developments are expected to add traffic to at least one of the study intersections during at least one of the peak hour periods:

1. Albright Way: Replace 250,000 s.f. of office with 485,000 s.f. of office
2. Bentley Silicon Valley Auto Dealer: expansion from 26,085 s.f. to 31,909 s.f.
3. Los Gatos High School: construct improvements and add 200 students
4. 550 Hubbell Way: 4 single-family homes
5. 375 Knowles Drive: 33 single-family homes
6. North 40 Specific Plan (Project A): build 364 housing units, 150-room hotel, 269,000 s.f. retail
7. 55 Los Gatos-Saratoga Road: demolish 3 hotel rooms and add commercial mixed-use
8. Placer Oaks Road: 10-unit residential subdivision
9. Highlands of Los Gatos: residential subdivision

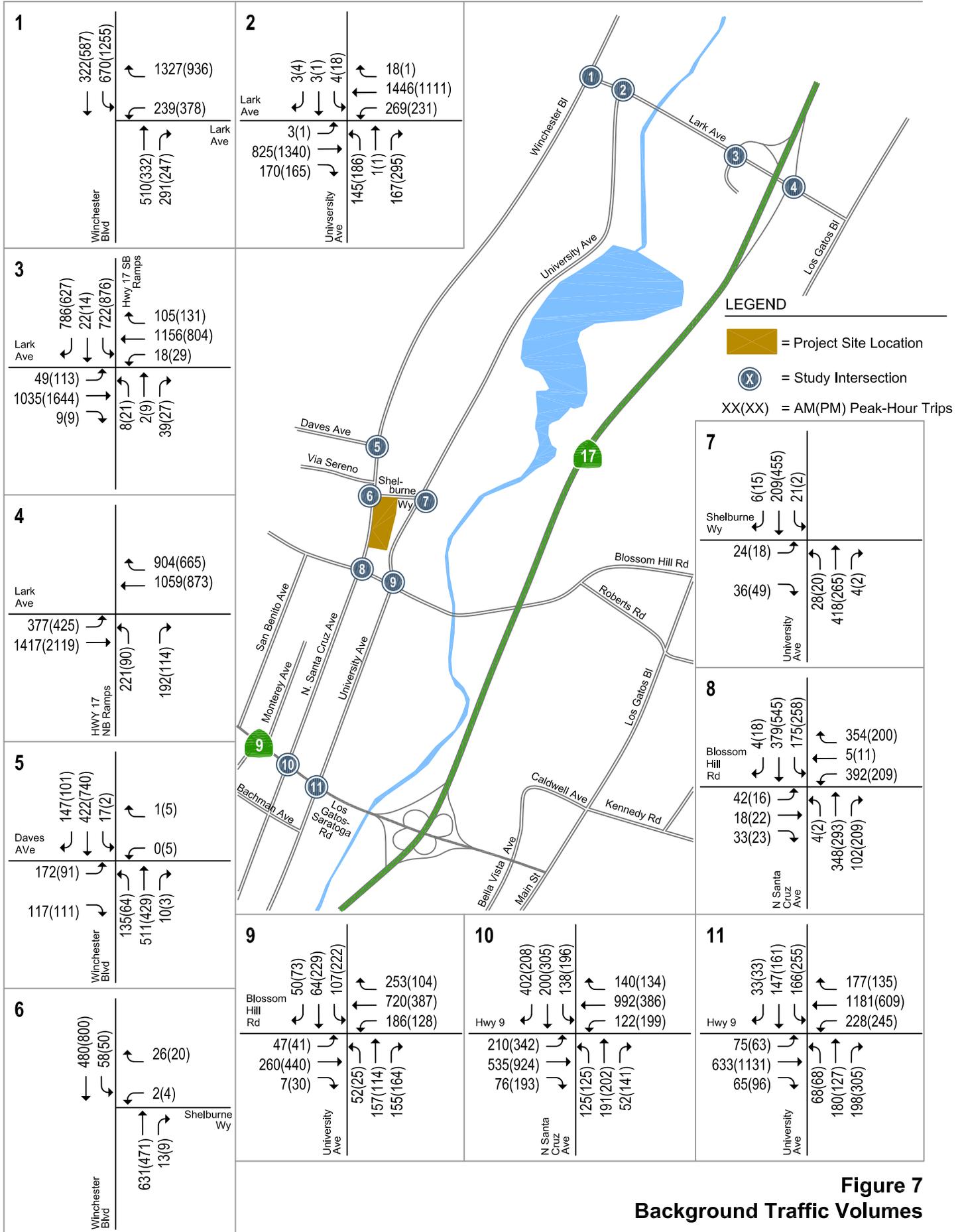
The following approved developments have also been considered, but are not expected to add traffic to any of the study intersections during either the AM or PM peak hours:

10. 146 Gemini: 3-unit residential subdivision
11. 400 More Avenue-Water District La Riconada Plant: plant renovations
12. 100 Prospect Avenue: demolish existing Convent (Sisters) and construct 17 detached homes

Background peak hour traffic volumes were calculated by adding the estimated traffic from the approved developments to existing volumes. Vehicle trips from each of the approved projects were obtained from the TRAFFIX file provided by the Town of Los Gatos or from the project's traffic impact study. The estimated trips were assigned to the study intersections according to the distributions and assignments identified in the Town's TRAFFIX file or the relevant traffic studies. At the time traffic counts at the study intersections were conducted (March 2016), it is assumed that the Albright Way office project was approximately 50% occupied.

Background traffic volumes are shown graphically on Figure 7.

Winchester Boulevard Office



**Figure 7**  
**Background Traffic Volumes**

## Background Transportation Network

It was assumed in this analysis that the transportation network under background conditions would be the same as the existing network.

## Intersection Levels of Service under Background Conditions

The results of the intersection LOS analysis under background conditions are shown in Table 6. The results show that, measured against the Town of Los Gatos and CMP level of service standards, all study intersections would continue to operate at acceptable levels of service (LOS D or better) during both the AM and PM peak hours.

The unsignalized intersections would operate at LOS B for their respective worst approaches during both peak hours under background conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections under background conditions is thus not performed.

**Table 6**  
**Background Intersection Levels of Service Summary**

Study Number	Intersection	Peak Hour	Existing		Background	
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS
1	Winchester Blvd. and Lark Ave.	AM	21.2	C	21.9	C
		PM	18.7	B	20.7	C
2	University Ave. and Lark Ave.	AM	21.9	C	22.0	C
		PM	25.7	C	27.2	C
3	SR17 Southbound Ramps and Lark Ave.	AM	27.4	C	28.9	C
		PM	33.4	C	38.3	D
4	SR17 Northbound Ramps and Lark Ave.	AM	18.1	B	18.7	B
		PM	12.9	B	13.6	B
5	Winchester Blvd. and Daves Ave.	AM	30.8	C	30.7	C
		PM	26.1	C	27.3	C
6	Winchester Blvd. and Shelburne Ave. <sup>1</sup>	AM	0.7 (10.9)	A (B)	0.7 (11.3)	A (B)
		PM	0.6 (12)	A (B)	0.5 (13)	A (B)
7	University Ave. and Shelburne Ave. <sup>1</sup>	AM	1.5 (12.1)	A (B)	1.5 (12.1)	A (B)
		PM	1.3 (13)	A (B)	1.3 (13.1)	A (B)
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	25.0	C	26.0	C
		PM	23.0	C	23.5	C
9	University Ave and Blossom Hill Rd.	AM	21.4	C	21.4	C
		PM	30.0	C	30.0	C
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	41.5	D	42.0	D
		PM	48.3	D	48.6	D
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	33.7	C	33.7	C
		PM	39.7	D	39.7	D

**Notes:**  
 \* Denotes CMP intersection  
 1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

## 4. Project Conditions

---

This chapter describes roadway traffic operations under existing plus project conditions and background plus project conditions, as well as the method by which project traffic is estimated and any impacts caused by the project. Both with-project scenarios are analyzed in accordance with VTA's CMP guidelines.

### Significant Impact Criteria

Significance criteria are used to establish what constitutes an impact. Impacts on intersections are based on the significance criteria and LOS standards of the jurisdiction in which the intersection is located. For this analysis, significance criteria for impacts on intersections are based on the Town of Los Gatos LOS standard. As noted above, LOS D is an acceptable level of traffic operation at signalized intersections in Los Gatos.

A project is said to create a significant adverse impact on traffic conditions at an intersection if, for either peak hour, either of the following conditions occurs:

1. The addition of project traffic causes an intersection operating at LOS A, B, or C under no-project conditions to degrade more than one letter grade under with-project conditions, or
2. The level of service at an intersection is LOS D under no-project conditions and the addition of project traffic causes a degradation of level of service to LOS E or F.

### Project Description

The project site is located on the southeast corner of the intersection of Winchester Boulevard and Shelburne Way in Los Gatos, California. Existing uses on the project site consist of three single-family houses. The project would demolish the existing buildings and construct a 30,070-s.f. office building on the 1.31-acre lot. The project includes 128 parking spaces, and access to the project site would be provided by one driveway each on Winchester Boulevard and on Shelburne Way.

## Project Trip Estimates

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

### Trip Generation

To better represent an office building in Los Gatos, driveway counts of three comparable office buildings in Los Gatos were collected. Comparable office buildings were selected based on the size of the buildings as well as the tenant types. The trip generation counts were conducted on a regular weekday in March 2016 recording vehicle volumes at driveways of office buildings. Table 7 shows the results of the counts and the calculated average trip rate for a general office building in Los Gatos. As shown on Table 7, compared to the average peak hour trip rates published in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9<sup>th</sup> Edition* for a general office building, local data yielded 9% higher trip rates during the PM peak hour. Therefore, the project trip generation was estimated using trip rates derived from local surveys.

**Table 7**  
**Surveyed General Office Buildings**

Surveyed Sites <sup>1</sup>	Size	Unit	AM Peak Hour				PM Peak Hour			
			Trips In	Trips Out	Total Trips	Peak Rate	Trips In	Trips Out	Total Trips	Peak Rate
475 Alberto Way	30.22	ksf	37	3	40		4	37	41	
16795 Lark Avenue	22.40	ksf	19	12	31		4	33	37	
975 University Avenue	15.00	ksf	16	2	18		0	32	32	
<b>Total</b>	<b>67.62</b>	<b>ksf</b>	<b>72</b>	<b>17</b>	<b>89</b>		<b>8</b>	<b>102</b>	<b>110</b>	
<b>Average Surveyed Rates</b>						<b>1.32</b>				
<b>Average ITE Rates <sup>2</sup></b>						<b>1.56</b>				

**Notes:**

1. Trip generation surveys were conducted in March 2016.
2. Average ITE trip rates for general office building based on ITE's *Trip Generation, 9<sup>th</sup> Edition* for land use code 710.

Based on local trip generation rates, the proposed new building is expected to generate 40 trips (32 in and 8 out) during the AM peak hour, and 49 trips (4 in and 45 out) during the PM peak hour. Given that there are existing buildings that are generating traffic already on the proposed project site, some of the trips from the site will not be new trips. Trips generated by the existing houses on site were estimated using the average trip generation rates published in the ITE *Trip Generation Manual, 9<sup>th</sup> Edition* for a single-family detached house. Based on the ITE trip rates, the existing houses on site currently generate 2 trips (0 in and 2 out) during the AM peak hour, and 3 trips (2 in and 1 out) during the PM peak hour.

Crediting the trips generated by the existing uses on the site, the project would generate an estimate of 303 net new daily trips, 38 (32 in and 6 out) net new AM trips, and 46 (2 in and 44 out) net new PM trips.

Trip generation using the average ITE rates for an office building would result in 7 additional project trips during the AM peak hour, and 4 fewer project trips during the PM peak hour.

Trip generation estimates are shown on Table 8.

**Table 8**  
**Trip Generation Summary**

Land Use	Size	Unit	Daily		AM Peak Hour			PM Peak Hour					
			Rate	Trips	Rate	In	Out	Total	Rate	In	Out	Total	
<b>Proposed Project</b>													
Office <sup>1</sup>	30.07	ksf	11.03	332	1.32	32	8	40	1.63	4	45	49	
<b>Existing Land Use</b>													
Single Family Homes <sup>2</sup>	3	d.u.	9.52	29	0.75	0	2	2	1	2	1	3	
<b>Net Project Trips</b>				<b>303</b>		<b>32</b>	<b>6</b>	<b>38</b>		<b>2</b>	<b>44</b>	<b>46</b>	
<b>Notes:</b>													
1. Office trip generation rates are based on local trip generation surveys of similar office buildings in terms of size and use within Los Gatos.													
2. Single-Family Detached Housing (Land Use 210) peak hour average rates based on ITE's <i>Trip Generation, 9th Edition</i> .													

### Trip Distribution

The trip distribution pattern for the proposed project was estimated based on existing travel patterns of the surrounding roadway system and the locations of complementary land uses. While trip distribution patterns for office and residential land uses are typically not the same, because of the small number of trips generated by the existing houses, they were assumed to follow the same trip distribution for the office land use. The project trip distribution pattern is shown on Figure 8.

### Trip Assignment

The project trips were assigned to the roadway network based on the directions of approach and departure, the roadway network connections, and the location of project driveways. 15% of project traffic is estimated to come from SR 9 west of Daves Avenue. This traffic can access the project site either by driving eastbound on SR 9 and turning left onto northbound Winchester Boulevard, or by turning onto eastbound Daves Avenue and then turning right onto southbound Winchester Boulevard. The Daves Avenue route is shorter but requires more left-turns, which could lengthen the travel time. The SR 9 route is longer, but requires fewer left-turns. Therefore, Hexagon assigned 7% of project traffic onto Daves Avenue and 8% of project traffic onto SR 9.

The project is proposing 128 parking spaces, 87 spaces will be in the underground parking garage, and 41 spaces will be at grade. The underground parking garage can be accessed via a full access driveway on Shelburne Way, while the at-grade parking lot can be accessed via a full access driveway on Winchester Boulevard. Because the underground parking garage and the at-grade parking lot are not connected, it is assumed that approximately 70% of all project trips will access the project site using the Shelburne driveway, and 30% will access the project site using the Winchester driveway.

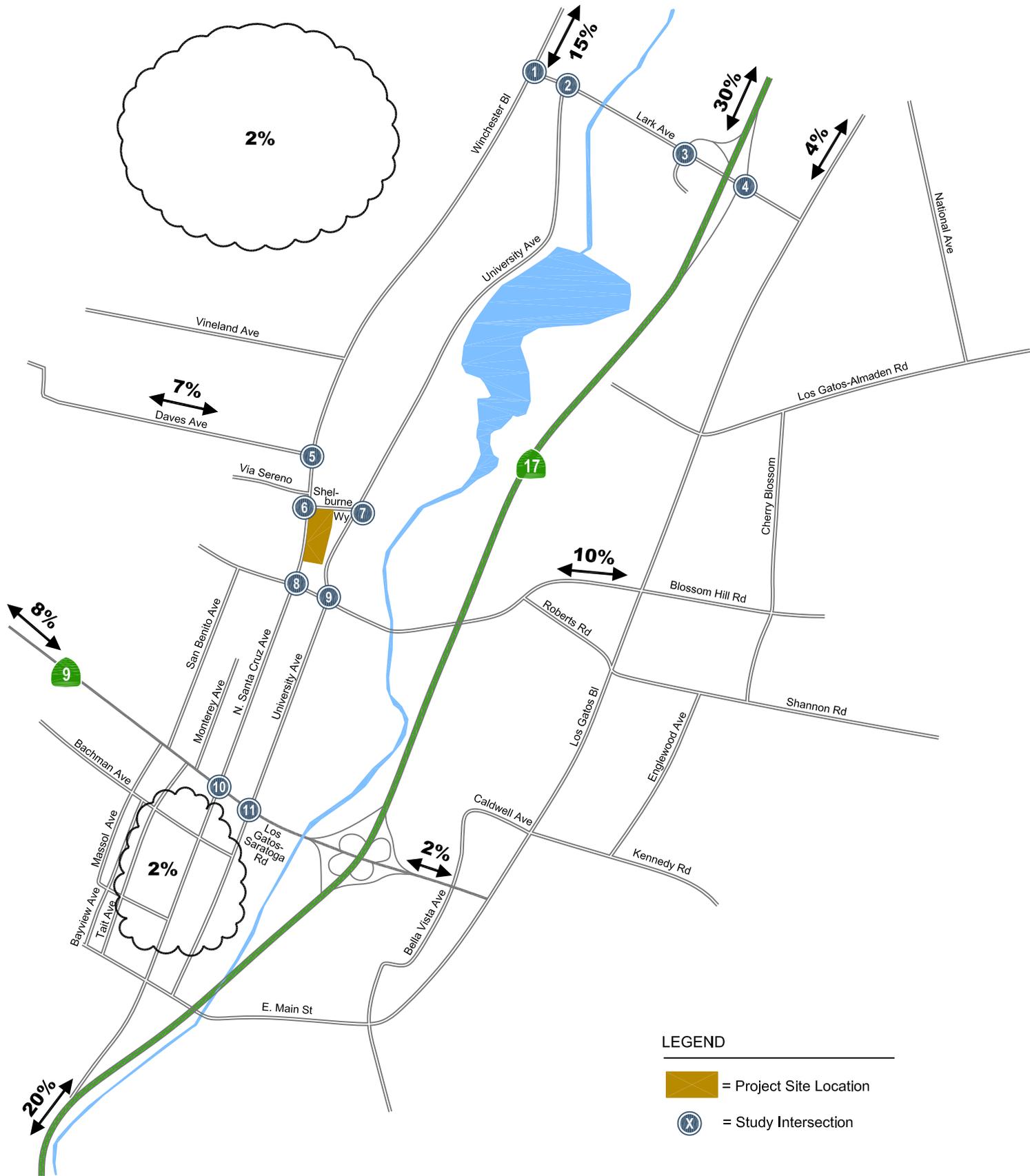
Figure 9 presents the project trips at each study intersection as well as the project driveways.

### Intersection Traffic Volumes

Project impacts were evaluated relative to both existing traffic volumes as well as background traffic volumes. For the existing plus project scenario, the new trips generated by the project were added to the existing traffic volumes (described in Chapter 2) to derive the existing plus project traffic volumes. Figure 10 shows the intersection turning-movement volumes under existing plus project conditions. For the background plus project scenario, the new trips generated by the project were added to the background traffic volumes (described in Chapter 3) to derive the background plus project traffic volumes. Figure 11 shows the intersection turning-movement volumes under background plus project conditions.

### Transportation Network

This analysis assumes that the transportation network with and without the project would be the same under existing and background conditions.

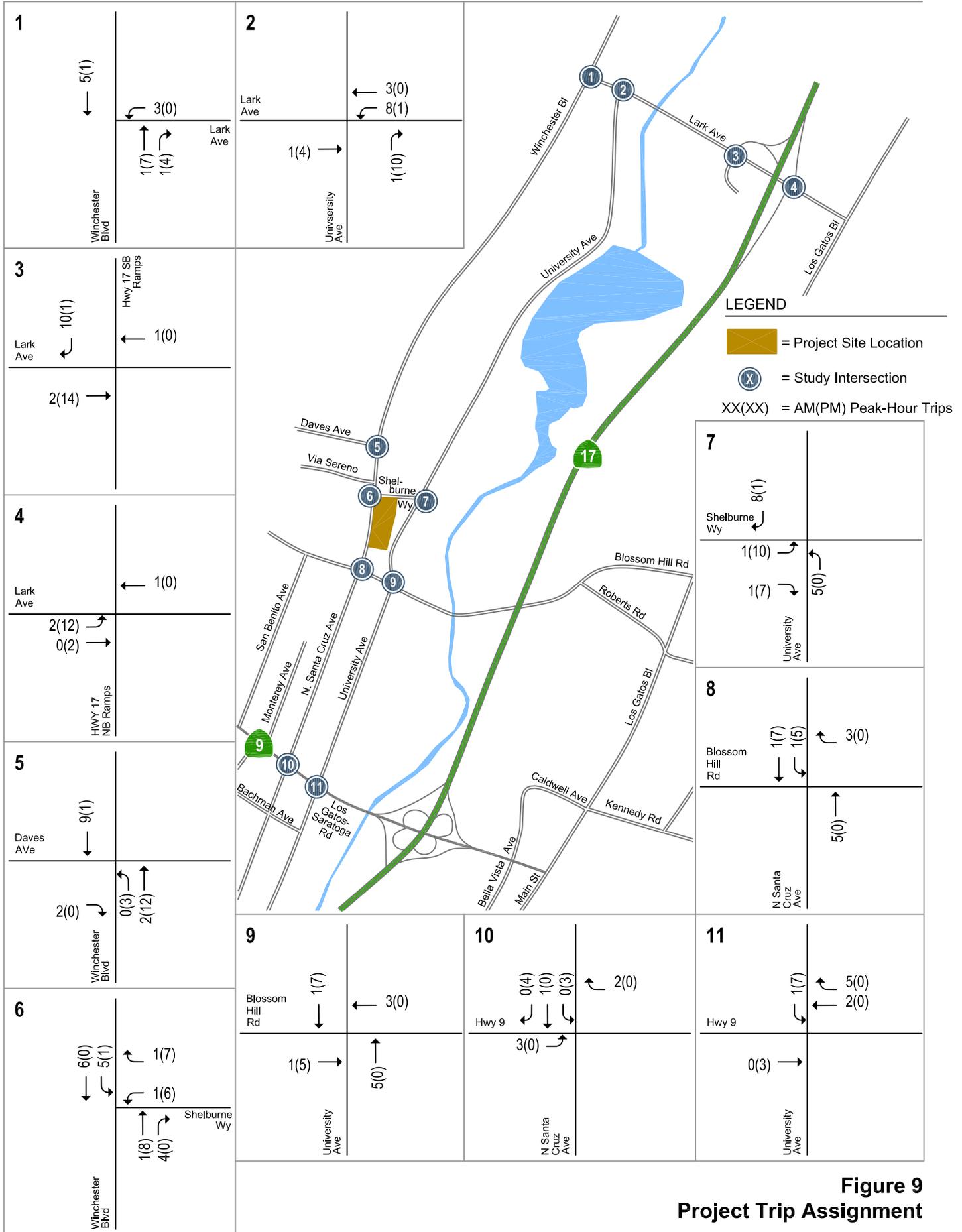


**LEGEND**

- = Project Site Location
- = Study Intersection

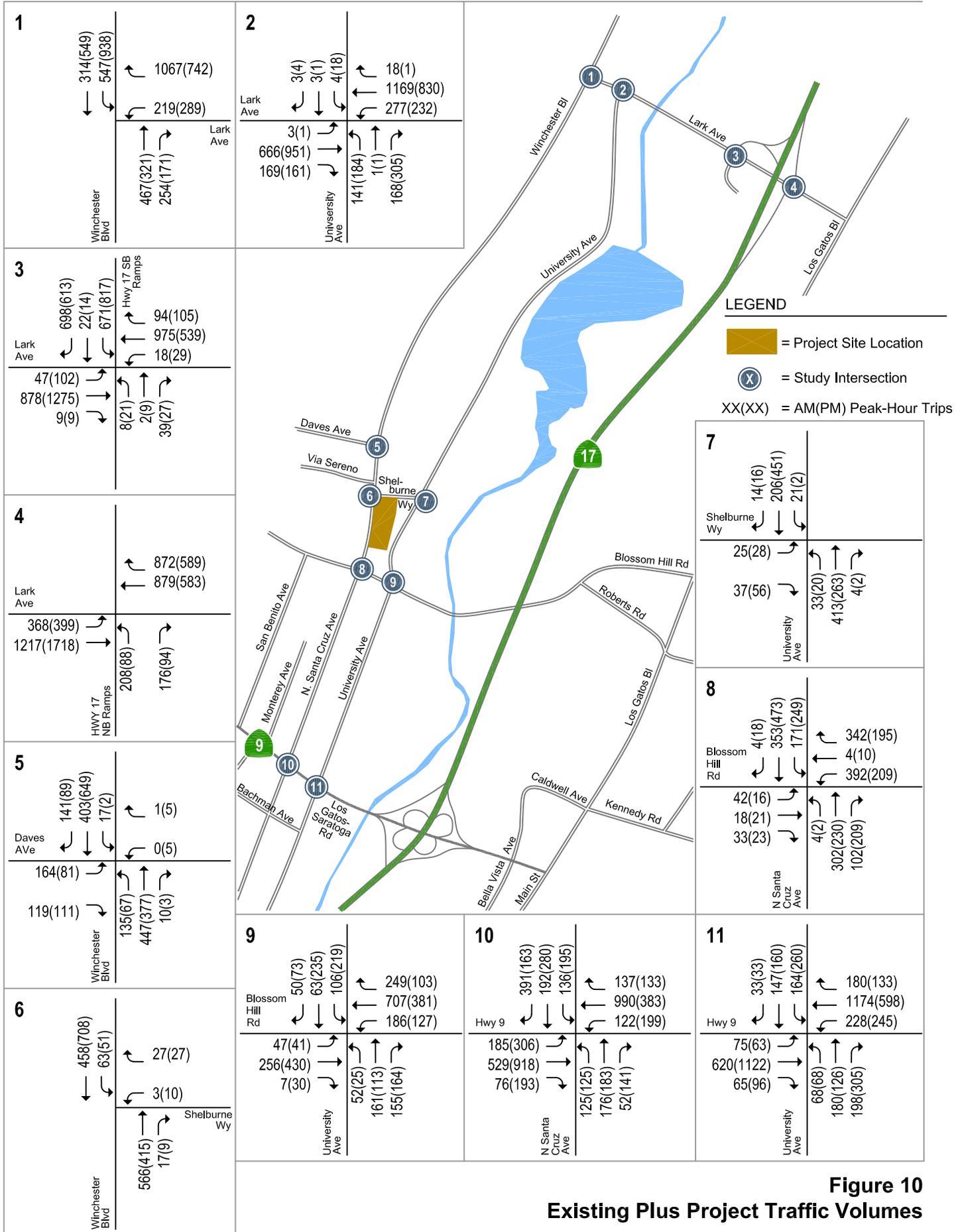
**Figure 8**  
**Project Trip Distribution**

Winchester Boulevard Office



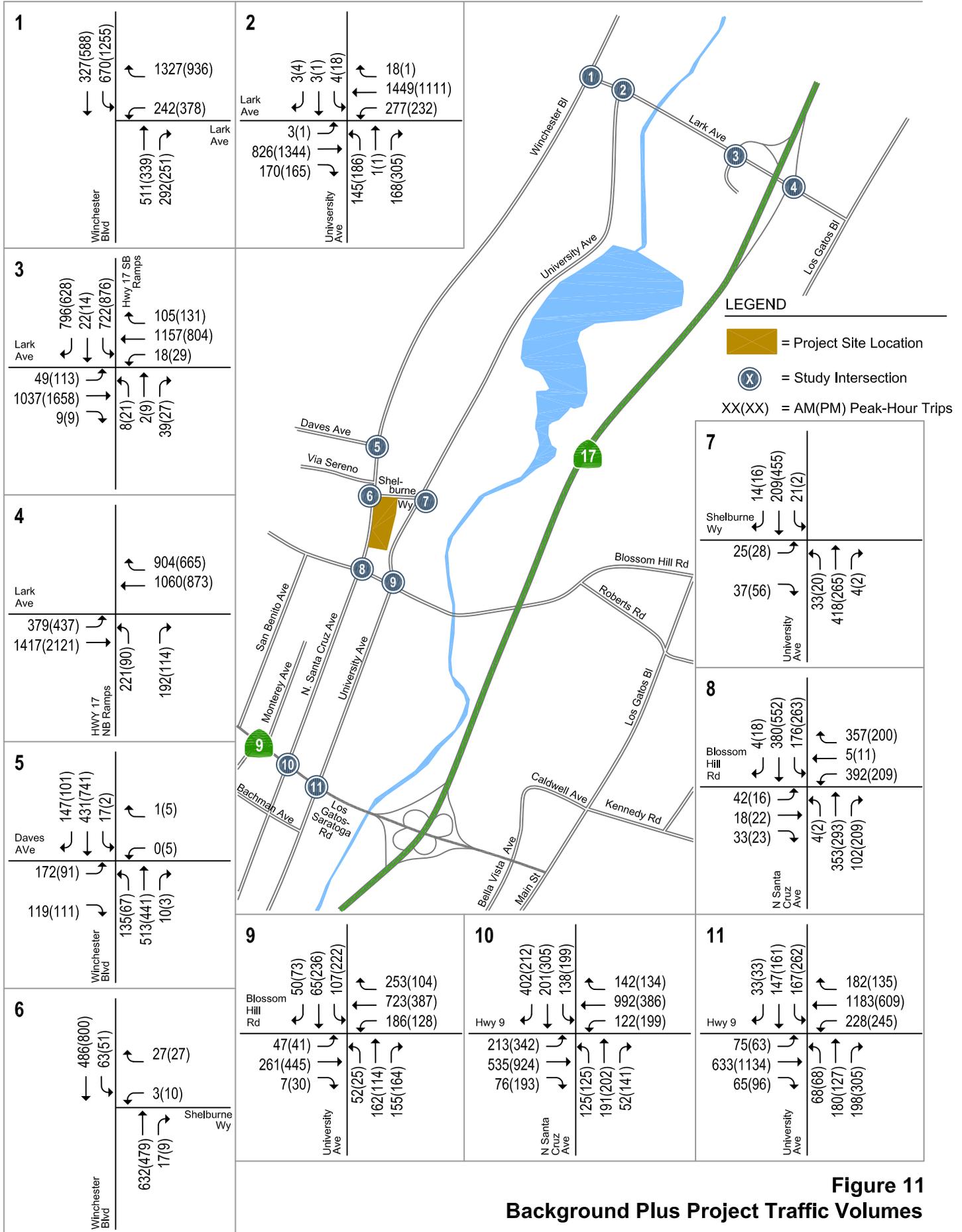
**Figure 9**  
**Project Trip Assignment**

Winchester Boulevard Office



**Figure 10**  
**Existing Plus Project Traffic Volumes**

Winchester Boulevard Office



**Figure 11**  
Background Plus Project Traffic Volumes

## Background plus Project Conditions Intersection Levels of Service

The results of the intersection LOS analysis under background plus project conditions are summarized in Table 9. The analysis results show that all the study intersections would operate at an acceptable LOS D or better during both the AM and PM peak hours. According to the Town of Los Gatos significant intersection impact criteria the proposed project would not generate any significant intersection impacts under background plus project conditions.

The unsignalized intersections would operate at LOS B and LOC C for their respective worst approaches during both peak hours under background plus project conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections under background plus project conditions is thus not performed.

**Table 9**  
**Background Plus Project Intersection Levels of Service Summary**

Study Number	Intersection	Peak Hour	Background		Background + Project			
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C
1	Winchester Blvd. and Lark Ave.	AM	21.9	C	21.9	C	0.1	0.002
		PM	20.7	C	20.8	C	0.2	0.002
2	University Ave. and Lark Ave.	AM	22.0	C	22.2	C	0.0	0.001
		PM	27.2	C	27.3	C	0.1	0.002
3	SR17 Southbound Ramps and Lark Ave.	AM	28.9	C	28.9	C	0.0	0.000
		PM	38.3	D	38.6	D	0.4	0.004
4	SR17 Northbound Ramps and Lark Ave.	AM	18.7	B	18.8	B	0.1	0.001
		PM	13.6	B	13.7	B	0.0	0.000
5	Winchester Blvd. and Daves Ave.	AM	30.7	C	30.8	C	0.1	0.007
		PM	27.3	C	27.3	C	0.2	0.003
6	Winchester Blvd. and Shelburne Ave. <sup>1</sup>	AM	0.7 (11.3)	A(B)	0.8 (11.8)	A(B)	-	-
		PM	0.5 (13)	A(B)	0.7 (15.7)	A(C)	-	-
7	University Ave. and Shelburne Ave. <sup>1</sup>	AM	1.5 (12.1)	A(B)	1.6 (12.3)	A(B)	-	-
		PM	1.3 (13.1)	A(B)	1.6 (13.8)	A(B)	-	-
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	26.0	C	26.1	C	0.2	0.004
		PM	23.5	C	25.0	C	-10.0	0.006
9	University Ave and Blossom Hill Rd.	AM	21.4	C	21.5	C	0.2	0.004
		PM	30.0	C	30.1	C	0.0	0.003
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	42.0	D	42.1	D	0.1	0.002
		PM	48.6	D	48.6	D	0.0	0.000
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	33.7	C	33.7	C	0.0	0.001
		PM	39.7	D	39.8	D	0.2	0.003

**Notes:**

\* Denotes CMP intersection

1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

## Existing Plus Project Intersection Levels of Service

The results of the intersection LOS analysis under existing plus project conditions are summarized in Table 10. The analysis results show that all the study intersections would operate at an acceptable LOS D or better during both the AM and PM peak hours. According to the Town of Los Gatos significant intersection impact criteria, the proposed project would not generate any significant intersection impacts under existing plus project conditions.

The unsignalized intersections would operate at LOS B for their respective worst approaches during both peak hours under existing plus project conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections under existing plus project conditions is thus not performed.

**Table 10**  
**Existing Plus Project Intersection Levels of Service Summary**

Study Number	Intersection	Peak Hour	Existing		Existing + Project			
			Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C
1	Winchester Blvd. and Lark Ave.	AM	21.2	C	21.2	C	0.1	0.001
		PM	18.7	B	18.8	B	0.1	0.002
2	University Ave. and Lark Ave.	AM	21.9	C	23.2	C	12.3	0.071
		PM	25.7	C	25.7	C	0.1	0.002
3	SR17 Southbound Ramps and Lark Ave.	AM	27.4	C	27.4	C	0.0	0.000
		PM	33.4	C	33.5	C	0.1	0.004
4	SR17 Northbound Ramps and Lark Ave.	AM	18.1	B	18.1	B	0.1	0.001
		PM	12.9	B	13.0	B	0.2	0.004
5	Winchester Blvd. and Daves Ave.	AM	30.8	C	30.9	C	0.1	0.007
		PM	26.1	C	26.1	C	0.1	0.003
6	Winchester Blvd. and Shelburne Ave. <sup>1</sup>	AM	0.7 (10.9)	A (B)	0.8 (11.4)	A (B)	-	-
		PM	0.6 (12)	A (B)	0.8 (14)	A (B)	-	-
7	University Ave. and Shelburne Ave. <sup>1</sup>	AM	1.5 (12.1)	A (B)	1.6 (12.2)	A (B)	-	-
		PM	1.3 (13)	A (B)	1.6 (13.7)	A (B)	-	-
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	25.0	C	25.1	C	0.2	0.004
		PM	23.0	C	23.1	C	0.1	0.003
9	University Ave and Blossom Hill Rd.	AM	21.4	C	21.5	C	0.2	0.004
		PM	30.0	C	30.0	C	0.0	0.003
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	41.5	D	41.5	D	0.0	0.000
		PM	48.3	D	48.3	D	0.0	0.000
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	33.7	C	33.7	C	-0.1	0.000
		PM	39.7	D	39.8	D	0.2	0.003

**Notes:**

\* Denotes CMP intersection

1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

## Project Impacts on Daves Avenue during School Peak Hours

Daves Avenue Elementary School is located approximately 2,000 feet west of the project site. At the request of the Town, a qualitative discussion of project impacts on Daves Avenue during peak morning drop-off and afternoon pick-up periods is provided.

Daves Avenue Elementary School currently begins classes at 8:15 AM for all grades and ends at approximately 2:30 PM for all grades on all weekdays except Wednesday, when students end classes at approximately 12:15 PM. Hexagon observed traffic operations on Daves Avenue during the peak school morning drop-off and afternoon pick-up hours. As discussed in Chapter 2, only minor congestion issues were observed, and the congestion lasted a period of approximately twenty to thirty minutes. During the school morning drop-off peak period, the proposed project is expected to generate three trips within an hour on eastbound Daves Avenue. During the school PM pick-up hours, office land uses typically generate little traffic, and the project is not assumed to generate any traffic on eastbound Daves Avenue. Overall, during both the morning drop-off and afternoon pick-up school peak periods, the proposed project is not expected to add a noticeable amount of traffic to eastbound Daves Avenue, which experiences minor congestion for the peak twenty to thirty minutes of school activity.

During both the morning drop-off and afternoon pick-up hours at Daves Avenue Elementary School, Hexagon observed that the majority of the drop-off and pick-up operations occurred on-site. Only a few parents dropped-off or picked-up their children while parked along Daves Avenue. Overall, students are being dropped-off and picked-up in a safe manner. Because the project is expected to add only three trips during the morning peak hour and no traffic during the afternoon school peak hour onto Daves Avenue, it is not expected that the proposed project would significantly affect the current drop-off and pick-up patterns and affect student safety.

## Travel Demand Management Measures

Transportation Demand Management (TDM) is a combination of services, incentives, facilities, and actions that reduce single-occupant vehicle (SOV) trips to help relieve traffic congestion, parking demand, and air pollution. The purpose of TDM is to promote more efficient utilization of existing transportation facilities, and to ensure that new developments are designed to maximize the potential for sustainable transportation usage.

The Town of Los Gatos has established requirements for TDM programs within large projects (generating 100 or more employee trips during the AM peak hour) under Ordinance 1893. Although the ordinance does not apply to this specific project, the following are identified TDM measures outlined in the ordinance that this project has included:

- **Transit Ticket Subsidies:** Transit ticket subsidies encourage employees to commute via transit by offering discounted fares. Subsidized ticket prices along with the project being located in close proximity to a bus stop improve the convenience of riding public transit for employees.
- **Preferential parking for ridesharing vehicles:** Preferential parking provides reserved parking in a desirable priority location, such as near the building entrance or in a guarded lot. The initiative encourages employees to rideshare by making it more convenient for users, and reduces the demand for parking.
- **Bike racks and lockers:** Bike racks and lockers provide safe storage for employees' bicycles. By offering accessible and safe storage, nearby employees can commute by bicycle.
- **Showers:** Shower facilities can encourage employees to move more and incorporate fitness into their daily routines. Providing showers enables active commuters to arrive early and prepare for the day without hygienic concerns.

Each included TDM measure encourages alternative and active commuting behavior that would reduce SOV trips.

## Vehicle Miles Traveled

In accordance with SB 743, daily VMT for projects in Los Gatos versus the average of the San Francisco Bay area are presented based on the Metropolitan Transportation Commission (MTC) travel demand forecast model (<http://analytics.mtc.ca.gov/foswiki/Main/VmtPerWorker>, accessed on September 12, 2016). The Year 2020 Plan Bay Area model forecasted daily VMT is 25.34 miles per worker employed in this area of Los Gatos (Traffic Analysis Zone 509), while the San Francisco Bay Area average daily VMT is 21.8 miles per worker. Given that no standard approach or guidelines have been finalized under SB 743, the VMT presented in this report is for informational purposes only. It is not intended to provide any indication of the transportation impacts of the project under SB 743.

The TDM measures proposed by the project would encourage alternative and active commuting behavior that would reduce single-occupant vehicle trips. These TDM measures would reduce the VMT generated by the proposed project.

## 5. Cumulative plus Project Conditions

---

This chapter describes cumulative traffic conditions with the proposed project. Cumulative conditions reflect the traffic conditions that are projected to occur in the future if all of the development projects that have been proposed in the study area were constructed and occupied. Cumulative traffic volumes reflect traffic generated by the approved development projects (as included in the Background scenario) and other proposed but not yet approved (pending) development projects. This chapter describes the procedure used to determine cumulative plus project traffic volumes and the resulting traffic conditions.

### Roadway Network

It is assumed in this analysis that the transportation network under cumulative conditions would be the same as that described under existing conditions.

### Pending Developments

Pending developments are those that have been proposed to local agencies but have not been approved. The pending project list was obtained from the Town of Los Gatos and is included in Appendix B. Based on a review of traffic studies prepared for these projects, a recent TRAFFIX file provided by the Town of Los Gatos, the types and sizes of these developments, and their respective distance from the project site, the following pending developments are expected to add traffic to at least one of the study intersections during at least one of the peak hour periods:

#### Pending Developments

1. 401 Alberto Way Office: demolish 30,000 s.f. office and construct 93,500 s.f. office
2. 517 Blossom Hill Road: demolish 30-unit apartment and construct 103-unit residential
3. 420 Blossom Hill Road: demolish 6,514 s.f. office and construct 86-unit residential
4. Dell Avenue Area Plan (Campbell): Add approx. 3 million s.f. office
5. 140 Knowles Drive: remove 111,348 s.f. and construct 200 units residential
6. 16151 Los Gatos Blvd-Acura Auto Dealer: add 1,097 s.f. floor area
7. 15600 and 15650 Los Gatos Blvd: demolish auto dealership and build commercial buildings
8. 15380 Los Gatos Blvd: demolish existing 2,400 s.f. convenience store and Construct a 3,700 s.f. new convenience store
9. 16212 Los Gatos Blvd: 11 homes subdivision
10. 15500 Los Gatos Blvd: Buick site redevelopment
11. 201-225 Los Gatos-Saratoga Road: demolish 3,250 s.f. specialty and 8,156 s.f. general office and construct 17,654 s.f. electric car dealership or mixed commercial use
12. 50 Los Gatos-Saratoga Road: demolish 189-Room Hotel and construct 230 unit residential
13. Samaritan Medical Office Master Plan: net increase 365,000 s.f. medical office (Total 475k s.f.)
14. Twin Oaks: 10-home subdivision

The following pending developments have also been considered, but are not expected to add traffic to any of the study intersections during either the AM or PM peak hours:

15. Venture Christian Church: increase from 91,092 s.f. to 107,289
16. 101 Newell Avenue: demolish existing lodge and construct 4 homes
17. Shady Lane Extension: 5-lot subdivision on vacant lot
18. 15975 Union Ave: 3-home subdivision
19. 258 Union Ave: 7-home subdivision

## Cumulative plus Project Traffic Volumes

Cumulative plus project peak hour traffic volumes were calculated by adding the estimated traffic from the pending developments as well as the net new peak hour trips generated by the project to background volumes. Vehicle trips for each of the pending projects were obtained from the TRAFFIX file provided by the Town of Los Gatos or from the project's traffic impact study. The estimated trips were assigned to the study intersections according to the distributions and assignments identified in the Town's TRAFFIX file or the relevant traffic studies. Cumulative plus project traffic volumes are shown graphically on Figure 12.

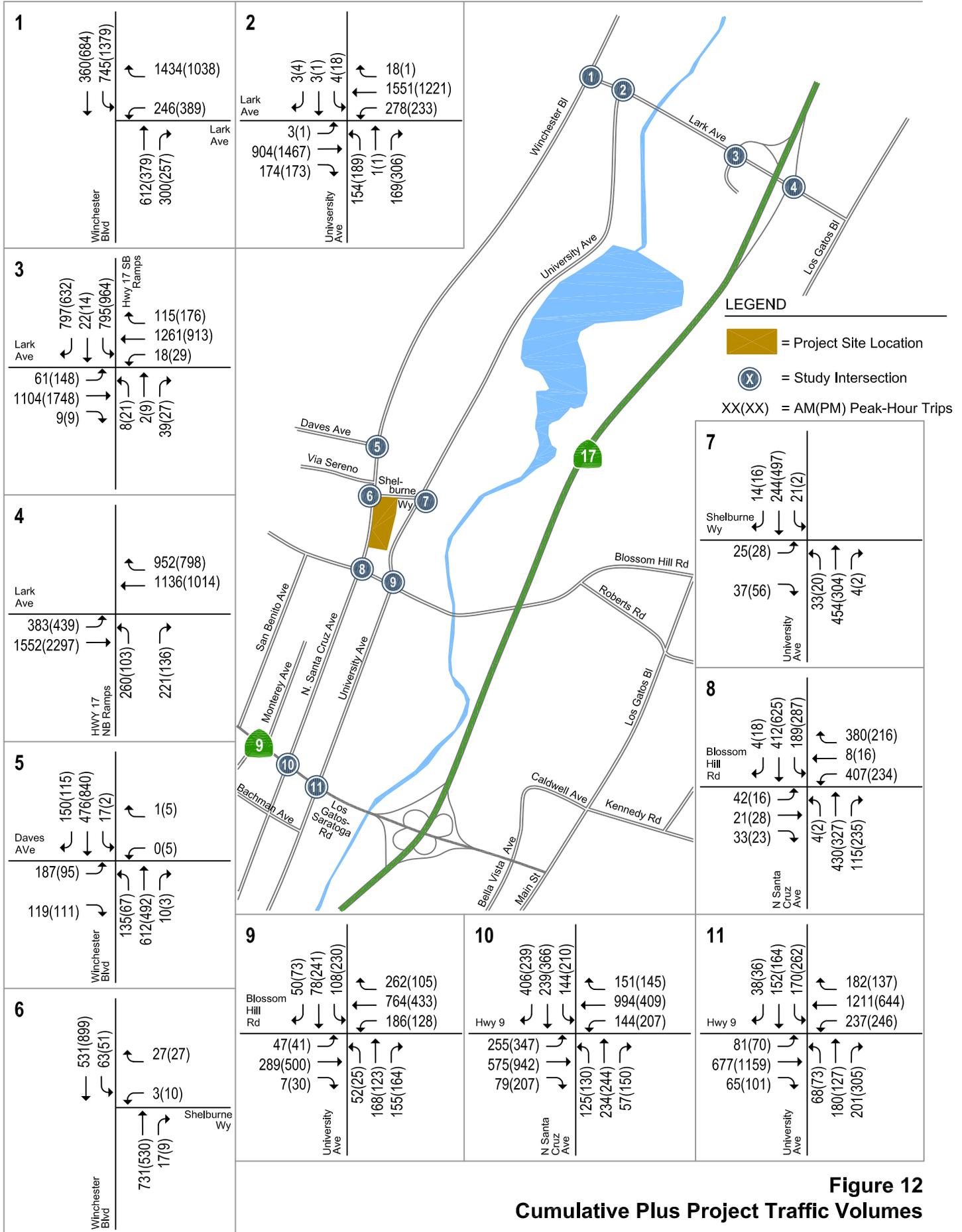
## Intersection LOS Under Cumulative Plus Project Conditions

As shown on Table 11, all study intersections would operate at acceptable levels of service under cumulative plus project conditions. The unsignalized intersections would operate at LOS B and LOS C for their respective worst approaches during both peak hours under cumulative plus project conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections under cumulative plus project conditions thus was not performed.

Even though the project would not have a significant impact at the study intersections, it would be required to pay a Traffic Impact Fee, as does all new development in the Town of Los Gatos. The Town's Traffic Impact Fee is unrelated to whether or not a project has any impacts under CEQA, and is required of all new development projects that generate additional trips on the Town's roadway network. The current fee is \$879 per new trip generated, as approved by the Town Council on March 24, 2014. The project is expected to generate a net new 303 daily trips. The associated traffic impact fee is \$266,337. The purpose of the fee is to help fund transportation projects that are needed to accommodate vehicle trip growth. As a general practice, traffic impact fees are typically calculated at the time of the final project approval. The fee policy and schedule are subject to change in which the final fees may be different than the amount stated above. Among the projects that will be funded with Traffic Impact Fees that are within the study areas are:

- Intersection Improvements at SR 9 and N. Santa Cruz Avenue;
- Intersection Improvements at Winchester Boulevard and Lark Avenue;
- Second westbound right-turn lane at Lark Avenue and SR 17 northbound ramps;
- SR 9 - Los Gatos Creek Trail connector – New path and bridge for bikes and pedestrians;
- Complete Streets Improvements – Lark Avenue from Garden Hill Drive to Los Gatos Blvd;
- Complete Streets Improvements – Winchester Boulevard from Blossom Hill Road to Lark Avenue.

Winchester Boulevard Office



**Figure 12**  
**Cumulative Plus Project Traffic Volumes**

**Table 11**  
**Intersection Levels of Service Summary - Cumulative plus Project Conditions**

Study Number	Intersection	Peak Hour	Cumulative + Project	
			Avg. Delay (sec)	LOS
1	Winchester Blvd. and Lark Ave.	AM	22.2	C
		PM	21.5	C
2	University Ave. and Lark Ave.	AM	22.9	C
		PM	29.0	C
3	SR17 Southbound Ramps and Lark Ave.	AM	31.8	C
		PM	46.8	D
4	SR17 Northbound Ramps and Lark Ave.	AM	21.6	C
		PM	15.2	B
5	Winchester Blvd. and Daves Ave.	AM	31.1	C
		PM	29.9	C
6	Winchester Blvd. and Shelburne Ave. <sup>1</sup>	AM	0.7 (12.7)	A (B)
		PM	0.7 (17.7)	A (C)
7	University Ave. and Shelburne Ave. <sup>1</sup>	AM	1.5 (13)	A (B)
		PM	1.5 (14.6)	A (B)
8	N. Santa Cruz Avenue and Blossom Hill Rd.	AM	28.4	C
		PM	28.1	C
9	University Ave and Blossom Hill Rd.	AM	21.7	C
		PM	30.3	C
10	N. Santa Cruz Ave and Los Gatos-Saratoga Rd.*	AM	44.2	D
		PM	50.3	D
11	University Ave. and Los Gatos-Saratoga Rd.*	AM	34.2	C
		PM	39.8	D

**Notes:**  
\* Denotes CMP intersection  
1. For unsignalized intersections, intersection-wide average delay and corresponding LOS are first reported, and worst-approach delay and corresponding LOS are reported in parentheses.

## 6. Other Transportation Issues

---

This chapter discusses an analysis completed of other transportation issues associated with the project site, including:

- Operations analysis – vehicle queuing and storage at selected intersections
- Potential impacts regarding transit, pedestrian, and bicycle facilities
- Site access and on-site circulation
- Parking

Unlike the level of service impact methodology, which is adopted by the Town of Los Gatos, the analyses discussed in this chapter are based on professional judgment in accordance with the standards and methods employed by the traffic engineering community.

Although operational issues are not considered CEQA impacts, they do describe traffic conditions that are relevant to describing the project environment.

### Operations Analysis

Vehicle queues were estimated using a Poisson probability distribution, which estimates the probability of “n” vehicles for a vehicle movement using the following formula:

$$P(x = n) = \frac{\lambda^n e^{-\lambda}}{n!}$$

Where:

$P(x = n)$  = probability of “n” vehicles in queue per lane

$n$  = number of vehicles in the queue per lane

$\lambda$  = Average number of vehicles in the queue per lane (vehicles per hour per lane/signal cycles per hour)

The operations analysis is based on vehicle queuing for high-demand left-turn movements at intersections where 10 or more project trips were added or there was observed congestion. Using a Poisson probability distribution, the basis of the analysis is as follows: (1) the Poisson probability distribution is used to estimate the 95<sup>th</sup> percentile maximum number of queued vehicles for a particular movement; (2) the estimated maximum number of vehicles in the queue is translated into a queue length, assuming 25 feet per vehicle; and (3) the estimated maximum queue length is compared to the existing or planned available storage capacity for the movement to determine if adequate storage is available to accommodate the 95<sup>th</sup> percentile queues. This analysis thus provides a basis for determining whether the addition of project trips would exacerbate peak hour queues and delays, as well as estimating future storage requirements at intersections. The following turn movements were analyzed for vehicular queues:

- University Avenue and Lark Avenue – the westbound left-turn movement
- SR17 northbound ramps and Lark Avenue – the eastbound left-turn movement
- N. Santa Cruz and Los Gatos-Saratoga Road – the eastbound left-turn movement
- University Avenue and Los Gatos-Saratoga Road – the southbound left-turn movement
- Winchester Boulevard and Shelburne Way – the southbound left-turn and westbound left-turn movement
- Winchester Boulevard and Project Driveway – the southbound left-turn movement

Vehicle queuing estimates are provided in Table 12. Hexagon performed field observations at these intersections to determine the average queue length. The reported existing queue lengths match our observations.

Under existing and background conditions, volumes on all studied movements are contained within the provided storage space, except at the following turn pockets where the 95<sup>th</sup> percentile queues exceed the provided storage space:

- University Avenue & Lark Avenue – westbound left-turn pocket – AM & PM Peak Hours
- University Avenue & Los Gatos-Saratoga Road – southbound left-turn pocket – PM Peak Hour

Under existing plus project and background plus project conditions, the 95<sup>th</sup> percentile queues at the above mentioned two overflowing movements would continue to exceed the provided storage space. The project would not cause additional turn pockets to overflow. As shown on Table 12, the project is expected to add fewer than 10 vehicles per hour onto the overflowing movements and is not expected to extend the 95<sup>th</sup> percentile queues.

The project driveway on Shelburne Way is proposed at approximately 130 feet east of Winchester Boulevard. The 95<sup>th</sup> percentile queue length for westbound Shelburne Way at Winchester Boulevard is estimated at 25 feet, which indicates that vehicles turning out of the Shelburne Way driveway would not be blocked.

The project driveway on Winchester Boulevard is proposed at approximately 250 feet south of Shelburne Way. There is an existing two-way left-turn median on Winchester Boulevard for southbound inbound vehicles to wait and turn into the driveway. Based on the queuing analysis results, it is expected that the southbound left-turn project traffic on Winchester Boulevard turning into the driveway would be contained within the two-way left-turn median.

**Table 12**  
**Queuing Analysis**

Measurement	University Ave. & Lark Ave.		NB SR17 Ramps & Lark Ave.		N. Santa Cruz Ave. & Los Gatos-Saratoga Rd.		University Ave. & Los Gatos-Saratoga Rd.		Winchester Blvd & Shelburne Way				Winchester Blvd. and Project Driveway	
	WBL		EBL <sup>4</sup>		EBL		SBL <sup>5</sup>		SBL		WB		SBL	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
<b>Existing</b>														
Cycle/Delay <sup>1</sup> (sec)	100	100	95	110	150	150	150	150	8.8	8.3	10.9	12		
Volume (vphpl)	269	231	366	387	182	306	163	253	58	50	28	24		
Avg. Queue <sup>2</sup> (veh./ln.)	12.0	6.4	9.0	14.0	7.6	10.0	3.3	7.3	0.1	0.1	0.1	0.1		
Avg. Queue <sup>3</sup> (ft./ln.)	300	160	225	350	190	250	81	181	4	3	2	2		
95th % Queue (veh./ln.)	18	11	14	20	12	15	6	12	1	1	1	1		
95th % Queue (ft./ln.)	450	275	350	500	300	375	150	300	25	25	25	25		
Storage (ft./ln.)	225	225	720	720	425	425	250	250	65	65	130	130		
Adequate (Y/N)	N	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y		
<b>Existing plus Project</b>														
Cycle/Delay <sup>1</sup> (sec)	100	100	95	110	150	150	150	150	8.8	8.3	11.4	13.9	8.2	0.0
Volume (vphpl)	277	232	368	399	185	306	164	260	63	51	30	37	6	0
Avg. Queue <sup>2</sup> (veh./ln.)	12.4	6.4	9.0	14.4	7.7	10.0	3.3	7.5	0.2	0.1	0.1	0.1	0.0	0.0
Avg. Queue <sup>3</sup> (ft./ln.)	310	160	225	360	193	250	83	188	4	3	2	4	0	0
95th % Queue (veh./ln.)	18	11	14	21	13	15	7	12	1	1	1	1	0	0
95th % Queue (ft./ln.)	450	275	350	525	325	375	175	300	25	25	25	25	0	0
Storage (ft./ln.)	225	225	720	720	425	425	250	250	65	65	130	130	250	250
Adequate (Y/N)	N	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y
<b>Background</b>														
Cycle/Delay <sup>1</sup> (sec)	100	100	95	110	150	150	150	150	9	8.5	11.3	13		
Volume (vphpl)	269	231	377	425	210	342	166	255	58	50	28	24		
Avg. Queue <sup>2</sup> (veh./ln.)	12.0	6.4	9.3	15.4	8.8	11.2	3.3	7.3	0.1	0.1	0.1	0.1		
Avg. Queue <sup>3</sup> (ft./ln.)	300	160	233	385	220	280	83	183	4	3	2	2		
95th % Queue (veh./ln.)	18	11	15	22	14	17	7	12	1	1	1	1		
95th % Queue (ft./ln.)	450	275	375	550	350	425	175	300	25	25	25	25		
Storage (ft./ln.)	225	225	720	720	425	425	250	250	65	65	130	130		
Adequate (Y/N)	N	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y		
<b>Background plus Project</b>														
Cycle/Delay <sup>1</sup> (sec)	100	100	95	110	150	150	150	150	9.1	8.5	11.8	15.5	10.3	0
Volume (vphpl)	277	232	379	437	213	342	167	262	63	51	30	37	6	0
Avg. Queue <sup>2</sup> (veh./ln.)	12.4	6.4	9.3	15.8	8.9	11.2	3.3	7.5	0.2	0.1	0.1	0.2	0.0	0.0
Avg. Queue <sup>3</sup> (ft./ln.)	310	160	233	395	223	280	83	188	4	3	2	4	0	0
95th % Queue (veh./ln.)	18	11	15	23	14	17	7	12	1	1	1	1	0	0
95th % Queue (ft./ln.)	450	275	375	575	350	425	175	300	25	25	25	25	0	0
Storage (ft./ln.)	225	225	720	720	425	425	250	250	65	65	130	130	250	250
Adequate (Y/N)	N	N	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y

1. Vehicle queue calculations based on cycle length for signalized intersections, and movement delay for unsignalized intersections.  
 2. Average queues were adjusted to resemble field observations  
 3. Assumes 25 Feet Per Vehicle Queued.  
 4. Storage length accounts for dual eastbound left-turn storage pockets.  
 5. Storage length accounts for dual southbound left-turn storage pockets.

## Project Impact on Bicycle, Pedestrian and Transit Facilities

The project site is well served by existing bicycle facilities. There is an existing Class III bikeway on Shelburne Way between Winchester Boulevard and University Avenue. Nearby bicycle facilities within the project vicinity include bike lanes on Daves Avenue, Winchester Boulevard north of Daves Avenue, and on University Avenue north of Blossom Road, as well as the Los Gatos Creek trail. The Los Gatos Creek Trail is a Class I bike facility that runs in a north-south direction just west of Highway 17.

Pedestrian activity could occur between the site and downtown Los Gatos, located approximately a mile south, as well as the closest bus stops, located about 200 feet north and 700 feet to the south of the project site. There are existing sidewalks on Winchester Boulevard that connect the site to the bus stops and to downtown Los Gatos. Several sections of Shelburne Way lack sidewalks, including the project frontage. The project would improve the situation by adding a sidewalk along its frontage. There are no crosswalks at the intersection of Winchester Boulevard and Shelburne Way. The project would not create sufficient pedestrian demand to warrant the installation of a crosswalk. The nearest crosswalk is at the signalized intersection of Winchester Boulevard and Daves Avenue, which is located approximately 575 feet, from the project site.

As shown on Figure 2 in Chapter 1, the project proposes to provide detached sidewalks with a landscape buffer on Winchester Boulevard and Shelburne Way along the building frontage. Detached sidewalks with a landscape buffer would provide a wider buffer area between pedestrians and on-street vehicles.

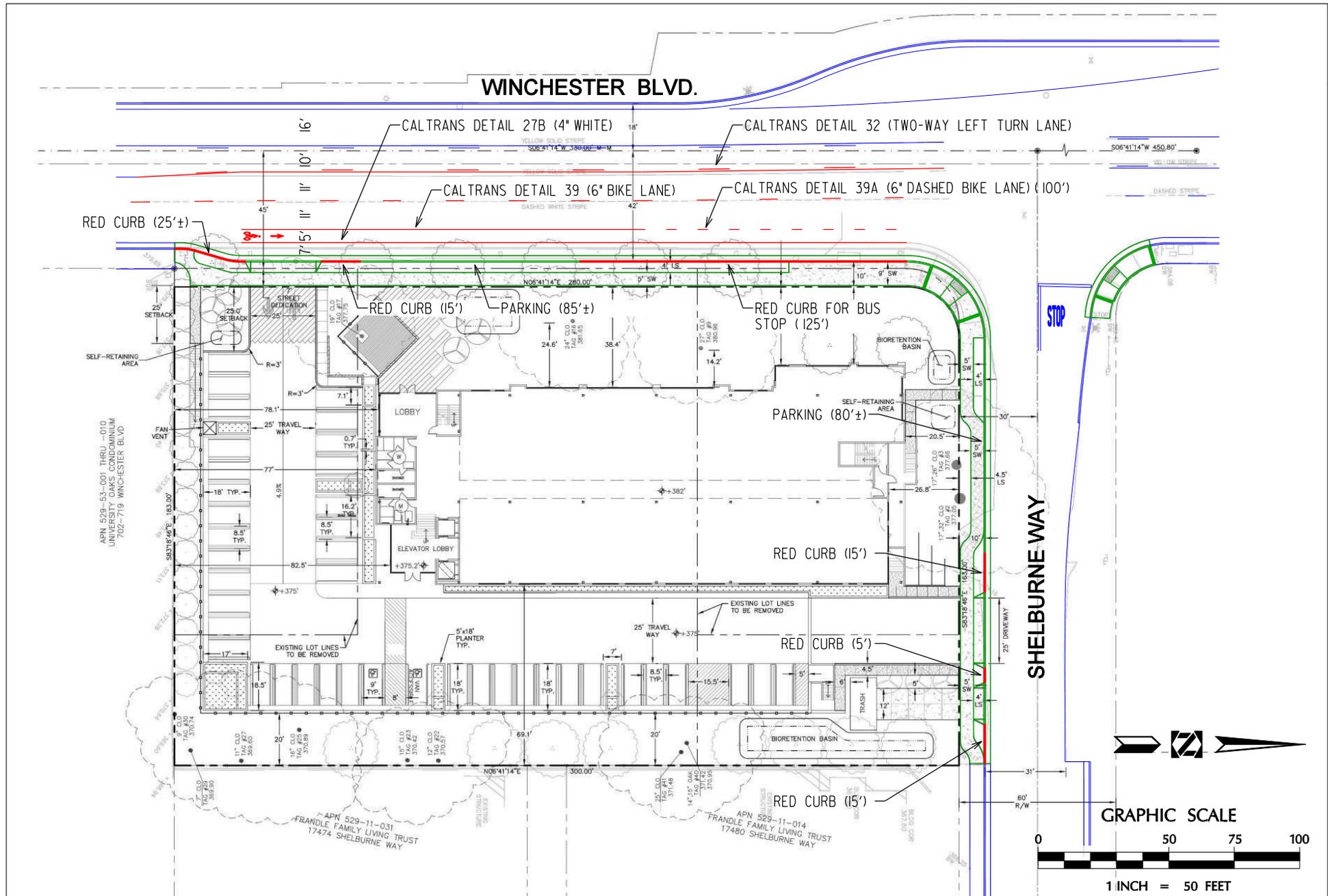
The project would be required to pay a Traffic Impact Fee, as does all new development in the Town of Los Gatos. The Town's Traffic Impact Fee is unrelated to whether or not a project has any impacts under CEQA, and is required of all new development projects that generate additional trips on the Town's roadway network. Among the projects that will be funded with Traffic Impact Fees that are within the study area are the complete street improvements on Winchester Boulevard from Blossom Hill Road to Lark Avenue. It is expected that the complete street improvements would enhance the bicycle and pedestrian facilities along Winchester Boulevard. The potential bicycle and pedestrian facility improvements are shown in a conceptual drawing on Figure 13.

There is transit service on Winchester Boulevard adjacent to the site. The closest bus stop for northbound service is approximately 450 feet north at Winchester Boulevard and Farley Road, and less than 200 feet north at Winchester Boulevard and Via Sereno for southbound service. It is not expected that the proposed project would generate a significant amount of transit ridership, or create a significant impact to intersection levels of service along transit routes. Therefore, the project would not significantly impact transit facilities and transit travel times.

As shown on Figure 2 in Chapter 1, as requested by the Valley Transportation Authority (VTA) the project proposes to provide an additional VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection. The proposed bus stop would provide direct transit access to the project site.

### **Recommendations**

While not required to improve Level of Service or to mitigate impacts related to traffic, it is recommended that the proposed project implement detached sidewalks on Winchester Boulevard and on Shelburne Way along the building frontages, and implement the proposed VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection.



## Site Access and Circulation

This section describes the site access and circulation for the proposed project. This review is based on project site plans prepared by Studio T Square dated August 1, 2016 (see Figure 2).

### **Site Access**

Site access was evaluated to determine the adequacy of site driveways with regards to corner sight distance and traffic volumes. The proposed project would have two full-access driveways, one each on Winchester Boulevard and Shelburne Way. The northern access driveway from Shelburne Way would provide access to an 87-space below-grade parking garage. The Winchester Boulevard access driveway would connect to a 41-space surface parking lot. Both access driveways serve as the entrance and exit to that specific grade-level parking area. Queuing analysis indicates that the Shelburne Way driveway would not be blocked by the westbound traffic queues at the intersection of Winchester Boulevard and Shelburne Way. Therefore, access to the project driveways would be adequate under all analyzed scenarios.

### **Driveway Sight Distance**

The project access points should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic and see oncoming pedestrians and bicyclists. Adequate corner sight distance (sight distance triangles) should be provided at all site access points in accordance with the Town's standards. Sight distance triangles should be measured approximately 15 feet back from the traveled way.

Sight distance requirements vary depending on the roadway speeds. The speed limit on Winchester Boulevard and Shelburne Way is 25 mph. The Caltrans recommended stopping sight distance for this roadway is 150 feet.

### **Recommendations**

At both the Winchester Boulevard driveway and the Shelburne Way driveway, on-street parking should be prohibited within 15 feet of the driveway to ensure adequate sight distance.

### **On-Site Circulation**

All driveway and drive-aisle widths are at least 25 feet wide, and comply with the minimum requirements established in the Town of Los Gatos Code of Ordinances Section 29.10.155. All parking stalls within the parking garage are 18 feet in length (16 feet with 2 feet overhang) and 8 feet 6 inches in width, which meet the town's requirements.

The building lobby and entrance is proposed to front Winchester Boulevard. Pedestrians would access the project site through the main lobby and entrance area. Sidewalks are proposed to be installed on Winchester Boulevard and Shelburne Way fronting the project site. The proposed project would provide adequate pedestrian access and circulation.

### **Emergency Vehicles, Truck Access and Circulation**

The site plan proposes a dedicated trash enclosure on Shelburne Way just east of the main access driveway. Trash bins would be picked up from and returned to the dedicated trash enclosure on the day of garbage collection. All driveways and drive-aisles are at least 25 feet wide, which are adequate for emergency vehicle access and circulation.

## Parking

For office use at the project site, the Town of Los Gatos Municipal Code Section 29.10.150 requires parking to be provided at the rate of one parking space per 235 square feet of gross floor area. The project proposes an office building totaling 30,070 square feet, which by code would be required to provide 128 parking spaces. The project site plan provides 128 parking spaces. Therefore, the parking provision as shown on the current project site plans would meet the Town standards.

Per the California Building Code (CBC) Table 11B-208.2, four accessible spaces are required for parking garages with 76 to 100 parking spaces and two accessible spaces are required for parking lots with 26 to 50 parking spaces. Of the required accessible parking spaces, one van accessible space is required. As shown on the site plan, the project would provide six accessible parking spaces, of which four are accessed via the northern driveway on the below-grade level near the elevators, and the remaining two are accessed via the western driveway on the ground floor. The project site plan also labels one of the accessible parking spaces in both the underground garage and the surface parking lot to be van accessible. Therefore, the accessible parking provisions as shown on the current project site plans would meet the CBC requirements.

As discussed above, to ensure adequate sight distance for vehicles turning out of the driveways, Hexagon recommends on-street parking on Winchester Boulevard and Shelburne Way within 15 feet of the driveway be prohibited.

The Town of Los Gatos does not have requirements for bicycle parking spaces. According to VTA's *Bicycle Technical Guidelines*, which is VTA's general guide for local agencies in planning, design and maintenance of bicycle facilities and bicycle-friendly roadways, offices should provide one bicycle parking space per 6,000 s.f. and 75 percent of the bicycle parking spaces should be secured (Class I) spaces. The proposed project is 30,070 s.f. and would be recommended to provide 5 bicycle parking spaces (4 secured bike parking spaces and 1 bike rack.) Comparatively, the California Green Building Code (CGBC) Section 5.106.4 requires short-term bike parking equivalent to 5 percent of the visitor parking spaces and long-term bike parking equivalent to 5 percent of the employee parking spaces. This equates to a total of 6 long-term bicycle parking spaces. The project does not identify specific visitor parking spaces, but the project should provide at least one two-bike capacity rack near the visitor entrance to the building. The proposed project is proposing in its underground garage a secured bike storage room that can hold 36 bicycles. The proposed bicycle storage facility exceeds the recommended secured bike storage quantity by VTA and the CGBC. Based on both the VTA guidelines and CGBC requirements, it is recommended that one two-bike capacity bike rack be provided near the visitor entrance to the building.

The bike storage room will be located next to the driveway and can be accessed from ground level via a set of stairs approximately 30 feet to the north and via elevators approximately 100 feet to the south. Bicyclist access to the bike storage is adequate.

## 7. Conclusions

---

This report presents the results of the Transportation Impact Analysis (TIA) prepared for the proposed office development located at Winchester Boulevard and Shelburne Way in Los Gatos, CA. The project site is located on the 1.31-acre lot southwest of the intersection of Winchester Boulevard and Shelburne Way. Currently, the project site is comprised of three houses. The project proposes to replace the existing houses with a 30,070-s.f. office building with 128 parking spaces. Access to the project site would be provided by two driveways, one on Winchester Boulevard and the other on Shelburne Way.

This study was conducted for the purpose of identifying the potential traffic impacts related to the proposed development. The potential impacts of the project were evaluated in accordance with the standards set forth by the Town of Los Gatos and the Santa Clara County Congestion Management Program (CMP). The traffic analysis is based on the AM and PM peak hour levels of service for nine signalized intersections, two unsignalized intersections, and three freeway segments. Of the nine study intersections, two are CMP intersections.

Per CMP technical guidelines, a freeway segment LOS analysis is required when a project is expected to add trips greater than one percent of a segment's capacity. Given that the number of project trips added to the freeways in the area is estimated to be less than the one percent threshold of freeway capacity, a detailed analysis of freeway segment levels of service was not performed. A simple freeway segment capacity evaluation to substantiate this determination is presented in Table 3 in Chapter 1.

### Intersection Levels of Service

The intersection LOS analysis concluded that all study intersections would operate at acceptable levels of service under all studied conditions. The unsignalized intersections would operate at LOS B and LOS C for their respective worst approaches during both peak hours under all studied conditions. The levels of service results indicate that these two unsignalized intersections would be operating at near free-flow condition. A signal warrant check for these two intersections thus was not performed.

## Operations Analysis

Operational issues are not considered CEQA impacts. They are included for informational purposes.

A queuing analysis was provided to determine whether the addition of project trips would exacerbate peak hour queues and delays, as well as estimating future storage requirements at intersections. The following turn movements were analyzed for vehicles queues:

- University Avenue and Lark Avenue – the westbound left-turn movement
- SR17 northbound ramps and Lark Avenue – the eastbound left-turn movement
- N. Santa Cruz and Los Gatos-Saratoga Road – the eastbound left-turn movement
- University Avenue and Los Gatos-Saratoga Road – the southbound left-turn movement
- Winchester Boulevard and Shelburne Way – the southbound left-turn and westbound movement
- Winchester Boulevard and Project Driveway – the southbound left-turn movement

Hexagon performed field observations at these intersections to determine the average queue length. The reported existing queue lengths match our observations.

Under existing and background conditions, volumes on all studied movements are contained within the provided storage space, except at the following turn pockets where the 95<sup>th</sup> percentile queues exceed the provided storage space:

- University Avenue & Lark Avenue – westbound left-turn pocket – AM & PM Peak Hours
- University Avenue & Los Gatos-Saratoga Road – southbound left-turn pocket – PM Peak Hour

Under existing plus project and background plus project conditions, the 95<sup>th</sup> percentile queues at the above mentioned two overflowing movements would continue to exceed the provided storage space. The project would not cause additional turn pockets to overflow. As shown on Table 12, the project is expected to add fewer than 10 vehicles per hour to the overflowing movements and is not expected to extend the 95<sup>th</sup> percentile queues.

The project driveway on Shelburne Way is proposed at approximately 130 feet east of Winchester Boulevard. The 95<sup>th</sup> percentile queue length for westbound Shelburne Way at Winchester Boulevard is estimated at 25 feet, which indicates that vehicles turning out of the Shelburne Way driveway would not be blocked.

The project driveway on Winchester Boulevard is proposed at approximately 250 feet south of Shelburne Way. There is an existing two-way left-turn median on Winchester Boulevard for southbound inbound vehicles to wait and turn into the driveway. Based on the queuing analysis results, it is expected that the southbound left-turn project traffic on Winchester Boulevard turning into the driveway would be contained within the two-way left-turn median.

## Project Impact on Bicycle, Pedestrian and Transit Facilities

The project site is well served by existing bicycle facilities. There is an existing Class III bikeway on Shelburne Way between Winchester Boulevard and University Avenue. Nearby bicycle facilities within the project vicinity include bike lanes on Daves Avenue, Winchester Boulevard north of Daves Avenue, and on University Avenue north of Blossom Road, as well as the Los Gatos Creek trail. The Los Gatos Creek Trail is a Class I bike facility that runs in a north-south direction just west of Highway 17.

Pedestrian activity could occur between the site and downtown Los Gatos, located approximately a mile south, as well as the closest bus stops, located about 200 feet north and 700 feet to the south of the project site. There are existing sidewalks on Winchester Boulevard that connect the site to the bus stops and to downtown Los Gatos. Several sections of Shelburne Way lack sidewalks, including the project frontage. The project would improve the situation by adding a sidewalk along its frontage. There are no crosswalks at the intersection of Winchester Boulevard and Shelburne Way. The project would not create sufficient pedestrian demand to warrant the installation of a crosswalk. The nearest crosswalk is at the signalized intersection of Winchester Boulevard and Daves Avenue, which is located approximately 575 feet, from the project site.

As shown on Figure 2 in Chapter 1, the project proposes to provide detached sidewalks with a landscape buffer on Winchester Boulevard and Shelburne Way along the building frontage. Detached sidewalks with a landscape buffer would provide a wider buffer area between pedestrians and on-street vehicles.

The project would be required to pay a Traffic Impact Fee, as does all new development in the Town of Los Gatos. The Town's Traffic Impact Fee is unrelated to whether or not a project has any impacts under CEQA, and is required of all new development projects that generate additional trips on the Town's roadway network. Among the projects that will be funded with Traffic Impact Fees that are within the study area are the complete street improvements on Winchester Boulevard from Blossom Hill Road to Lark Avenue. It is expected that the complete street improvements would enhance the bicycle and pedestrian facilities along Winchester Boulevard.

There is transit service on Winchester Boulevard adjacent to the site. The closest bus stop for northbound service is approximately 450 feet north at Winchester Boulevard and Farley Road, and less than 200 feet north at Winchester Boulevard and Via Sereno for southbound service. It is not expected that the proposed project would generate a significant amount of transit ridership, or create a significant impact to intersection levels of service along transit routes. Therefore, the project would not significantly impact transit facilities and transit travel times.

As shown on Figure 2 in Chapter 1, as requested by the Valley Transportation Authority (VTA) the project proposes to provide an additional VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection. The proposed bus stop would provide direct transit access to the project site.

### **Recommendations**

While not required to improve Level of Service or to mitigate impacts related to traffic, it is recommended that the proposed project implement detached sidewalks on Winchester Boulevard and on Shelburne Way along the building frontages, and implement the proposed VTA bus stop along the building frontage on Winchester Boulevard at the Shelburne intersection.

## Site Access and Circulation

This section describes the site access and circulation for the proposed project. This review is based on project site plans prepared by Studio T Square dated August 1, 2016 (see Figure 2).

### **Site Access**

Site access was evaluated to determine the adequacy of site driveways with regards to corner sight distance and traffic volumes. The proposed project would have two full-access driveways, one each on Winchester Boulevard and Shelburne Way. The northern access driveway from Shelburne Way would provide access to an 87-space below-grade parking garage. The Winchester Boulevard access driveway would connect to a 41-space surface parking lot. Both access driveways serve as the entrance and exit to that specific grade-level parking area. Queuing analysis indicates that the Shelburne Way driveway would not be blocked by the westbound traffic queues at the intersection of Winchester Boulevard and Shelburne Way. Therefore, access to the project driveways would be adequate under all analyzed scenarios.

### **Driveway Sight Distance**

The project access points should be free and clear of any obstructions to optimize sight distance, thereby ensuring that exiting vehicles can see pedestrians on the sidewalk and other vehicles traveling on adjacent roadways. Landscaping and parking should not conflict with a driver's ability to locate a gap in traffic and see oncoming pedestrians and bicyclists. Adequate corner sight distance (sight distance triangles) should be provided at all site access points in accordance with the Town's standards. Sight distance triangles should be measured approximately 15 feet back from the traveled way.

Sight distance requirements vary depending on the roadway speeds. The speed limit on Winchester Boulevard and Shelburne Way is 25 mph. The Caltrans recommended stopping sight distance for this roadway is 150 feet.

### **Recommendations**

At both the Winchester Boulevard driveway and the Shelburne Way driveway, on-street parking should be prohibited within 15 feet of the driveway to ensure adequate sight distance.

### **On-Site Circulation**

All driveway and drive-aisle widths are at least 25 feet wide, and comply with the minimum requirements established in the Town of Los Gatos Code of Ordinances Section 29.10.155. All parking stalls within the parking garage are 18 feet in length (16 feet with 2 feet overhang) and 8 feet 6 inches in width, which meet the town's requirements.

The building lobby and entrance is proposed to front Winchester Boulevard. Pedestrians would access the project site through the main lobby and entrance area. Sidewalks are proposed to be installed on Winchester Boulevard and Shelburne Way fronting the project site. The proposed project would provide adequate pedestrian access and circulation.

### **Emergency Vehicles, Truck Access and Circulation**

The site plan proposes a dedicated trash enclosure on Shelburne Way just east of the main access driveway. Trash bins would be picked up from and returned to the dedicated trash enclosure on the day of garbage collection. All driveways and drive-aisles are at least 25 feet wide, which are adequate for emergency vehicle access and circulation.

## Parking

For office use at the project site, the Town of Los Gatos Municipal Code Section 29.10.150 requires parking to be provided at the rate of one parking space per 235 square feet of gross floor area. The project proposes an office building totaling 30,070 square feet, which by code would be required to provide 128 parking spaces. The project site plan provides 128 parking spaces. Therefore, the parking provision as shown on the current project site plans would meet the Town standards.

Per the California Building Code (CBC) Table 11B-208.2, four accessible spaces are required for parking garages with 76 to 100 parking spaces and two accessible spaces are required for parking lots with 26 to 50 parking spaces. Of the required accessible parking spaces, one van accessible space is required. As shown on the site plan, the project would provide six accessible parking spaces, of which four are accessed via the northern driveway on the below-grade level near the elevators, and the remaining two are accessed via the western driveway on the ground floor. The project site plan also labels one of the accessible parking spaces in both the underground garage and the surface parking lot to be van accessible. Therefore, the accessible parking provisions as shown on the current project site plans would meet the CBC requirements.

As discussed above, to ensure adequate sight distance for vehicles turning out of the driveways, Hexagon recommends on-street parking on Winchester Boulevard and Shelburne Way within 15 feet of the driveway be prohibited.

The Town of Los Gatos does not have requirements for bicycle parking spaces. According to VTA's *Bicycle Technical Guidelines*, which is VTA's general guide for local agencies in planning, design and maintenance of bicycle facilities and bicycle-friendly roadways, offices should provide one bicycle parking space per 6,000 s.f. and 75 percent of the bicycle parking spaces should be secured (Class I) spaces. The proposed project is 30,070 s.f. and would be recommended to provide 5 bicycle parking spaces (4 secured bike parking spaces and 1 bike rack.) Comparatively, the California Green Building Code (CGBC) Section 5.106.4 requires short-term bike parking equivalent to 5 percent of the visitor parking spaces and long-term bike parking equivalent to 5 percent of the employee parking spaces. This equates to a total of 6 long-term bicycle parking spaces. The project does not identify specific visitor parking spaces, but the project should provide at least one two-bike capacity rack near the visitor entrance to the building. The proposed project is proposing in its underground garage a secured bike storage room that can hold 36 bicycles. The proposed bicycle storage facility exceeds the recommended secured bike storage quantity by VTA and the CGBC. Based on both the VTA guidelines and CGBC requirements, it is recommended that one two-bike capacity bike rack be provided near the visitor entrance to the building.

The bike storage room will be located next to the driveway and can be accessed from ground level via a set of stairs approximately 30 feet to the north and via elevators approximately 100 feet to the south. Bicyclist access to the bike storage is adequate.

**Winchester Boulevard Office Development**  
**Transportation Impact Analysis**  
**Technical Appendices**

**Appendix A**  
**New Traffic Counts**

## **Appendix B**

### **Town of Los Gatos Approved and Pending Projects**

## **Appendix C**

### **Volume Summary Tables**

## **Appendix D**

### **Intersection Level of Service Calculations**