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# HEXAGON TRANSPORTATION CONSULTANTS, INC.



## San Jose Data Center (SJC04)

### Draft Transportation Analysis

Prepared for:

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## Executive Summary

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This report presents the results of the transportation analysis conducted for a proposed 631,278 square-foot (s.f.) data center located on the northwest corner of Orchard Parkway and Component Drive in North San Jose, California. The approximately 22.29-acre vacant project site is generally bordered by existing industrial development on the north, Orchard Parkway on the east, existing industrial development on the south, and the Guadalupe River and multi-use trail on the west. The project would have access via a right-turn-only driveway on Orchard Parkway, located approximately 100 feet north of Component Drive. Additional emergency vehicle access would be provided between the project site and the existing industrial uses to the north.

The transportation impacts of the project were evaluated following the standards and methodologies established in the City of San Jose's Transportation Analysis Handbook, adopted in April 2020. Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the Transportation Analysis Handbook and in accordance with applicable provisions of the California Environmental Quality Act (CEQA), the Transportation Analysis report for the project includes a CEQA transportation analysis and a non-CEQA Local Transportation Analysis (LTA).

### CEQA Transportation Impacts

#### Project Vehicle Miles Traveled (VMT) Analysis

Per the City's VMT Evaluation Tool, the existing Area VMT for employment uses is 15.49 VMT per employee, which is above the existing regional average threshold of 14.37 VMT per employee. The project VMT estimated by the Evaluation Tool is 15.48 VMT per employee, which also exceeds the industrial threshold of 14.37 VMT per employee. Since the VMT generated by the project would exceed the threshold of significance for industrial employment uses in the area, the project would result in a significant transportation impact on VMT, and mitigation is required to reduce the VMT impact to a less-than-significant level.

#### **Project Mitigation**

The project proposes to limit the on-site parking supply (a Tier 3 VMT reduction measure) to mitigate the significant VMT impact. The project would provide a total of 148 vehicle parking spaces, which is 25 fewer spaces than what the City of San Jose Municipal Code requires. Parking data collected at two existing data centers operating in the City of Santa Clara support the proposed parking reduction. The project plans to request a parking exception from the City of San Jose Planning Department in order to qualify for the parking reduction. These types of parking reductions that are supported by evidence of reduced parking demand are typically approved as they support the City's overall strategy to reduce VMT (e.g., see General Plan Policies TR-8.3, TR-8.4, and TR-8.6 described in Chapter 1). Decreasing



a project's parking supply encourages employees to choose an alternative transportation mode for their commutes, thereby reducing VMT.

Based on the City's VMT Evaluation Tool, limiting the amount of parking provided to serve the Data Center project would lower the project VMT to 14.36 per employee (a reduction of about 7.5%), which would reduce the project impact to a less-than-significant level (below the threshold of 14.37 VMT per employee).

### Cumulative VMT Impact Analysis

The proposed project would be consistent with the development type and intensity provided in the *Envision San Jose 2040 General Plan*, the cumulative effects of which were previously evaluated in the *Envision San Jose 2040 General Plan Environmental Impact Report* and *Supplemental Program Environmental Impact Report*. The project is consistent with the applicable General Plan goals and policies for the following reasons:

- With the issuance of a Site Development Permit/Special Use Permit, the proposed project would be consistent with the current zoning designation: *Combined Industrial Commercial (CIC)*.
- The project would increase the employment density in the project area, and the proposed density would be consistent with the current General Plan Land Use Designation that applies to the project site.
- The project would be consistent with adopted plans and policies for planned pedestrian and bicycle facilities. The project would provide improvements to pedestrian and bicycle connectivity and safety in the vicinity of the project site by constructing a Class I Bikeway trail extension between the Guadalupe River Trail and Orchard Parkway. The trail connection is identified in the City of San Jose Better Bike Plan 2025.

Based on the project description, the proposed project would be consistent with the *Envision San Jose 2040 General Plan* and would not require a General Plan Amendment (GPA). The project including its proposed improvements would be considered part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

## Local Transportation Effects

### Project Trip Generation

After applying the ITE trip rates to the proposed project and applying the appropriate trip adjustments and reductions, it is estimated that the project would generate 532 new daily vehicle trips, with 59 new trips (32 inbound and 27 outbound) occurring during the AM peak hour and 49 new trips (15 inbound and 34 outbound) occurring during the PM peak hour.

### Intersection Traffic Operations

The results of the intersection level of service analysis show that the signalized study intersections are currently operating at acceptable levels of service (LOS D or better) during the AM and PM peak hours of traffic and would continue to operate acceptably under background and background plus project conditions.

### Other Transportation Items

The proposed site plan shows adequate site access and on-site circulation for automobiles, trucks, bicycles and pedestrians. However, the location of the project driveway on Orchard Parkway (100 feet north of Component Drive) could make it difficult for exiting vehicles to cross the two southbound lanes and enter the 150-foot-long southbound left-turn pocket on Orchard Parkway at Component Drive.

Accordingly, the project driveway should be located as far north as possible to provide optimal access to the southbound left-turn pocket on Orchard Parkway at Component Drive.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. Note, however, that the City of San Jose Better Bike Plan 2025 identifies Orchard Parkway as having a Class IV separated bikeway. Accordingly, City staff will require that the project make a fair-share monetary contribution toward the planned Class IV bikeway improvements along the project frontage on Orchard Parkway. Based on a cost of \$144 per linear foot (source: City of San Jose Department of Public Works), the project's total fair-share contribution would equate to approximately \$50,400 ( $\$144 \times 350 \text{ feet of frontage} = \$50,400$ ).

The project would construct a Class I Bikeway trail extension along the southern boundary of the site. The trail connection is identified in the City of San Jose Better Bike Plan 2025 and would create a paved link between the Guadalupe River Trail and the intersection of Orchard Parkway and Component Drive. The Class I Bikeway trail will be predominantly on land owned by the project applicant. However, in order for the trail to interconnect to the Guadalupe River Trail, the trail must cross the land owned and managed by the Santa Clara Valley Water District (Valley Water). While the project applicant will fund and construct the portion of the trail over which it controls, the funding, permitting, authorization and construction of the portion on Valley Water land will need to be performed by Valley Water pursuant to authorization from those agencies with the appropriate permit jurisdiction.

# 1. Introduction

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This report presents the results of the transportation analysis conducted for a proposed 631,278 square-foot (s.f.) data center located on the northwest corner of Orchard Parkway and Component Drive in North San Jose, California (see Figure 1). The approximately 22.29-acre vacant project site is generally bordered by existing industrial development on the north, Orchard Parkway on the east, existing industrial development on the south, and the Guadalupe River and multi-use trail on the west. The project would have access via a right-turn-only driveway on Orchard Parkway, located approximately 100 feet north of Component Drive. Additional emergency vehicle access would be provided between the project site and the existing industrial uses to the north. The site plan is shown on Figure 2.

The transportation impacts of the project were evaluated following the standards and methodologies established in the City of San Jose's Transportation Analysis Handbook, adopted in April 2020. Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the Transportation Analysis Handbook and in accordance with applicable provisions of the California Environmental Quality Act (CEQA), the Transportation Analysis report for the project includes a CEQA transportation analysis and a non-CEQA Local Transportation Analysis (LTA).

## Transportation Policies

To align the City of San Jose's transportation analysis guidelines with State of California Senate Bill 743 (SB 743), as reflected in the updated CEQA Guidelines, and the City's goals as set forth in the Envision San Jose 2040 General Plan, the City of San Jose adopted Transportation Analysis Policy 5-1. The Policy establishes the thresholds for transportation impacts under CEQA based on vehicle-miles-traveled (VMT) instead of intersection level of service (LOS).

The Transportation Analysis Policy aligns with the Envision San Jose 2040 General Plan which seeks to focus new development growth within Planned Growth Areas, bringing together office, residential, and service land uses to internalize trips and reduce VMT. VMT-based policies support dense, mixed-use, infill projects as established in the General Plan's Planned Growth Areas. The Envision San Jose 2040 General Plan contains the following policies to encourage the use of non-automobile transportation modes to minimize vehicle trip generation and reduce VMT:

- Accommodate and encourage the use of non-automobile transportation modes to achieve San Jose's mobility goals and reduce vehicle trip generation and VMT (TR-1.1);
- Consider impacts on overall mobility and all travel modes when evaluating transportation impacts of new developments or infrastructure projects (TR-1.2);
- Increase substantially the proportion of commute travel using modes other than the single-occupant vehicle in order to meet the City's mode split targets for San Jose residents and workers (TR-1.3);

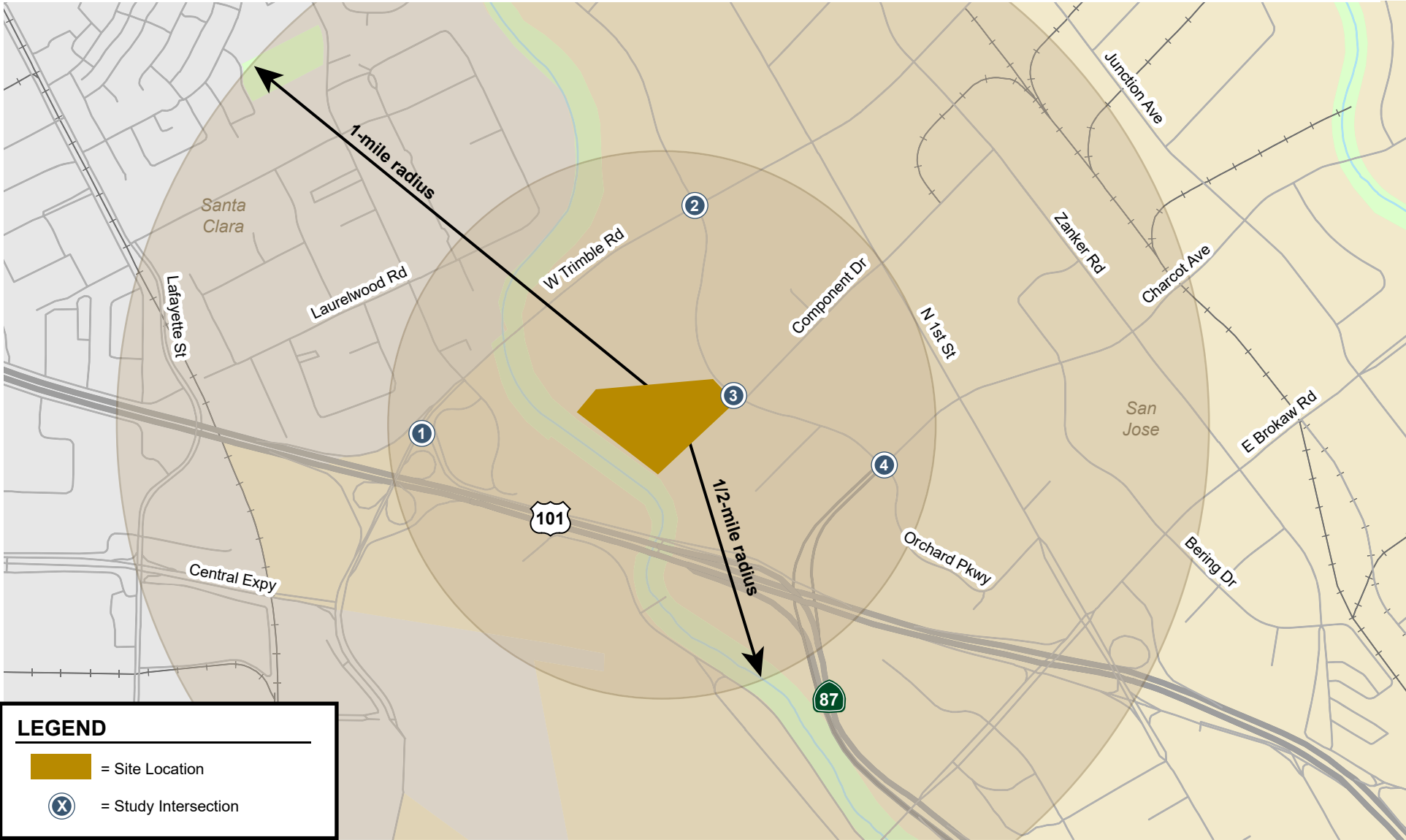


Figure 1  
Site Location and Study Intersections

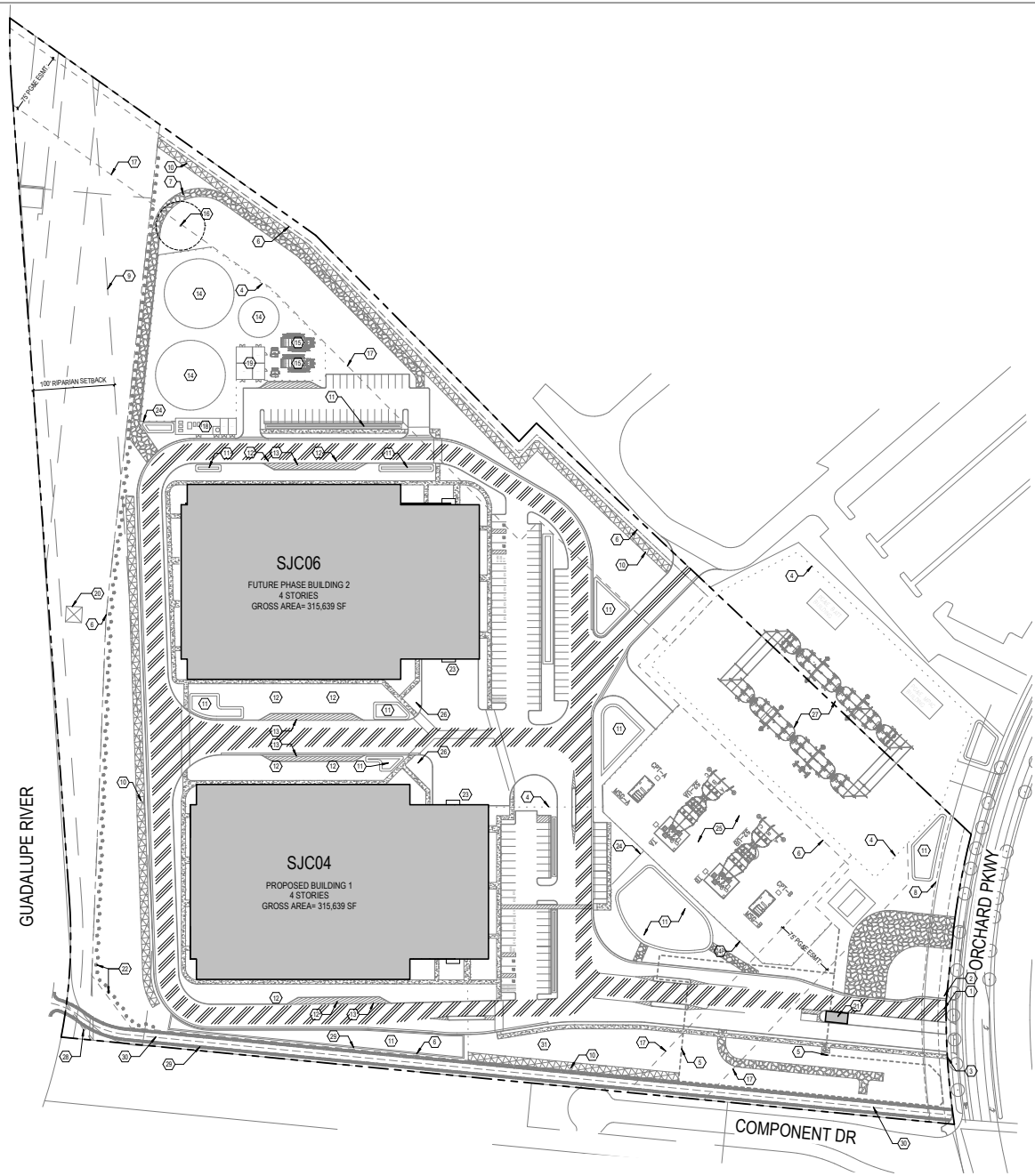


Figure 2  
Site Plan

- Through the entitlement process for new development, projects shall be required to fund or construct needed transportation improvements for all transportation modes, giving first consideration to improvement of bicycling, walking and transit facilities and services that encourage reduced vehicle travel demand (TR-1.4);
- Actively coordinate with regional transportation, land use planning, and transit agencies to develop a transportation network with complementary land uses that encourage travel by bicycling, walking and transit, and ensure that regional greenhouse gas emissions standards are met (TR-1.8);
- Coordinate the planning and implementation of citywide bicycle and pedestrian facilities and supporting infrastructure. Give priority to bicycle and pedestrian safety and access improvements at street crossings and near areas with higher pedestrian concentrations (school, transit, shopping, hospital, and mixed-use areas) (TR-2.1);
- Provide a continuous pedestrian and bicycle system to enhance connectivity throughout the City by completing missing segments. Eliminate or minimize physical obstacles and barriers that impede pedestrian and bicycle movement on City streets. Include consideration of grade-separated crossings at railroad tracks and freeways. Provide safe bicycle and pedestrian connections to all facilities regularly accessed by the public, including the Mineta San Jose International Airport (TR-2.2);
- Integrate the financing, design and construction of pedestrian and bicycle facilities with street projects. Build pedestrian and bicycle improvements at the same time as improvements for vehicular circulation (TR-2.5);
- Require new development where feasible to provide on-site facilities such as bicycle storage and showers, provide connections to existing and planned facilities, dedicate land to expand existing facilities or provide new facilities such as sidewalks and/or bicycle lanes/paths, or share in the cost of improvements (TR-2.8);
- As part of the development review process, require that new development along existing and planned transit facilities consist of land use and development types and intensities that contribute towards transit ridership, and require that new development is designed to accommodate and provide direct access to transit facilities (TR-3.3);
- Support the development of amenities and land use and development types and intensities that increase daily ridership on the VTA, BART, Caltrain, ACE and Amtrak California systems and provide positive fiscal, economic, and environmental benefits to the community (TR-4.1);
- Promote transit-oriented development with reduced parking requirements and promote amenities around appropriate transit hubs and stations to facilitate the use of available transit services (TR-8.1);
- Support using parking supply limitations and pricing as strategies to encourage the use of non-automobile modes (TR-8.3);
- Discourage, as part of the entitlement process, the provision of parking spaces significantly above the number of spaces required by code for a given use (TR-8.4);
- Allow reduced parking requirements for mixed-use developments and for developments providing shared parking or a comprehensive transportation demand management (TDM) program, or developments located near major transit hubs or within Urban Villages and other Growth Areas (TR-8.6);



- Within new development, create and maintain a pedestrian-friendly environment by connecting the internal components with safe, convenient, accessible, and pleasant pedestrian facilities and by requiring pedestrian connections between building entrances, other site features, and adjacent public streets (CD-3.3);
- Create a pedestrian-friendly environment by connecting new residential development with safe, convenient, accessible, and pleasant pedestrian facilities. Provide such connections between new development, its adjoining neighborhood, transit access points, schools, parks, and nearby commercial areas (LU-9.1); and
- Facilitate the development of housing close to jobs to provide residents with the opportunity to live and work in the same community (LU-10.5).

## CEQA Transportation Analysis Scope

The CEQA Transportation Analysis includes an evaluation of VMT.

### VMT Analysis

The City of San Jose's Transportation Analysis Policy (Policy 5-1) establishes procedures for determining project impacts on VMT based on project description, characteristics, and/or location. The City of San Jose defines VMT as the total miles of travel by personal motorized vehicles a project is expected to generate in a day. VMT is calculated for residential, office, and industrial projects using the Origin-Destination VMT method, which measures the full distance of personal motorized vehicle-trips with one end within the project.

A project's VMT is compared to the appropriate thresholds of significance based on the project location and type of development. When assessing a residential project, the project's VMT is divided by the number of residents expected to occupy the project to determine the VMT per capita. When assessing an office or industrial project, the project's VMT is divided by the number of employees to determine VMT per worker. The thresholds of significance for development projects, as established in the Transportation Analysis Policy, are based on the existing citywide average VMT level for residential uses and the existing regional average VMT level for employment uses.

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and industrial projects with local traffic. The tool estimates a project's VMT and compares it to the appropriate thresholds of significance based on the project location (i.e., assessor's parcel number) and type of development.

The San Jose VMT Evaluation Tool does not provide specific guidance for evaluating VMT for the data center land use. As noted above, the Evaluation Tool only includes three broad categories of uses: residential, office, and industrial. For the purpose of the VMT evaluation, it has been determined that the proposed data center should be treated as industrial. The basis for this determination is due to the fact that the employment associated with a data center is significantly less than that of office space because much of the data center space is used to house computer equipment. Data centers are essentially warehouses that store customer data and associated ancillary operations and have a small number of employees and visitors. Although the proposed data center would incorporate some office space (19,606 s.f.), the vast majority of the data center square footage (611,672 s.f. of the 631,278 s.f. total, or approximately 97%) would operate more like industrial warehouse space and, therefore, industrial is the most accurate land use category to select for the San Jose VMT Evaluation Tool. Based on this approach, the data center trips were converted to an equivalent amount of industrial space and analyzed for VMT impacts using the evaluation tool (see Chapter 3).

### **Screening Criteria for VMT Analysis Exemption**

The City of San Jose's *Transportation Analysis Handbook, 2018* includes screening criteria for projects that are expected to result in a less-than-significant VMT impact based on the project description, characteristics and/or location. The screening criterion set forth in the *Transportation Analysis Handbook* for small infill industrial projects is described below.

#### **Screening Criterion for Small Infill Industrial Projects**

- 30,000 square feet of total gross floor area or less

The project is proposing to construct a 631,278 s.f. data center, which is equivalent to 128,337 s.f. of industrial space in terms of trip generation (see Table 3 in Chapter 3 for the land use conversion). Therefore, the project does not meet the screening criterion for small infill industrial projects.

Figure 3 shows the current VMT levels estimated by the City for workers based on the locations of industrial jobs. Developments in the green-colored areas are estimated to have VMT levels that are below the thresholds of significance, developments in the yellow-colored areas have typical City average VMT, while the orange- and pink-colored areas are estimated to have VMT levels that are above the thresholds of significance. Orange areas are deemed to be capable of being mitigated, whereas pink areas are considered incapable of being mitigated to a less than significant level. The project site is identified as being located in an orange area.

### **Local Transportation Analysis Scope**

The non-CEQA Local Transportation Analysis (LTA) supplements the VMT analysis by identifying potential adverse operational effects that may arise due to a new development, as well as evaluating the effects of a new development on site access, circulation, and other safety-related elements in the proximate area of the project. As part of the LTA, a project is generally required to conduct an intersection operations analysis if the project is expected to add 10 or more vehicle trips per hour per lane to any signalized intersection that is located within a half-mile of the project site, or is located within one mile of the project site and is currently operating at LOS D or worse. Based on these criteria, as outlined in the City's *Transportation Analysis Handbook*, a list of study intersections is then developed for the LTA. Note, however, that signalized intersections that do not meet all the criteria may still be added to the list of study intersections at the City's discretion. Unsignalized intersections may also be added; though, unlike signalized intersections, unsignalized intersections typically are not evaluated for level of service (San Jose has not established a level of service standard for unsignalized intersections). The City of San Jose Department of Public Works ultimately determines the list of study intersections.

For purposes of the project's LTA, it comprises an analysis of AM and PM peak hour traffic conditions for the following four intersections:

1. US 101 Northbound Off-Ramp and Trimble Road
2. Orchard Parkway and Trimble Road
3. Orchard Parkway and Component Drive
4. Orchard Parkway and Charcot Avenue

The list of study intersections was approved by City of San Jose staff. Traffic conditions at the study intersections were analyzed for both the weekday AM and PM peak hours of adjacent street traffic. The AM peak hour typically occurs between 7:00 AM and 9:00 AM and the PM peak hour typically occurs between 4:00 PM and 6:00 PM on a regular weekday. These are the peak commute hours during which most traffic congestion occurs on the roadways.



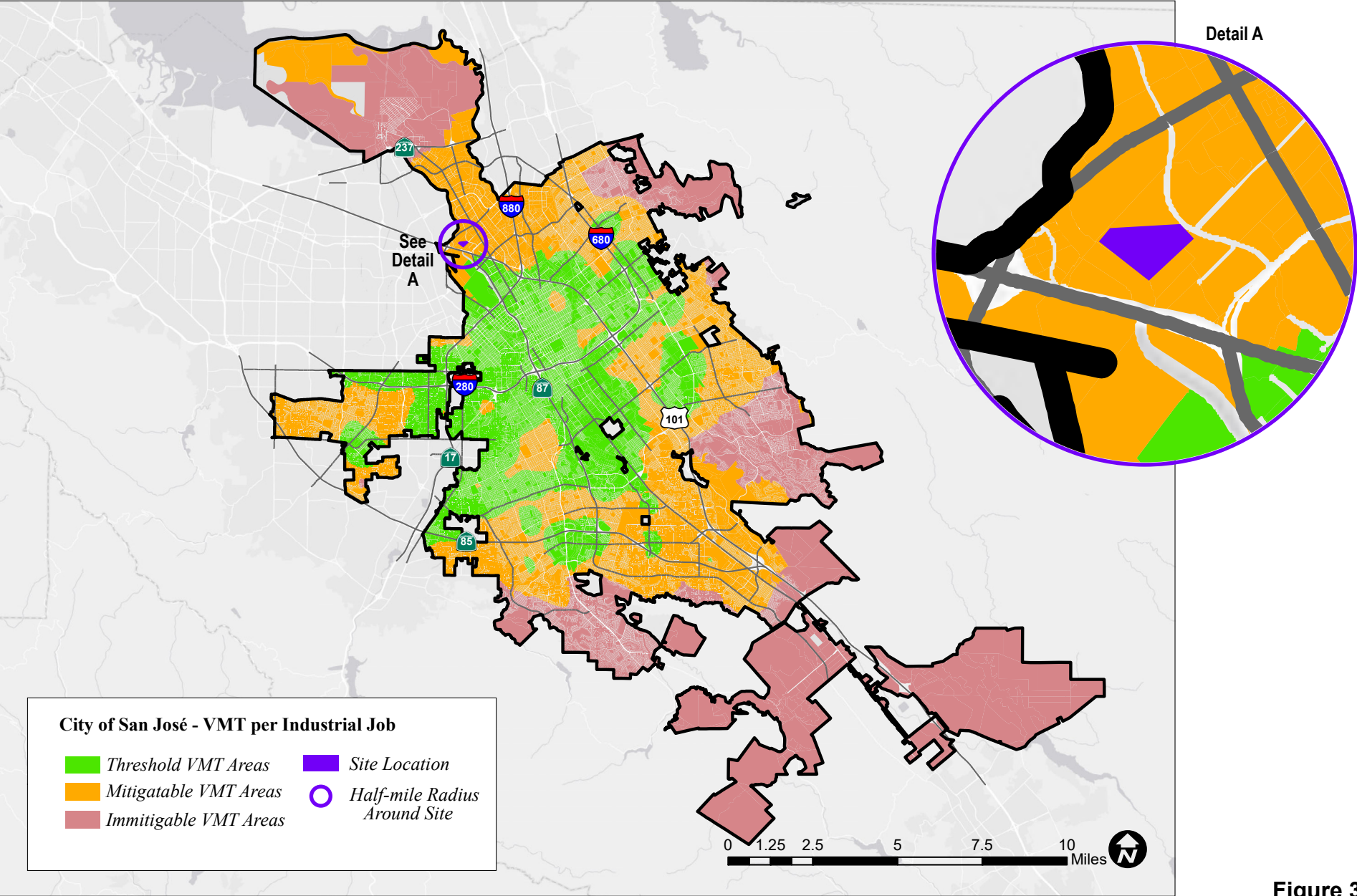


Figure 3  
VMT Heat Map for Industrial Workers in San Jose

Traffic conditions for the project's LTA were evaluated for the following scenarios: existing conditions, background conditions, and background plus project conditions. Traffic volumes for all scenarios are tabulated in Appendix A. The traffic scenarios are described in detail below.

- **Existing Conditions.** Existing AM and PM peak hour traffic volumes for the study intersections were obtained from historical count data (2016 and 2017 counts) provided by the City of San Jose. Note that although new 2022 traffic counts were collected, the current traffic volumes in the study area have not yet returned to pre-pandemic levels, so the new counts were not used.
- **Background Conditions.** Background traffic volumes reflect traffic added by nearby approved projects that are not yet completed or occupied. The added traffic from approved but not yet completed or occupied developments was provided by the City of San Jose in the form of the Approved Trips Inventory (ATI). Background conditions represent the baseline conditions to which project conditions are compared for the purpose of determining potential adverse operational effects of the project. The ATI sheets are contained in Appendix B.
- **Background Plus Project Conditions.** Background plus project conditions reflect projected traffic volumes on the planned roadway network with completion of the project and approved developments that are not yet completed or occupied. Background plus project traffic volumes were estimated by adding to background traffic volumes the additional traffic generated by the project.

The LTA also includes a vehicle queuing analysis, an evaluation of potential adverse effects on bicycle, pedestrian, and transit facilities, and a review of site access, on-site circulation, and parking.

## VMT Analysis Methodology

### Methodology

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and industrial projects with local traffic. Accordingly, the City's VMT Evaluation Tool was used for this VMT analysis; it calculates VMT and compares it to the appropriate thresholds of significance based on the project location and type of development.

Based on the assessor's parcel number (APN) of a project, the VMT Evaluation Tool identifies the existing average VMT per capita and VMT per employee for the area. Based on the project location, type of development, project description, and proposed trip reduction measures, the evaluation tool calculates the project VMT. Projects located in areas where the existing VMT is above the established threshold are referred to as being in "high-VMT areas". Projects in high-VMT areas are required to include a set of VMT reduction measures that would reduce the project VMT to the extent possible.

The VMT Evaluation Tool evaluates a list of selected VMT reduction measures that can be applied to a project to reduce the project VMT. There are four strategy tiers whose effects on VMT can be calculated with the Evaluation Tool:

1. Project characteristics (e.g., density, diversity of uses, design, and affordability of housing) that encourage walking, biking and transit uses;
2. Multimodal network improvements that increase accessibility for transit users, bicyclists, and pedestrians;
3. Parking measures that discourage personal motorized vehicle-trips; and
4. Transportation Demand Management (TDM) measures that provide incentives and services to encourage alternatives to personal motorized vehicle-trips.

The first three strategies – land use characteristics, multimodal network improvements, and parking – are physical design strategies that can be incorporated into the project design. TDM includes programmatic measures that aim to reduce VMT by decreasing personal motorized vehicle mode share and by encouraging more walking, biking, and riding transit. TDM measures are typically enforced through annual trip monitoring to assess the project's status in meeting the VMT reduction goals.

### Thresholds of Significance

Table 1 shows the VMT thresholds of significance for development projects, as established in the City's Transportation Analysis Policy. The VMT impact threshold is the regional average for industrial employment uses. Thus, projects that include industrial employment uses (such as the proposed project) are said to create a significant adverse impact when the estimated project-generated VMT exceeds the existing regional average VMT, which is 14.37 VMT per employee (significant impact threshold). Projects that trigger a significant VMT impact can assess a variety of the four strategies described above to reduce the impact. A significant impact is said to be satisfactorily mitigated when the strategies and VMT reductions implemented render the VMT impact less than significant.

**Table 1**  
**VMT Thresholds of Significance for Development Projects**

Project Types	Significance Criteria	Current Level	Threshold
<b>Residential Uses</b>	Project VMT per capita exceeds existing citywide average VMT per capita minus 15 percent, <u>or</u> existing regional average VMT per capita minus 15 percent, whichever is lower.	11.91  VMT per capita (Citywide Average)	10.12  VMT per capita
<b>General Employment Uses</b>	Project VMT per employee exceeds existing regional average VMT per employee minus 15 percent.	14.37  VMT per employee (Regional Average)	12.21  VMT per employee
<b>Industrial Employment Uses</b>	Project VMT per employee exceeds existing regional average VMT per employee.	14.37  VMT per employee (Regional Average)	14.37  VMT per employee
<b>Retail / Hotel / School Uses</b>	Net increase in existing regional total VMT.	Regional Total VMT	Net Increase
<b>Public / Quasi-Public Uses</b>	In accordance with most appropriate type(s) as determined by Public Works Director.	Appropriate levels listed above	Appropriate thresholds listed above
<b>Mixed-Uses</b>	Evaluate each land use component of a mixed-use project independently, and apply the threshold of significance for each land use type included.	Appropriate levels listed above	Appropriate thresholds listed above
<b>Change of Use / Additions to Existing Development</b>	Evaluate the full site with the change of use or additions to existing development, and apply the threshold of significance for each project type included.	Appropriate levels listed above	Appropriate thresholds listed above
<b>Area Plans</b>	Evaluate each land use component of the Area Plan independently, and apply the threshold of significance for each land use type included.	Appropriate levels listed above	Appropriate thresholds listed above

Source: City of San Jose, 2018 *Transportation Analysis Handbook*, Table 2.

## Intersection Operations Analysis Methodology

This section presents the methods used to determine the traffic conditions at the study intersections and the potential adverse operational effects due to the project. It includes descriptions of the data requirements, the analysis methodologies, the applicable intersection level of service standards, and the criteria used to determine adverse effects on intersection operations. The study intersections are located within the City of San Jose and were evaluated according to the City of San Jose level of service (LOS) standards.

### Data Requirements

The data required for the analysis were obtained from the City of San Jose and field observations. The following data were collected from these sources:

- existing traffic volumes (2016 and 2017 intersection counts)
- trips from approved projects
- existing lane configurations
- signal timing and phasing

### Level of Service Standards and Analysis Methodologies

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.

#### City of San Jose Signalized Intersections

The City of San Jose level of service 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 intersection operations on the basis of average control delay time for all vehicles at the intersection. The City of San Jose level of service standard for the City's signalized intersections and CMP intersections is LOS D or better. The correlation between average control delay and level of service is shown in Table 2.

### Adverse Intersection Operations Effects

According to the City of San Jose's *Transportation Analysis Handbook, 2018*, an adverse effect on signalized intersection operations would occur if for either peak hour:

1. The level of service at the intersection degrades from an acceptable level (LOS D or better) under background conditions to an unacceptable level under background plus project conditions, or
2. The level of service at the intersection is an unacceptable level (LOS E or F) under background conditions and the addition of project trips cause both the critical-movement delay at the intersection to increase by four (4) or more seconds *and* the volume-to-capacity ratio (V/C) to increase by one percent (.01) or more.

The exception to this threshold is when the addition of project traffic reduces the amount of average control delay for critical movements, i.e., the change in average control delay for critical movements is negative. In this case, the threshold is when the project increases the critical v/c value by 0.01 or more.

Adverse effects at signalized intersections can be addressed by one of the following approaches:

- Construct improvements to the subject intersection or other roadway segments of the citywide transportation system to increase overall capacity, or
- Reduce project-generated vehicle trips (e.g., implement a “trip cap”) to eliminate the adverse operational effects and restore intersection operations to background conditions. The extent of trip reduction should be set at a level that is realistically attainable through proven methods of reducing trips.

**Table 2**  
**Signalized Intersection Level of Service Definitions Based on Average Control Delay**

Level of Service	Description	Average Control Delay Per Vehicle (sec.)
<b>A</b>	Operations with very low delay occurring with favorable progression and/or short cycle lengths.	up to 10.0
<b>B</b>	Operations with low delay occurring with good progression and/or short cycle lengths.	10.1 to 20.0
<b>C</b>	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.1 to 35.0
<b>D</b>	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.1 to 55.0
<b>E</b>	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.1 to 80.0
<b>F</b>	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	Greater than 80.0

Source: Transportation Research Board, *2010 Highway Capacity Manual*, (Washington, D.C., 2010).

## Intersection Vehicle Queuing Analysis

The analysis of intersection operations was supplemented with a vehicle queuing analysis at study intersections where the project would add a noteworthy number of trips to the left-turn movements. The queuing analysis is presented for informational purposes only, since the City of San Jose has not defined a policy related to queuing. 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 # of vehicles in the queue per lane (vehicles per hr. per lane/signal cycles per hr.)



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 per signal cycle 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.

For signalized intersections, the 95<sup>th</sup> percentile queue length value indicates that during the peak hour, a queue of this length or less would occur on 95 percent of the signal cycles. Or, a queue length larger than the 95<sup>th</sup> percentile queue would only occur on 5 percent of the signal cycles (about 3 cycles during the peak hour for a signal with a 60-second cycle length). Therefore, left-turn pocket storage designs based on the 95<sup>th</sup> percentile queue length would ensure that storage space would be exceeded only 5 percent of the time for a signalized movement.

## Report Organization

This report has a total of five chapters. Chapter 2 describes the existing roadway network, transit service, bicycle, and pedestrian facilities. Chapter 3 describes the VMT analysis. Chapter 4 describes the local transportation analysis (LTA) including the method by which project traffic is estimated, intersection operations analysis for background plus project conditions, any adverse intersection operations effects caused by the project, intersection vehicle queuing analysis, site access and on-site circulation review, effects on bicycle, pedestrian, and transit facilities, and parking. Chapter 5 presents the conclusions of the transportation analysis.

## 2. Existing Conditions

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This chapter describes the existing conditions of the transportation system within the study area of the project. It presents the VMT of the existing land uses in the proximity of the project and describes transportation facilities in the vicinity of the project site, including the roadway network, transit service, and pedestrian and bicycle facilities. The analysis of existing intersection operations is included as part of the LTA (see Chapter 4).

### VMT of Existing Land Uses

To determine whether a project would result in CEQA transportation impacts related to VMT, the City has developed the San Jose VMT Evaluation Tool to streamline the analysis for residential, office, and industrial projects. Based on the Evaluation Tool and the project's APN, the existing area VMT for employment uses in the project vicinity is 15.49 VMT per worker. The current regional average VMT for employment uses is 14.37 VMT per worker (see Table 1 in Chapter 1). Thus, the VMT levels of existing employment uses in the project area are higher than the regional average VMT levels. The VMT Evaluation Tool summary report for the project is included in Chapter 3.

### Existing Roadway Network

Regional access to the project site is provided via US 101 and SR 87. Local access to the project site is provided via N. First Street, Trimble Road, Orchard Parkway, Component Drive, and Charcot Avenue.

**US 101** is a north/south freeway with six mixed-flow lanes and two high-occupancy-vehicle (HOV) lanes through most of Santa Clara and San Jose. US 101 extends northward through San Francisco and southward through Gilroy. Access to and from the site is provided via interchanges at Trimble Road and North First Street.

**SR 87** is a north-south freeway providing regional access to the project site via its connections to SR 85 and US 101 in the south, and I-280 and US 101 in the north. These facilities allow for regional access from East Bay and Peninsula cities, as well as Gilroy and Morgan Hill to San Jose. SR 87 is six to eight lanes wide, including two HOV lanes (one in each direction). SR 87 provides access to and from the project site where it terminates at Orchard Parkway and becomes Charcot Avenue.

**North First Street** is a two- to four-lane divided local connector street with a raised center median, upon which the Light Rail Transit line operates. South First Street begins at Alma Avenue as a transition from Monterey Road and extends northward where it turns into North First Street at Santa Clara Street. North First Street extends into North San Jose where it terminates at Gold Street north of

SR 237. North First Street has sidewalks and striped bike lanes on both sides of the street and has a posted speed limit of 45 mph. North First Street provides access to US 101 and intersects Charcot Avenue, Component Drive, and Trimble Road near the project site.

**Trimble Road** is a six-lane arterial extending southwestward from Montague Expressway to US 101. West of US 101, Trimble Road transitions to De La Cruz Boulevard into the City of Santa Clara. Access to the project site is provided via its intersection with Orchard Parkway. Trimble Road has sidewalks and striped bike lanes on both sides of the street and has a posted speed limit of 45 mph.

**Orchard Parkway** is two-lane north-south roadway that begins at North First Street just south of Tasman Drive and extends south to Charcot Avenue, where it transitions to O'Nel Drive. Direct access to the project site is provided via a right-in/right-out driveway on Orchard Parkway just north of Component Drive. Orchard Parkway has sidewalks and striped bike lanes on both sides of the street and has a posted speed limit of 35 mph.

**Component Drive** is a short two- to four-lane roadway that extends from Orchard Parkway to Zanker Road. Component Drive has sidewalks on both sides of the street; however, the sidewalk along the north side of the street is sporadic.

**Charcot Avenue** is a two- to four-lane roadway that begins at Orchard Parkway where SR 87 terminates/begins. Charcot Avenue runs eastward to O'Toole Avenue, just west of I-880, where it terminates. West of North First Street, Charcot Avenue is a four-lane roadway that provides access to the project site via its intersection with Orchard Parkway. Charcot Avenue has sidewalks and striped bike lanes on both sides of the street and has a posted speed limit of 35 mph.

## Existing Intersection Lane Configurations

The existing lane configurations at the study intersections are shown on Figure 4.

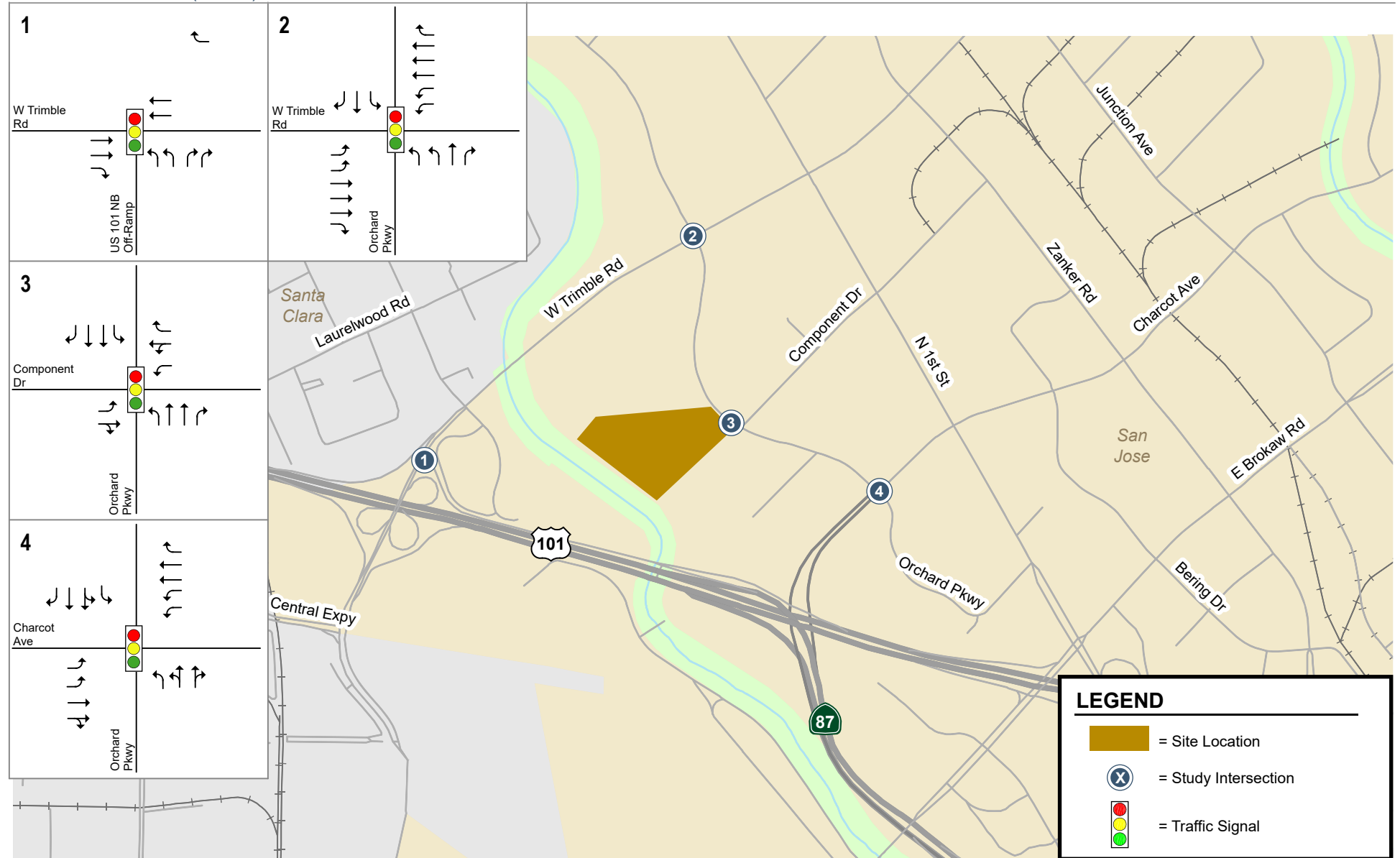
## Existing Pedestrian and Bicycle Facilities

There are bike paths and several roadways with striped bike lanes in the vicinity of the project site (see Figure 5). Bicycle facilities are divided into four classes of relative significance. Class I bikeways are bike paths that are physically separated from motor vehicles and offer two-way bicycle travel on a separate path. Class II bikeways are striped bike lanes on roadways that are marked by signage and pavement markings. Class III bikeways are bike routes and only have signs and/or Sharrows (shared lane markings) to help guide bicyclists on recommended routes to certain locations. Class IV bikeways are on-street bicycle facilities that incorporate physical barriers (e.g., raised curbs, flexible bollards, vehicle parking, grade separation, etc.) to separate bicycles from the flow of vehicular traffic. There are no Class IV bikeways in the project vicinity. Class II striped bike lanes are provided on the following roadways:

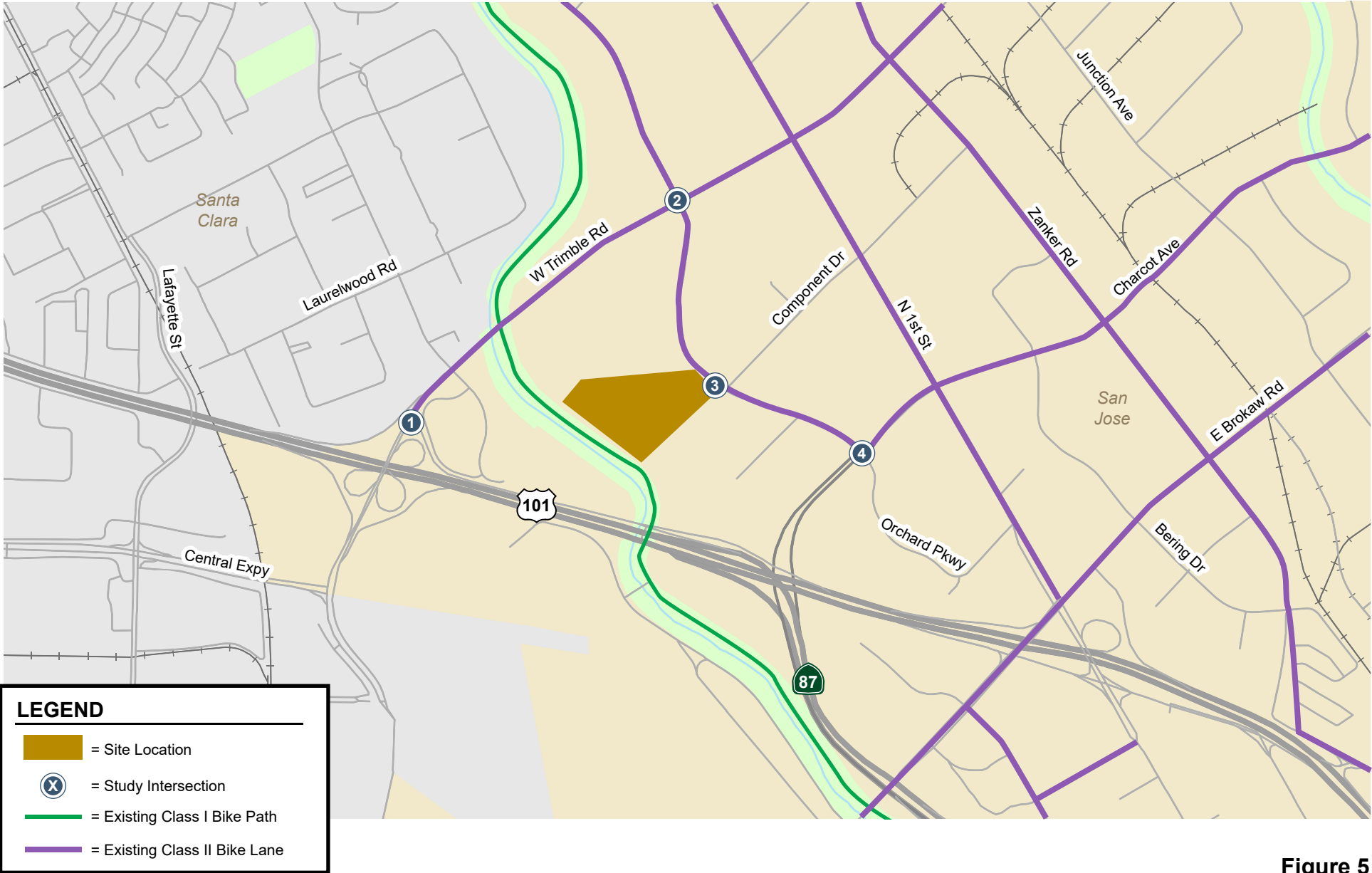
- North First Street - Between Brokaw Road and Alviso
- Trimble Road - Between Seaboard Avenue (just east of US 101) and Montague Expressway
- Orchard Parkway - Along its entirety between Charcot Avenue and North First Street
- Charcot Avenue - Between Orchard Parkway and Zanker Road

The Guadalupe River/Los Alamitos Creek multi-use trail system (Class I bikeway) runs through the City of San Jose along the Guadalupe River and separates bicyclists from motor vehicle traffic. The Guadalupe River trail is continuous from W. Virginia Street in the south to Alviso Marina County Park. There is another section of the trail a few blocks south of W. Virginia Street from Willow Street to Curtner Avenue, which provides access to trails that lead to Almaden Valley in southern San Jose. This shared trail system runs adjacent to SR 87 near the project vicinity, with trail access provided via Trimble Road. The trail system is available for use by pedestrians and bicyclists year round.





**Figure 4**  
**Existing Lane Configurations**



**Figure 5**  
**Existing Bicycle Facilities**

All the roadways in the study area have sidewalks on both sides of the street; however, there are a few short segments along the north side of Component Drive that are missing sidewalks. Overall, the existing network of sidewalks provides adequate connectivity for pedestrians between the project site and other surrounding land uses and transit stops. Crosswalks with pedestrian signal heads and push buttons are located at all the signalized intersections in the study area. Curb ramps are provided at all signalized intersections in the study area, although some do not meet current ADA design standards. The curb ramps at the following intersections near the project site (within approximately ½ mile of the site) do not meet current ADA standards:

- Orchard Parkway and Charcot Avenue – SW and SE corners of the intersection;
- North First Street and Component Drive – all 4 corners of the intersection; and
- North First Street and Charcot Avenue – all 4 corners of the intersection.

## Existing Transit Service

Existing transit service to the study area is provided by the Valley Transportation Authority (VTA). The VTA currently operates the 42.2-mile light rail line system extending from south San Jose through downtown to the northern areas of San Jose, Santa Clara, Milpitas, Mountain View and Sunnyvale. The service operates nearly 24 hours a day with 15-minute headways during much of the day. The Component LRT station is located at the North First Street and Component Drive intersection, just under ½ mile walk from the project site. The Component station is served by the Santa Teresa-Baypointe LRT Line (Blue Line) and the Winchester-Old Ironsides Line (Green Line).

The project site is not well-served by VTA buses. The nearest bus route (Route 60) operates along Brokaw Road, approximately one mile southeast of the project site. Route 60 provides service between the Milpitas BART station and the Winchester Station, with 15-minute headways during the weekday peak commute hours.

The VTA transit services in the project area are shown on Figure 6.

## Observed Existing Traffic Conditions

Due the current COVID-19 pandemic situation, traffic volumes are generally lower than during “normal” conditions. However, it is still valuable to observe traffic conditions in the field to identify any existing operational deficiencies. Accordingly, traffic conditions in the study area were observed during the weekday AM (7:00-9:00 AM) and PM (4:00-6:00 PM) peak traffic periods.

Based on the field observations, the study intersections operated adequately during both the weekday AM and PM peak hours of traffic, and no noteworthy operational issues were observed.



Figure 6  
Existing Transit Services

### 3.

## CEQA Transportation Analysis

This chapter describes the CEQA transportation analysis, including the VMT threshold of significance, the project-level VMT impact analysis results, mitigation to reduce a VMT impact, and the cumulative transportation impact analysis used to determine consistency with the City's General Plan.

### Project Level VMT Analysis

An evaluation of VMT per the City of San Jose's guidelines for transportation impact analysis was completed using the City's VMT Evaluation Tool. Based on the project location, type of development, project description, and proposed trip reduction measures, the VMT tool calculates VMT. However, the City's VMT Evaluation Tool is limited to the evaluation of the general land use categories of residential, office, and industrial. Therefore, the use of the VMT tool for land uses that are not reflective of one of the three land use types, such as the data center, requires the conversion of the proposed land use to an equivalent number of residential units, office space, or industrial space.

For the purpose of the VMT evaluation, it has been determined that the proposed data center should be treated as industrial. The basis for this determination is due to the fact that the employment associated with a data center is significantly less than that of office space since much of the data center space is used to house computer equipment. Data centers are essentially warehouses that store customer data and associated ancillary operations and have a small number of employees and visitors. Although the proposed data center would incorporate some office space (19,606 s.f.), the vast majority of the data center square footage (611,672 s.f. of the 631,278 s.f. total, or approximately 97%) would operate more like industrial warehouse space and, therefore, industrial is the most accurate land use category to select for the San Jose VMT Evaluation Tool. Based on this approach, the data center trips were converted to an equivalent amount of industrial space (see Table 3), and the project was analyzed for VMT impacts using the evaluation tool.

**Table 3**  
**Daily Trip Conversion from Data Center Trips to General Light Industrial Trips**

Land Use	ITE Land Use Code	Size	Daily	
			Rate	Trip
Data Center	160	631,278 Square Feet	0.99	625
General Light Industrial	110	<b>Equivalent Industrial Space<sup>1</sup> = 128,337 Square Feet</b>	4.87	625

Source: ITE Trip Generation Manual, 11<sup>th</sup> Edition 2021

<sup>1</sup>The VMT Evaluation Tool does not provide for the evaluation of VMT for a Data Center use. Therefore, the proposed project trips were converted to equivalent General Light Industrial space and evaluated as an Industrial land use in the tool.

As shown in Table 3, the equivalent industrial square footage for the proposed data center is 128,337 square feet. Based on the City's CEQA VMT Analysis screening criteria for development projects, the project would not meet the screening criteria for VMT analysis exemption because it is not equivalent to 30,000 gross square feet or less and, thus, does not qualify as a small infill industrial project.

### Project VMT Impact Analysis Results

Per the City's VMT Evaluation Tool, the existing Area VMT for employment uses is 15.49 VMT per employee, which is above the existing regional average threshold of 14.37 VMT per employee. The project VMT estimated by the Evaluation Tool is 15.48 VMT per employee, which also exceeds the industrial threshold of 14.37 VMT per employee.

### Project Impact

Since the VMT generated by the project would exceed the threshold of significance for industrial employment uses in the area, the project would result in a significant transportation impact on VMT, and mitigation is required to reduce the VMT impact to a less-than-significant level.

### Project Mitigation

The project proposes to limit the on-site parking supply (a Tier 3 VMT reduction measure) to mitigate the significant VMT impact. The project would provide a total of 148 vehicle parking spaces, which is 25 fewer spaces than what the City of San Jose Municipal Code requires. The project plans to request a parking exception from the City of San Jose Planning Department in order to qualify for the parking reduction. Decreasing a project's parking supply encourages employees to choose an alternative transportation mode for their commutes, thereby reducing VMT.

Parking data collected at two existing data centers operating in the City of Santa Clara show that the actual parking demand for data centers is less than the City of San Jose's parking requirement. The parking demand study shows that data centers require 0.23 parking spaces per 1,000 s.f. of building area. Based on this parking rate, the proposed 631,278 s.f. Data Center project requires a minimum of 146 parking spaces. Therefore, the parking demand study, which is detailed in Chapter 4, supports the proposed parking reduction. These types of parking reductions that are supported by evidence of reduced parking demand are typically approved as they support the City's overall strategy to reduce VMT (e.g., see General Plan Policies TR-8.3, TR-8.4, and TR-8.6 described in Chapter 1).

Based on the City's VMT Evaluation Tool, limiting the amount of parking provided to serve the Data Center project would lower the project VMT to 14.36 per employee (a reduction of about 7.5%), which would reduce the project impact to a less-than-significant level (below the threshold of 14.37 VMT per employee). A description of the proposed mitigation and the resulting reduction in VMT per worker are summarized in Table 4.

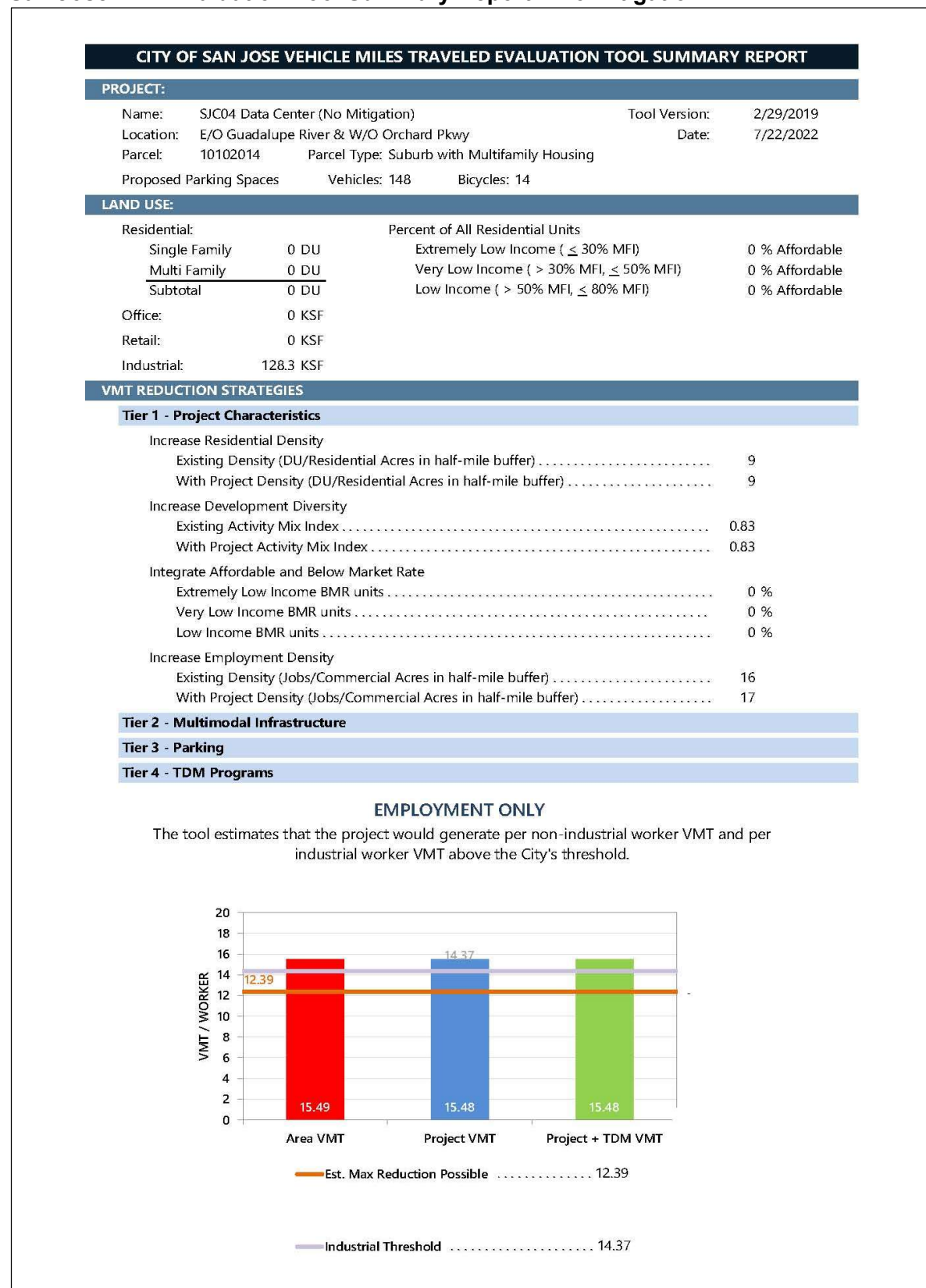
**Table 4**  
**Summary of VMT Mitigation and Resulting VMT per Worker**

Mitigation Measure	Mitigation Description	Vehicle Miles Traveled (VMT)		
		VMT Per Worker with Single VMT Reduction Measure	Industrial Threshold (VMT / Worker)	Significant VMT Impact?
Limit Parking Supply (Tier 3)	Provide 148 vehicle parking spaces, which is 25 fewer spaces than what the City of San Jose Municipal Code requires. The project would request a parking exception in order to qualify for the parking reduction. Decreasing a project's parking supply encourages employees to choose an alternative transportation mode for their commutes, thereby reducing VMT.	14.36	14.37	NO

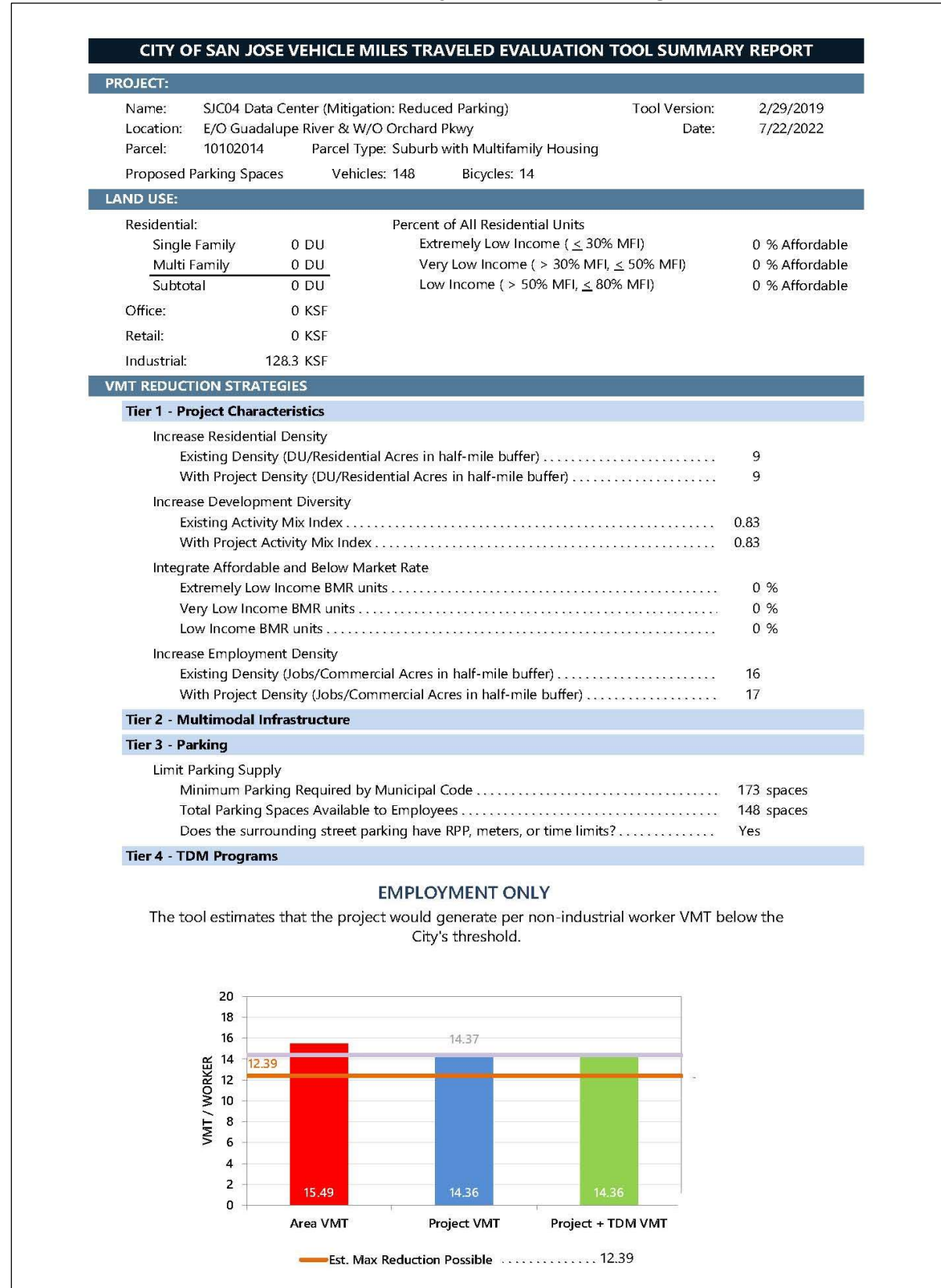
Figures 7A and 7B show the VMT summary reports generated by the City of San Jose's VMT Evaluation Tool without and with the proposed reduced parking, respectively.



**Figure 7A**  
**San Jose VMT Evaluation Tool Summary Report – No Mitigation**



**Figure 7B**  
**San Jose VMT Evaluation Tool Summary Report – With Mitigation**





The column chart at the bottom of each figure shows the Area VMT (red column), Project VMT (blue and green columns), and the Impact Threshold for industrial employment uses (grey line at the top of the chart).

### Cumulative VMT Impact Analysis

Projects must demonstrate consistency with the *Envision San Jose 2040 General Plan* to address cumulative impacts. Consistency with the City's General Plan is based on a consideration of all of its aspects, including the project's density, design, and ability to further the General Plan goals and policies and not obstruct their attainment. If a project is determined to be inconsistent with the General Plan, a cumulative impact analysis is required as part of the City's *Transportation Analysis Handbook*.

The proposed project would be consistent with the development type and intensity provided in the *Envision San Jose 2040 General Plan*, the cumulative effects of which were previously evaluated in the *Envision San Jose 2040 General Plan Environmental Impact Report and Supplemental Program Environmental Impact Report*.

The project is consistent with the General Plan goals and policies for the following reasons:

- With the issuance of a Site Development Permit/Special Use Permit, the proposed project would be consistent with the current zoning designation: *Combined Industrial Commercial (CIC)*.
- The project would increase the employment density in the project area, and the proposed density would be consistent with the current General Plan Land Use Designation that applies to the project site.
- The project would be consistent with adopted plans and policies for planned pedestrian and bicycle facilities. The project would provide improvements to pedestrian and bicycle connectivity and safety in the vicinity of the project site by constructing a Class I Bikeway trail extension between the Guadalupe River Trail and Orchard Parkway. The trail connection is identified in the City of San Jose Better Bike Plan 2025.

Based on the project description, the proposed project would be consistent with the *Envision San Jose 2040 General Plan* and would not require a General Plan Amendment (GPA). The project including its proposed improvements would be considered part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

## 4.

# Local Transportation Analysis

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This chapter describes the non-CEQA local transportation analysis (LTA) including existing traffic conditions, the method by which project traffic is estimated, intersection operations analysis for existing, background and background plus project scenarios, any adverse effects to intersection level of service caused by the project, intersection queuing analysis, site access and on-site circulation review, effects on bicycle, pedestrian and transit facilities, and parking supply.

### Intersection Operations Analysis

The intersection operations analysis is intended to quantify the operations of relevant San Jose intersections and to identify potential negative effects due to the addition of project traffic. Information required for the intersection operations analysis related to project trip generation, trip distribution, and trip assignment are presented in this section. The study intersections are located in the City of San Jose and have been identified and are evaluated based on the City of San Jose's intersection analysis methodology and standards in determining potential adverse operational effects due to the project, as described in Chapter 1.

### Project Trip Estimates

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

#### Trip Generation

Through empirical research, data have been collected that quantify the amount of traffic produced by many types of land uses. This research is compiled in the *Trip Generation Manual, 11<sup>th</sup> Edition* (2021) published by the Institute of Transportation Engineers (ITE). The magnitude of traffic added to the roadway system by a particular development is estimated by multiplying the applicable trip generation rate(s) by the size of the development. Trips that would be generated by the proposed project were estimated using the ITE trip rates for Data Center (ITE Land Use 160) located in a general urban/suburban setting. As defined by the ITE, a "data center" is a free-standing warehouse type of facility that is primarily used for off-site storage of computer systems and associated components and may include maintenance areas and a small office.

### Trip Adjustments and Reductions

In accordance with San Jose's *Transportation Analysis Handbook* (April 2020, Section 4.8, "Intersection Operations Analysis"), the project is eligible for adjustments and reductions from the baseline trip generation. Based on the 2020 San Jose guidelines, the project qualifies for a location-based adjustment. The location-based adjustment reflects the project's vehicle mode share based on the "place type" in which the project is located per the San Jose Travel Demand Model. The project's place type was obtained from the San Jose VMT Evaluation Tool. Based on the Evaluation Tool, the project site is located within a *Suburban with Multifamily Housing* place type. Therefore, the baseline project trips were adjusted to reflect the mode share associated with this place type.

Industrial developments located within areas designated *Suburban with Multifamily Housing* have a vehicle mode share of 92 percent (according to Table 6 of the City's *Transportation Analysis Handbook*). Thus, an 8 percent reduction was applied to the project trip generation estimates based on the location-based vehicle mode share outputs produced from the San Jose Travel Demand Model.

In addition, to address the significant VMT impact as described in Chapter 3, the project would limit the amount of parking provided to lower the project VMT and reduce the project impact to a less-than-significant level. Accordingly, a 7.5 percent reduction was applied based on the corresponding external trip adjustment obtained from the VMT Evaluation Tool. The reduction was applied to the adjusted project trips (with location-based adjustment).

### Net Project Trips

After applying the ITE trip rates to the proposed project and applying the appropriate trip adjustments and reductions, it is estimated that the project would generate 532 new daily vehicle trips, with 59 new trips (32 inbound and 27 outbound) occurring during the AM peak hour and 49 new trips (15 inbound and 34 outbound) occurring during the PM peak hour (See Table 5).

**Table 5**  
**Project Trip Generation Estimates**

ITE Land Use	% of Vehicle Mode Share	Reduction %	Size	Daily		AM Peak Hour			PM Peak Hour				
				Rate	Trips	Pk-Hr Rate	Trips			Pk-Hr Rate	Trips		
							In	Out	Total		In	Out	Total
Data Center <sup>1</sup>			631,278 SF	0.99	625	0.11	38	31	69	0.09	17	40	57
Location-Based Vehicle Mode Share Reduction <sup>2</sup>	92%	8.0%			(50)		(3)	(2)	(5)		(1)	(3)	(4)
Project-Specific Trip Reduction <sup>3</sup>		7.5%			(43)		(3)	(2)	(5)		(1)	(3)	(4)
Net Project Trips:					532		32	27	59		15	34	49

**Notes:**

<sup>1</sup> The project trip generation estimates are based on average rates contained in the *ITE Trip Generation Manual*, 11th Edition, for Data Center (Land Use 160) located in a General Urban/Suburban setting. Rates are expressed in trips per 1,000 SF.

<sup>2</sup> The project site is located within the place type Suburban with Multifamily Housing based on the City of San Jose VMT Evaluation Tool (February 29, 2019). The location-based vehicle mode share percentage outputs are obtained from Table 6 of the City of San Jose *Transportation Analysis Handbook* (April 2020). The 8% trip reduction (for industrial uses) is based on the percent of mode share for other modes of travel besides motor vehicles.

<sup>3</sup> A 7.5% trip reduction was applied based on the external trip adjustments obtained from the City's VMT Evaluation Tool. This trip reduction reflects the limited parking supply proposed by the project as mitigation to reduce the project VMT impact to a less-than-significant level. It is assumed that every percent reduction in VMT per worker is equivalent to one percent reduction in peak-hour vehicle trips.

### Trip Distribution and Assignment

The trip distribution pattern for the project was estimated based on existing travel patterns on the surrounding roadway system and the locations of complementary land uses. The peak hour vehicle trips associated with the project were added to the roadway network in accordance with the trip distribution pattern, the roadway network connections, and the location of the project driveway. The project trip distribution pattern and trip assignment are shown on Figure 8.

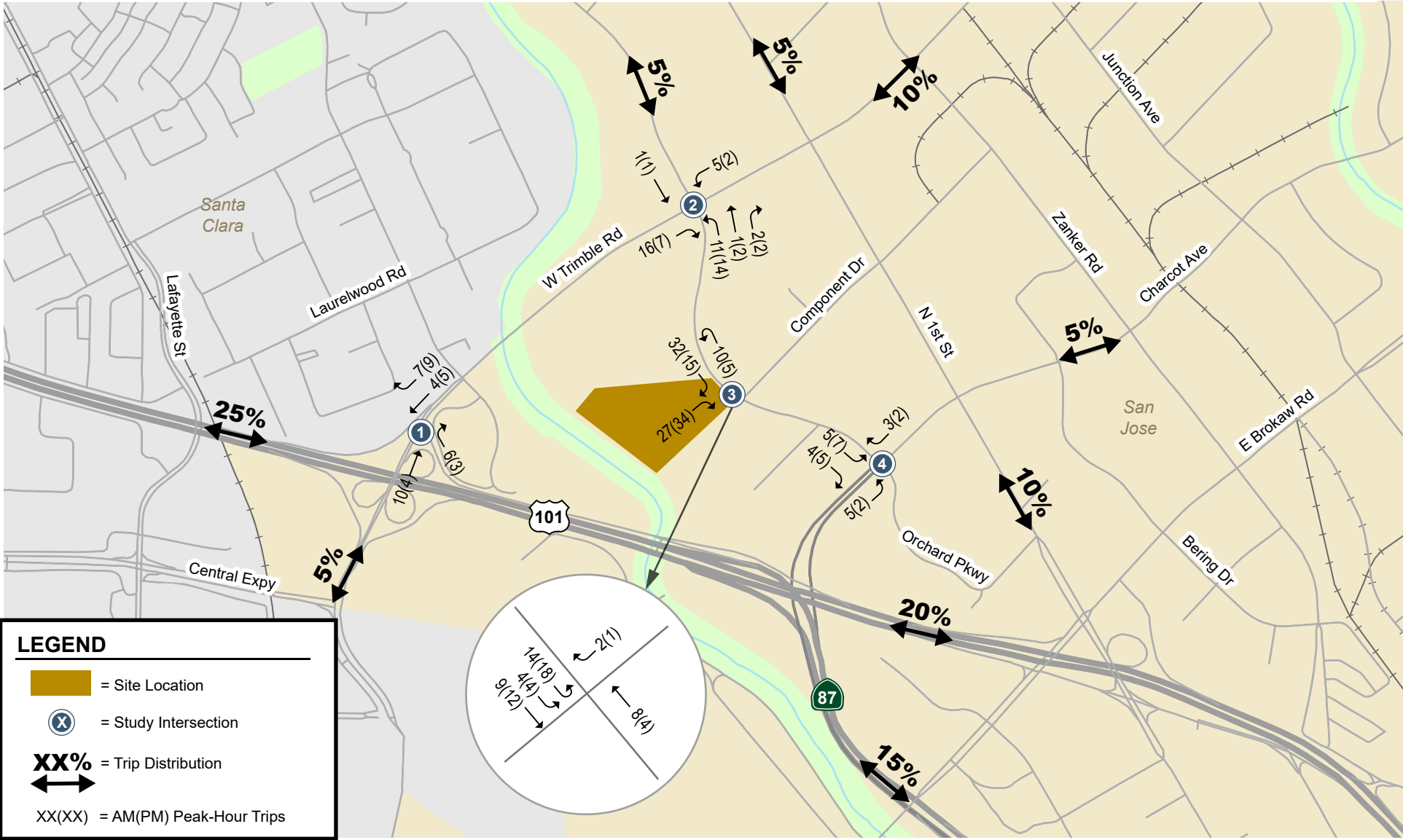


Figure 8  
Project Trip Distribution and Assignment

## Traffic Volumes Under All Scenarios

### Existing Traffic Volumes

Existing AM and PM peak hour traffic volumes for the study intersections were obtained from historical count data (2016 and 2017 counts) provided by the City of San Jose. Although new 2022 counts were conducted, the new counts are lower than counts conducted prior to the COVID-19 pandemic. For this reason, City of San Jose staff have requested that the older “pre-pandemic” counts be used in this transportation study. This approach allows transportation studies such as this to move forward without waiting for traffic conditions to return to “normal”. The existing AM and PM peak hour intersection volumes are shown graphically on Figure 9.

### Background Traffic Volumes

Background AM and PM peak hour traffic volumes were estimated by adding to existing traffic volumes the trips generated by nearby approved but not yet completed or occupied projects (see Figure 10). The vehicular trips associated with the approved projects in the area are listed in the City of San Jose’s Approved Trips Inventory (ATI) contained in Appendix B. The transportation network under background conditions would be the same as the existing transportation network.

### Background Plus Project Traffic Volumes

Project trips were added to background traffic volumes to obtain background plus project traffic volumes (see Figure 11).

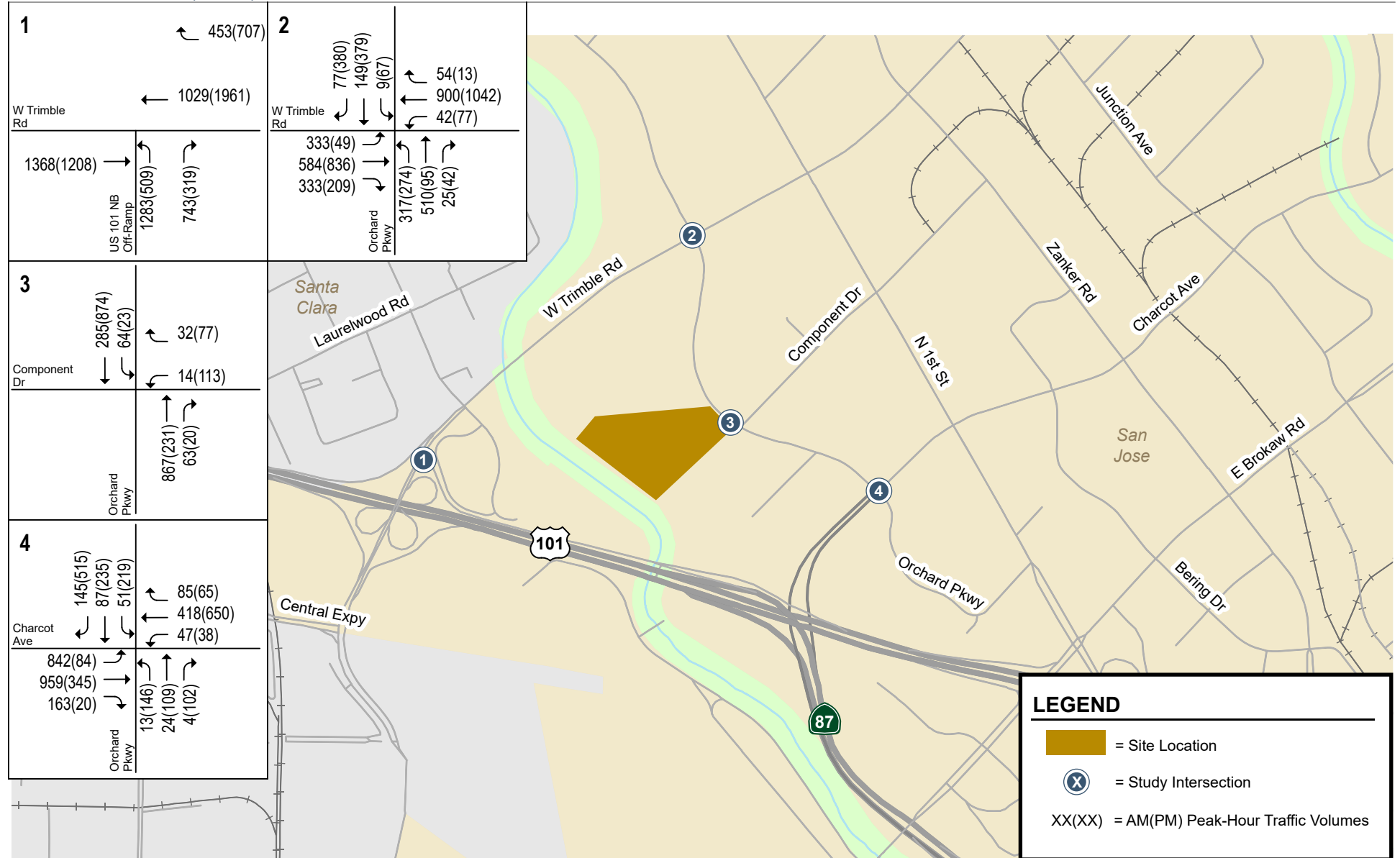
### Intersection Traffic Operations

Intersection levels of service were evaluated against the standards of the City of San Jose. The results of the analysis show that the signalized study intersections are currently operating at acceptable levels of service (LOS D or better) during the AM and PM peak hours of traffic and would continue to operate acceptably under background and background plus project conditions (see Table 6).

The detailed signalized intersection level of service calculations are contained in Appendix C.

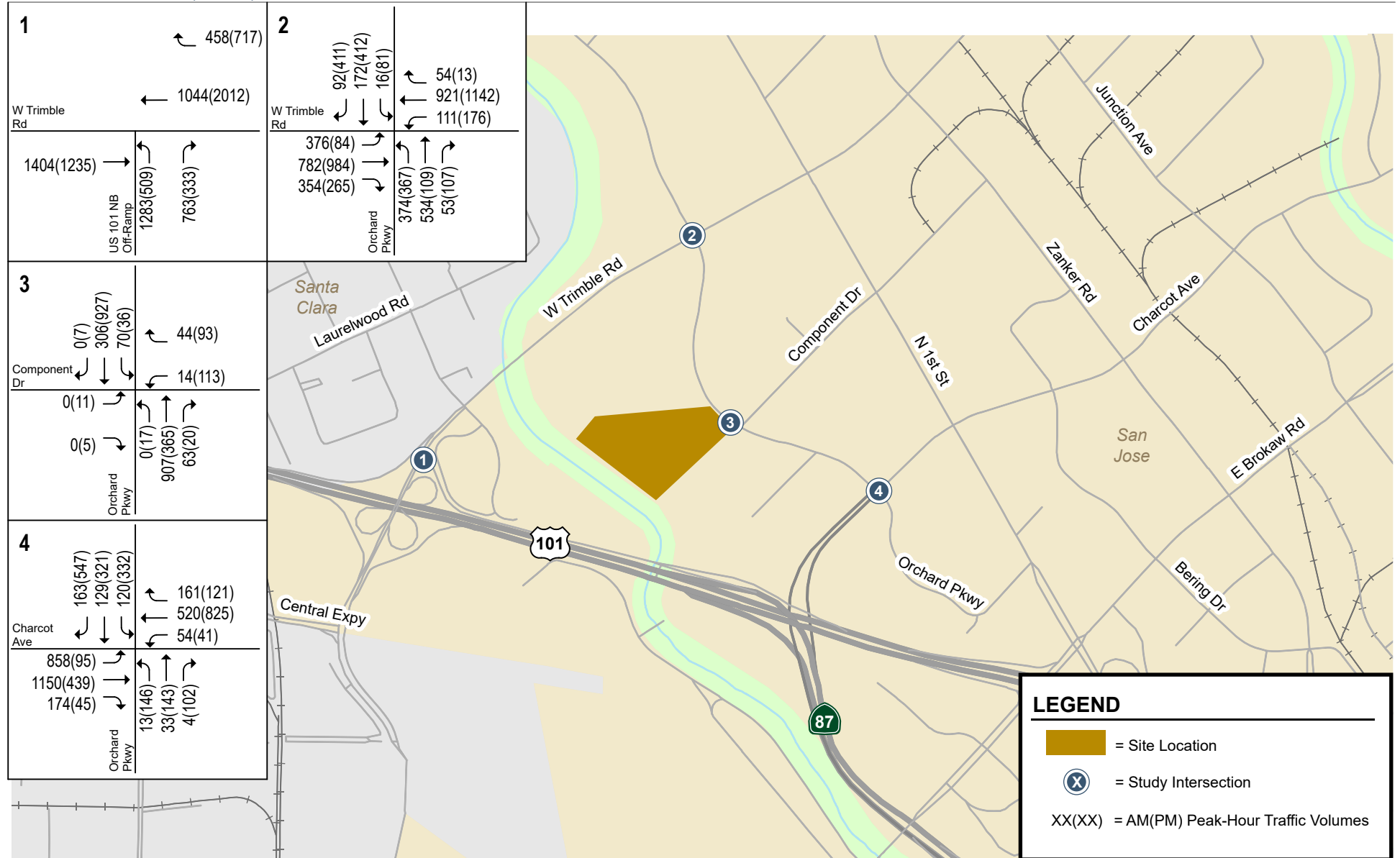
**Table 6**  
**Intersection Levels of Service**

#	Signalized Intersection	Peak Hour	Count Date	Existing		Background		Background + Project			
				Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Avg. Delay (sec)	LOS	Incr. In Crit. Delay (sec)	Incr. In Crit. V/C
1	US 101 NB Off-Ramp & Trimble Rd	AM	3/14/2017	20.1	C	20.4	C	20.5	C	0.1	0.003
		PM	3/14/2017	12.1	B	12.2	B	12.2	B	0.0	0.001
2	Orchard Pkwy & Trimble Rd	AM	3/17/2016	39.9	D	40.4	D	40.3	D	0.0	0.001
		PM	3/17/2016	39.1	D	41.8	D	42.1	D	0.3	0.005
3	Orchard Pkwy & Component Dr	AM	6/1/2017	8.4	A	8.7	A	9.2	A	0.8	0.015
		PM	6/1/2017	12.0	B	10.3	B	11.7	B	-3.7	0.170
4	Orchard Pkwy & Charcot Av	AM	6/1/2017	20.9	C	21.5	C	21.5	C	0.1	0.001
		PM	6/1/2017	26.2	C	27.0	C	27.0	C	0.1	0.003

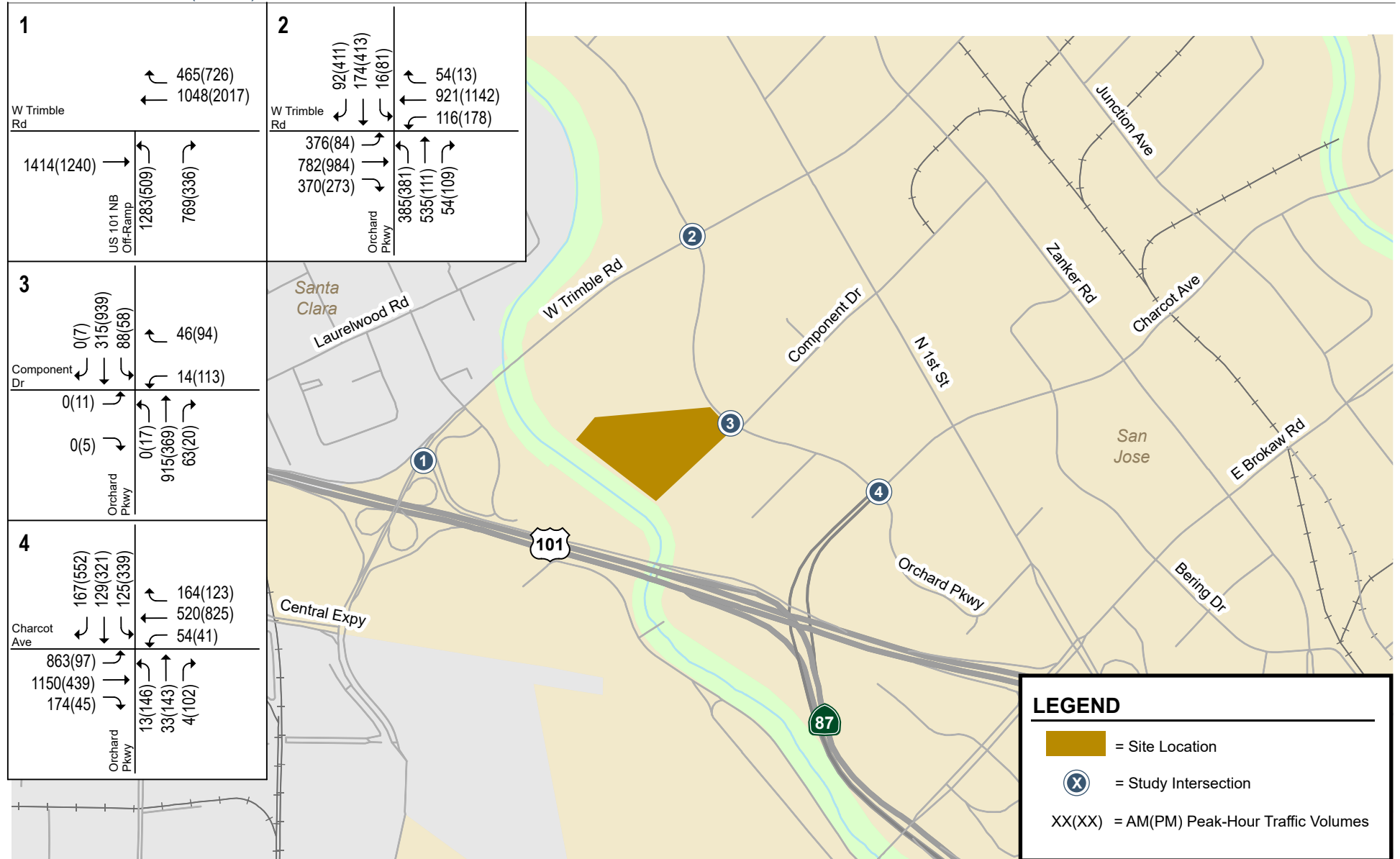


**Figure 9**  
**Existing Traffic Volumes**





**Figure 10**  
**Background Traffic Volumes**



**Figure 11**  
**Background Plus Project Traffic Volumes**



## Vehicle Queuing Analysis

The analysis of intersection levels of service was supplemented with a vehicle queuing analysis for left turn movements where the project would add a noteworthy number of trips to the left-turn movements of signalized intersections. This analysis provides a basis for estimating future storage requirements at the intersections under background plus project conditions. Vehicle queues were estimated using Poisson probability distribution, as described in Chapter 1. Vehicle queuing was analyzed for the northbound left-turn pocket at Orchard Parkway/Trimble Road and the southbound left-turn pocket at Orchard Parkway/Component Drive. As shown in Table 7, both intersections would provide adequate left-turn pocket vehicle storage under background plus project conditions.

**Table 7**  
**Intersection Vehicle Queuing Analysis Results**

Measurement	Orchard Pkwy & Trimble Rd		Orchard Pkwy & Component Dr	
	NBL		SBL	
	AM	PM	AM	PM
<b>Existing</b>				
Cycle/Delay <sup>1</sup> (sec)	140	140	68	68
Volume (vphpl )	159	137	64	23
95th %. Queue (veh/ln.)	11	9	3	2
95th %. Queue (ft./ln.) <sup>2</sup>	275	225	75	50
Storage (ft./ ln.) <sup>3</sup>	350	350	150	150
Adequate (Y/N)	Y	Y	Y	Y
<b>Background</b>				
Cycle/Delay <sup>1</sup> (sec)	140	140	68	68
Volume (vphpl )	187	184	70	36
95th %. Queue (veh/ln.)	12	12	3	2
95th %. Queue (ft./ln.)	300	300	75	50
Storage (ft./ ln.) <sup>3</sup>	350	350	150	150
Adequate (Y/N)	Y	Y	Y	Y
<b>Background Plus Project</b>				
Cycle/Delay <sup>1</sup> (sec)	140	140	68	68
Volume (vphpl )	193	191	88	58
95th %. Queue (veh/ln.)	12	12	4	3
95th %. Queue (ft./ln.) <sup>2</sup>	300	300	100	75
Storage (ft./ ln.) <sup>3</sup>	350	350	150	150
Adequate (Y/N)	Y	Y	Y	Y
<b>Notes:</b>				
<sup>1</sup> Vehicle queue calculations based on cycle length.				
<sup>2</sup> Assumes 25 Feet Per Vehicle Queued.				
<sup>3</sup> Storage Length represents the length of striped turn pocket + approx. 1/2 of taper.				

## Vehicular Access and Circulation

The site access and circulation evaluation is based on the July 20, 2022 site plan prepared by Sheehan Nagle Hartray Architects. Site access and on-site vehicular circulation were reviewed in accordance with generally accepted traffic engineering standards and City design standards.

### Site Access and Circulation

Access to and from the project site would be provided via a right-turn-only driveway on Orchard Parkway. The inbound and outbound movements would be separated by a median. According to the site plan the inbound and outbound movements measure 28 feet wide and 22 feet wide, respectively (measured at the throat), and are spaced 15 feet apart. Mountable curb would be provided on the north end of the inbound driveway to better accommodate large trucks turning right into the driveway from southbound Orchard Parkway. The outbound driveway would be situated approximately 100 feet north of Component Drive.

The inbound driveway would widen to two lanes approximately 200 feet on-site. The widened portion of the driveway would have barrier arms and kiosks. One inbound lane would allow for free passage for employees with badges. The other inbound lane would be for visitors and deliveries requiring permission to enter the project site. Between Orchard Parkway and the entry gate, there would be a short gravel turn-around area to enable vehicles to exit the site without passing through the security gate.

As shown on Figure 2 in Chapter 1, the triangular-shaped project site would consist of two 315,639 s.f. buildings, each with a loading dock and associated parking lots. Access to the loading docks would be provided via a 42-foot-wide drive aisle that bisects the two buildings (the loading docks would face each other). Two generators, three water tanks, a water pump station, a fire pump station, and a weather station would be located at the northern corner of the project site, and a substation would be located between the project driveway and the property to the north. The internal roadway network would provide access to all portions of the site. The main loop road measures 30 feet wide, and the parking lot drive aisles measure 26 feet wide. On-site circulation would be efficient with only one dead-end drive aisle located at the end of the parking lot serving the southern building, with adequate turn-around space provided.

### Project Driveway Volumes and Operations

The total AM and PM peak hour project-generated trips that are estimated to occur at the project driveway are 32 inbound trips and 27 outbound trips during the AM peak hour, and 15 inbound trips and 34 outbound trips during the PM peak hour (see Figure 8). Approximately 70 percent of inbound trips would approach from the north and 30 percent would approach from the south. Trips approaching the site from the south would be required to perform a U-Turn at the driveway serving the property to the north. It is estimated that 10 AM peak hour vehicles and 5 PM peak hour vehicles would need to make a U-turn to enter the site. Based on the relatively low traffic volumes along Orchard Parkway, vehicle delays for the U-Turn movement are expected to be very low. In addition, based on the low project trip generation, no operational issues are expected to occur at the project driveway.

As previously described, the project driveway on Orchard Parkway would be situated approximately 100 feet north of Component Drive. This could make it difficult for exiting vehicles to cross the two southbound lanes and enter the 150-foot-long southbound left-turn pocket on Orchard Parkway at Component Drive. Accordingly, the project driveway should be located as far north as possible to provide optimal access to the southbound left-turn pocket on Orchard Parkway at Component Drive.

### **Sight Distance at Project Driveway**

The project driveway 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 along Orchard Parkway. Any landscaping and signage should be located in such a way as to ensure an unobstructed view for drivers entering and exiting the site. Adequate sight distance reduces the likelihood of a collision at a driveway or intersection and provides drivers with the ability to locate sufficient gaps in traffic to exit a driveway.

According to the site plan, the project proposes no tall vegetation or objects that could affect sight distance at the project driveway, and parking is not allowed on Orchard Parkway. Also, the horizontal curvature of Orchard Parkway would be beneficial to sight distance. Thus, adequate sight distance would be provided at the project driveway.

### **Surface Parking Circulation Review**

The project proposes three main parking lots with 26-foot-wide drive aisles and two additional parking areas along the main loop road with 90-degree parking spaces provided throughout the site. The City's standard minimum width for two-way drive aisles is 26 feet wide where 90-degree parking is provided. This allows sufficient room for vehicles to back out of the parking spaces. According to the site plan, the drive aisles throughout the site all measure at least 26 feet wide. Thus, adequate access to all parking stalls would be provided throughout the site.

### **Parking Stall Dimensions**

The City of San Jose Off-Street Parking Design Standards require that standard 90-degree parking stalls be a minimum of 8.5 feet wide by 17 feet long and full-size parking stalls be 9 feet wide by 18 feet long. The site plan shows all the parking stalls would be 9 feet wide by 18 feet long and the ADA and van accessible parking spaces would be between 9 feet and 12 feet wide by 18 feet long, which would meet the City of San Jose's and ADA requirements for parking stall dimensions.

### **Truck Access and Circulation**

The project site plan was reviewed for truck access using truck turning-movement templates for the CA Legal truck type (WB-67 truck), which is the largest semi-trailer truck that would access the site. The project site would be adequate to serve these semi-trailer trucks. The security gates would also be adequate to serve these trucks. The truck turning templates are contained in Appendix D.

### **General Loading Operations**

Both buildings would have an associated loading zone with three loading docks each and a trash compactor, which would be accessed via a 42-foot-wide drive aisle that would bisect the two buildings. The loading zones are shown to be approximately 50 feet wide by 75 feet long and would provide adequate vertical clearance to accommodate WB-67 semi-trailer trucks.

The truck turning templates (see Appendix D) show that semi-trailer trucks could access the site and circulate throughout the site adequately. However, WB-67 trucks would have difficulty accessing the middle loading dock position at each building if trucks are parked at the outside loading dock positions.

### **Emergency Vehicle Access**

The project driveway width and drive aisle widths shown on the site plan would be adequate to accommodate emergency vehicles. The site plan also shows emergency vehicle access (EVA) from the adjacent property to the north. This secondary entrance would be used for EVA only.

The City of San Jose Fire Department requires that all portions of the buildings be within 150 feet of a fire access road and requires a minimum of 6 feet clearance from the property line along all sides of the buildings. Adequate clearance would be provided around the perimeters of the buildings and all areas of the proposed buildings would be within 150 feet of a fire access road.

### **Garbage Collection**

The site plan shows a 15-foot-wide refuse area adjacent to the loading docks at each building. Garbage trucks (SU-30 type trucks) could easily access these areas on garbage collection days. Adequate vertical clearance would be provided for garbage trucks.

### **Construction Activities**

Typical activities related to the construction of any development could include lane narrowing and/or lane closures, sidewalk and pedestrian crosswalk closures, and bike lane closures. In the event of any type of closure, clear signage (e.g., closure and detour signs) must be provided to ensure vehicles, pedestrians and bicyclists are able to adequately reach their intended destinations safely.

Construction worker parking and staging areas would be off-site at an existing commercial property parking lot located at 2825 Lafayette Street, approximately 1.9 miles from the site. Bus transportation between the data center project site and the off-site parking area would be provided by the project. Per City standard practice, the project would be required to submit a construction management plan for City approval that includes this construction worker parking and staging information, as well as addresses the construction schedule, street closures and/or detours, and the planned truck routes.

### **Pedestrian, Bicycle and Transit Facilities**

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

#### **Pedestrian and Bicycle Facilities**

Overall, the existing network of pedestrian and bicycle facilities provides adequate connectivity between the project site and other surrounding land uses and transit stops. Crosswalks with pedestrian signal heads and push buttons are located at all the signalized intersections in the study area. Curb ramps are provided at all the signalized intersections in the study area. There are bike paths and several roadways with striped bike lanes in the vicinity of the project site. Class II striped bike lanes are provided on Trimble Road, Orchard Parkway, North First Street, and Charcot Avenue.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. Note, however, that the City of San Jose Better Bike Plan 2025 identifies Orchard Parkway as having a Class IV separated bikeway. Accordingly, City staff will require that the project make a fair-share monetary contribution toward the planned Class IV bikeway improvements along the project frontage on Orchard Parkway. Based on a cost of \$144 per linear foot (source: City of San Jose Department of Public Works), the project's total fair-share contribution would equate to \$50,400 ( $\$144 \times 350$  feet of frontage = \$50,400).

The project proposes to make bicycle and pedestrian improvements along the southern boundary of the project site, as well as internally on the project site. These improvements include the following:

- A multi-use trail extension (Class I bike path) along the southern boundary of the project site (see Figure 12). The Class I Bikeway trail connection is identified in the City of San Jose Better Bike Plan 2025 and would create a link between the Guadalupe River Trail and Orchard Parkway at its intersection with Component Drive. The paved trail would include pavement markings and signage to indicate that bikes are allowed. Some minor intersection improvements may be necessary to connect the trail to the Orchard Parkway/Component Drive signalized intersection. The trail connection will be predominantly on land owned by the project applicant. However, in order for the trail to interconnect to the Guadalupe River Trail, the trail must cross the land owned and managed by the Santa Clara Valley Water District (Valley Water). While the project applicant will fund and construct the portion of the trail over which it controls, the funding, permitting, authorization and construction of the portion on Valley Water land will need to be performed by Valley Water pursuant to authorization from those agencies with the appropriate permit jurisdiction.
- Bicycle racks on the project site near the administrative buildings.
- An internal network of sidewalks and crosswalks connecting the buildings, substation, storage tank area, and parking lots.

### Transit Service

Due to the general nature of the industrial project, the project is expected to generate few new transit riders. Regardless, it is reasonable to assume that some employees would utilize the nearby transit services provided on a daily basis. Although there are no bus stops in the immediate vicinity of the project site, the Component LRT station is conveniently located at the North First Street and Component Drive intersection, less than ½ mile walk/bike ride from the project site. It is estimated that the increased transit demand generated by the proposed project could be accommodated by the current available ridership capacity of the VTA LRT service.

### Parking

#### Vehicular Parking

According to the City of San Jose's off-street parking requirements (Chapter 20.90, Table 20-190 of the City's Zoning Code), the vehicle parking requirements for the 631,278 s.f. Data Center are as follows:

- Office/Meeting/Technician Space: 1 space per 250 s.f. of floor area,
- Computer Equipment Space: 1 space per 5,000 s.f. of floor area, and
- Guardhouse (commercial support): 1 space per 350 s.f. of floor area.

The project proposes 19,606 s.f. of office/meeting/technician space, 611,672 s.f. of computer equipment space, and a 264 s.f. guardhouse. Based on the City's municipal code, the project would require 173 vehicle parking spaces as shown in Table 8 below.

According to the site plan, the project proposes to provide 148 vehicle parking spaces, or 25 fewer parking spaces than what the City's Municipal Code requires (173 spaces). The project would require a parking exception from the City of San Jose Planning Department to allow for a reduction in parking supply. Accordingly, previous parking data collected at two existing Data Centers operating in the City of Santa Clara were used to demonstrate that the actual parking demand for Data Centers is less than the City of San Jose's standard parking requirement. The details of the data center parking demand analysis are described below.



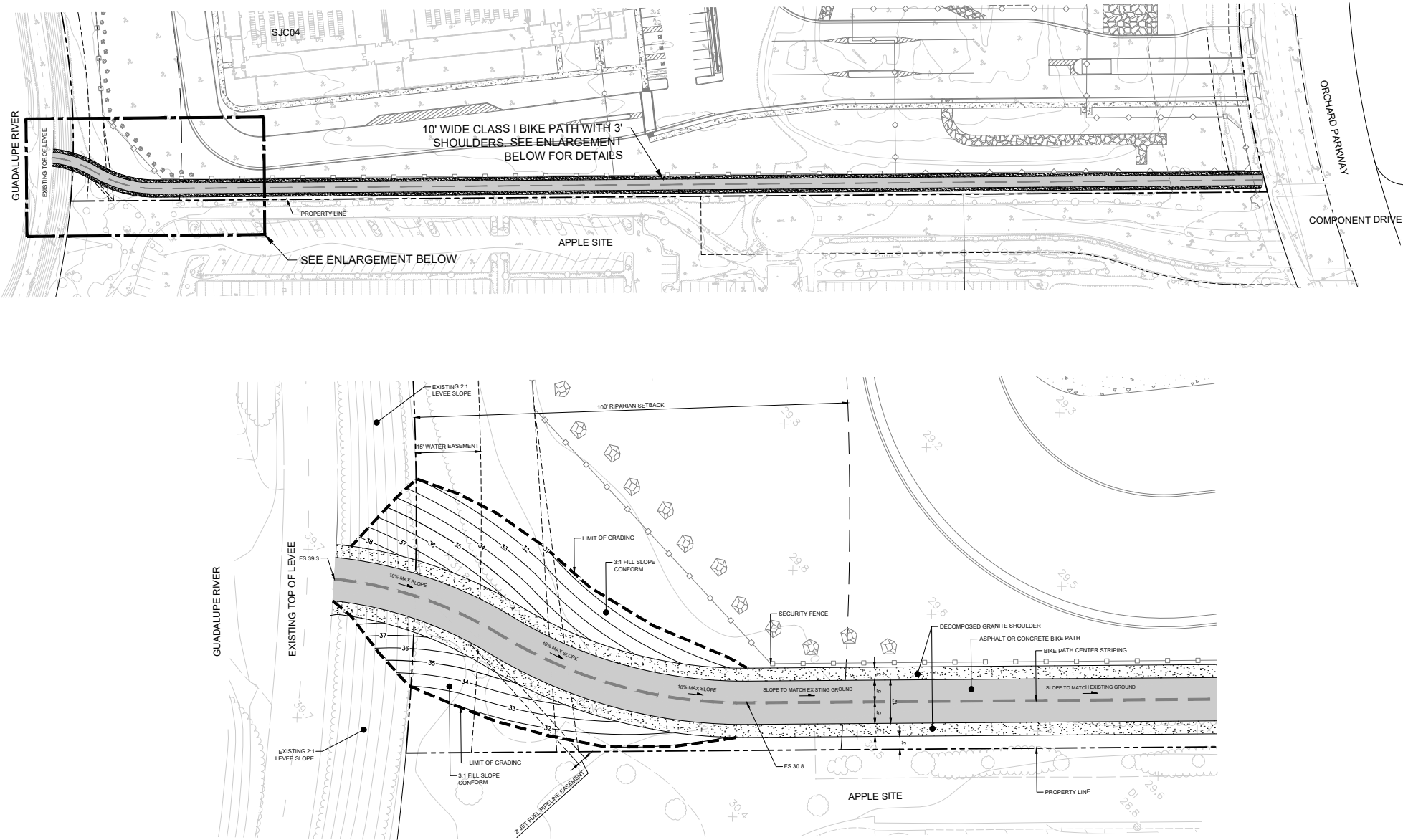


Figure 12  
Conceptual Plan for Guadalupe River Extension (Class I Bikeway)



**Table 8**  
**Vehicle Parking Requirements Based on City of San Jose Municipal Code**

Building	Use Category	Gross Square Feet (GSF)	Net Square Feet (85% of GSF)	City of San Jose Vehicle Parking Requirements	
				Parking Ratio	Vehicle Spaces Required
Bldg 1 (SJC04)	Office/Meeting/Technician Space	9,803	8,333	1 space per 250 sq.ft.	34
Bldg 1 (SJC04)	Computer Equipment Space	305,836	259,961	1 space per 5,000 sq.ft.	52
Bldg 2 (SJC06)	Office/Meeting/Technician Space	9,803	8,333	1 space per 250 sq.ft.	34
Bldg 2 (SJC06)	Computer Equipment Space	305,836	259,961	1 space per 5,000 sq.ft.	52
Guardhouse	Commercial Support	264	224	1 space per 350 sq.ft.	1
<b>Totals <sup>1</sup>:</b>		<b>631,542</b>	<b>536,812</b>		<b>173</b>

Source: San Jose Municipal Code Chapter 20.90, Table 20-190.

<sup>1</sup> Total GSF and NSF include guardhouse SF. Total GSF and NSF without guardhouse SF are 631,278 SF and 536,588 SF, respectively.

### **Parking Demand for Data Centers**

Parking demand data at five Data Centers in the City of Santa Clara were collected in 2017. Of the five Data Centers, three are significantly smaller and two are closer in size to the proposed project buildings. For this reason, only the parking counts for the two larger Data Centers were used. Parking demand counts were conducted on three weekdays in August of 2017 at both locations.

The two comparable Data Centers that were counted are located at 2045 Lafayette Street in Santa Clara (323,122 gross s.f.) and 2220 De La Cruz Boulevard in Santa Clara (365,489 gross s.f.). Parking demand was counted every hour between 8:00 AM and 6:00 PM on August 8, 2017 (Tuesday), August 9, 2017 (Wednesday), and August 10, 2017 (Thursday). The parking demand study is contained in Appendix E.

The total number of cars parked every hour were counted at each site. The peak parking demand occurs when the maximum number of cars are present at the site. The peak parking demand for both Data Center locations occurred at 1:00 PM with 75 total cars parked on site at 2045 Lafayette Street (Wednesday 8/9/2017) and 84 cars parked on site at 2220 De La Cruz Boulevard (Thursday 8/10/2017). The results of the Data Center parking study are presented below in Table 9.

The peak parking demand per 1,000 s.f. was calculated by dividing the number of parked cars by the size of each Data Center. As shown in the table, both Data Centers had a peak demand of 0.23 parking spaces per 1,000 s.f. Based on this observed peak parking demand rate, the proposed 631,278 gross s.f. Data Center project would need to provide 146 parking spaces as follows:

$$(631,278 \text{ s.f.} / 1,000 \text{ s.f.}) \times 0.23 \text{ spaces} = 145.19 = 146 \text{ spaces (rounded up)}$$

The project proposes to provide 148 parking spaces, which would exceed the calculated peak parking demand for data centers by two vehicle spaces. Therefore, based on the Data Center parking demand analysis, 148 vehicle parking spaces would be adequate to serve the project. However, a parking exception would be required to allow the proposed reduction in parking supply based on the City's Municipal Code requirements. It is our understanding that the City approved this lower parking ratio for the SJC02 Data Center project located at 1657 Alviso Milpitas Road in North San Jose. Thus, it is reasonable to assume that the City would adopt the alternative Data Center parking demand rate for

this Data Center project as well. These types of parking reductions that are supported by evidence of reduced parking demand are typically approved as they support the City's overall strategy to reduce VMT (e.g., see General Plan Policies TR-8.3, TR-8.4, and TR-8.6 described in Chapter 1).

**Table 9**  
**Summary of Parking Demand Counts for Data Centers**

Time	Parked Cars							
	2045 Lafayette Street				2220 De La Cruz Boulevard			
	8/8/2017 Tuesday	8/9/2017 Wednesday	8/10/2017 Thursday	Daily Average	8/8/2017 Tuesday	8/9/2017 Wednesday	8/10/2017 Thursday	Daily Average
8:00 AM	58	54	56	56	67	69	70	69
9:00 AM	60	55	58	58	71	71	73	72
10:00 AM	58	56	62	59	83	74	81	79
11:00 AM	59	51	56	55	81	76	81	79
12:00 PM	56	51	54	54	75	69	71	72
1:00 PM	63	75	74	71	70	68	84	74
2:00 PM	65	71	68	68	71	68	76	72
3:00 PM	53	65	67	62	72	60	63	65
4:00 PM	50	52	61	54	51	53	57	54
5:00 PM	32	35	41	36	41	49	52	47
6:00 PM	24	32	36	31	27	30	34	30
Size (s.f.)	323,122				365,489			
Max. Parking Demand (veh/ ksf)	0.232				0.230			

## Bicycle Parking

The project is required to provide 1 bicycle parking space per 5,000 s.f. of office/meeting/technician workspace, plus 1 bicycle parking space for each 50,000 s.f. of floor area devoted to computer equipment space according to the City of San Jose Municipal Code (Chapter 20.90, Table 20-190). This equates to a total parking requirement of 16 bicycle spaces as shown in Table 10 below.

**Table 10**  
**Bicycle Parking Requirements Based on City of San Jose Municipal Code**

Building	Use Category	Gross Square Feet (GSF)	Net Square Feet (85% of GSF)	City of San Jose Bicycle Parking Requirements	
				Parking Ratio	Bicycle Spaces Required
Bldg 1 (SJC04)	Office/Meeting/Technician Space	9,803	8,333	1 space per 5,000 sq.ft.	2
Bldg 1 (SJC04)	Computer Equipment Space	305,836	259,961	1 space per 50,000 sq.ft.	6
Bldg 2 (SJC06)	Office/Meeting/Technician Space	9,803	8,333	1 space per 5,000 sq.ft.	2
Bldg 2 (SJC06)	Computer Equipment Space	305,836	259,961	1 space per 50,000 sq.ft.	6
Guardhouse	Commercial Support	264	224	---	0
<b>Totals <sup>1</sup>:</b>		<b>631,542</b>	<b>536,812</b>		<b>16</b>

Source: San Jose Municipal Code Chapter 20.90, Table 20-190.

<sup>1</sup> Total GSF and NSF include guardhouse SF. Total GSF and NSF without guardhouse SF are 631,278 SF and 536,588 SF, respectively.

The project would provide a total of 16 bicycle parking spaces consisting of 8 bicycle spaces per building: 7 short-term spaces plus 1 long-term space per building. Therefore, the project would meet the City's bicycle parking requirement.

### **Motorcycle Parking**

General industrial land uses are required to provide one motorcycle space per 50 code required auto parking spaces according to the City of San Jose parking standards (San Jose Municipal Code Chapter 20.90, Table 20-250). As described in the previous chapter, a data center has similar characteristics to industrial land uses. Accordingly, the project would be required to provide 4 motorcycle parking spaces as follows:

$$173 \text{ Code-required auto spaces} / 50 = 3.46 = 4 \text{ motorcycle spaces (rounded up)}$$

The project proposes to provide 4 motorcycle parking spaces (2 spaces per building), which meets the City's motorcycle parking requirement.

## 5. Conclusions

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This report presents the results of the transportation analysis conducted for a proposed 631,278 square-foot (s.f.) data center located at 370 W. Trimble Road in North San Jose, California. The transportation impacts of the project were evaluated following the standards and methodologies established in the City of San Jose's Transportation Analysis Handbook, adopted in April 2020. Based on the City of San Jose's Transportation Analysis Policy (Policy 5-1) and the Transportation Analysis Handbook and in accordance with applicable provisions of the California Environmental Quality Act (CEQA), the Transportation Analysis report for the project includes a CEQA transportation analysis and a non-CEQA Local Transportation Analysis (LTA).

### CEQA Transportation Impacts

#### Project Vehicle Miles Traveled (VMT) Analysis

Per the City's VMT Evaluation Tool, the existing Area VMT for employment uses is 15.49 VMT per employee, which is above the existing regional average threshold of 14.37 VMT per employee. The project VMT estimated by the Evaluation Tool is 15.48 VMT per employee, which also exceeds the industrial threshold of 14.37 VMT per employee. Since the VMT generated by the project would exceed the threshold of significance for industrial employment uses in the area, the project would result in a significant transportation impact on VMT, and mitigation is required to reduce the VMT impact to a less-than-significant level.

#### Project Mitigation

The project proposes to limit the on-site parking supply (a Tier 3 VMT reduction measure) to mitigate the significant VMT impact. The project would provide a total of 148 vehicle parking spaces, which is 25 fewer spaces than what the City of San Jose Municipal Code requires. Parking data collected at two existing data centers operating in the City of Santa Clara support the proposed parking reduction. The project plans to request a parking exception from the City of San Jose Planning Department in order to qualify for the parking reduction. These types of parking reductions that are supported by evidence of reduced parking demand are typically approved as they support the City's overall strategy to reduce VMT (e.g., see General Plan Policies TR-8.3, TR-8.4, and TR-8.6 described in Chapter 1). Decreasing a project's parking supply encourages employees to choose an alternative transportation mode for their commutes, thereby reducing VMT.

Based on the City's VMT Evaluation Tool, limiting the amount of parking provided to serve the Data Center project would lower the project VMT to 14.36 per employee (a reduction of about 7.5%), which

would reduce the project impact to a less-than-significant level (below the threshold of 14.37 VMT per employee).

### Cumulative VMT Impact Analysis

The proposed project would be consistent with the development type and intensity provided in the *Envision San Jose 2040 General Plan*, the cumulative effects of which were previously evaluated in the *Envision San Jose 2040 General Plan Environmental Impact Report* and *Supplemental Program Environmental Impact Report*. The project is consistent with the applicable General Plan goals and policies for the following reasons:

- With the issuance of a Site Development Permit/Special Use Permit, the proposed project would be consistent with the current zoning designation: *Combined Industrial Commercial* (CIC).
- The project would increase the employment density in the project area, and the proposed density would be consistent with the current General Plan Land Use Designation that applies to the project site.
- The project would be consistent with adopted plans and policies for planned pedestrian and bicycle facilities. The project would provide improvements to pedestrian and bicycle connectivity and safety in the vicinity of the project site by constructing a Class I Bikeway trail extension between the Guadalupe River Trail and Orchard Parkway. The trail connection is identified in the City of San Jose Better Bike Plan 2025.

Based on the project description, the proposed project would be consistent with the *Envision San Jose 2040 General Plan* and would not require a General Plan Amendment (GPA). The project including its proposed improvements would be considered part of the cumulative solution to meet the General Plan's long-range transportation goals and would result in a less-than-significant cumulative impact.

### Local Transportation Effects

#### Project Trip Generation

After applying the ITE trip rates to the proposed project and applying the appropriate trip adjustments and reductions, it is estimated that the project would generate 532 new daily vehicle trips, with 59 new trips (32 inbound and 27 outbound) occurring during the AM peak hour and 49 new trips (15 inbound and 34 outbound) occurring during the PM peak hour.

#### Intersection Traffic Operations

The results of the intersection level of service analysis show that the signalized study intersections are currently operating at acceptable levels of service (LOS D or better) during the AM and PM peak hours of traffic and would continue to operate acceptably under background and background plus project conditions.

#### Other Transportation Items

The proposed site plan shows adequate site access and on-site circulation for automobiles, trucks, bicycles and pedestrians. However, the location of the project driveway on Orchard Parkway (100 feet north of Component Drive) could make it difficult for exiting vehicles to cross the two southbound lanes and enter the 150-foot-long southbound left-turn pocket on Orchard Parkway at Component Drive. Accordingly, the project driveway should be located as far north as possible to provide optimal access to the southbound left-turn pocket on Orchard Parkway at Component Drive.

The project would not remove any bicycle facilities, nor would it conflict with any adopted plans or policies for new bicycle facilities. Note, however, that the City of San Jose Better Bike Plan 2025

identifies Orchard Parkway as having a Class IV separated bikeway. Accordingly, City staff will require that the project make a fair-share monetary contribution toward the planned Class IV bikeway improvements along the project frontage on Orchard Parkway. Based on a cost of \$144 per linear foot (source: City of San Jose Department of Public Works), the project's total fair-share contribution would equate to approximately \$50,400 ( $\$144 \times 350$  feet of frontage = \$50,400).

The project would construct a Class I Bikeway trail extension along the southern boundary of the site. The trail connection is identified in the City of San Jose Better Bike Plan 2025 and would create a paved link between the Guadalupe River Trail and the intersection of Orchard Parkway and Component Drive. The Class I Bikeway trail will be predominantly on land owned by the project applicant. However, in order for the trail to interconnect to the Guadalupe River Trail, the trail must cross the land owned and managed by the Santa Clara Valley Water District (Valley Water). While the project applicant will fund and construct the portion of the trail over which it controls, the funding, permitting, authorization and construction of the portion on Valley Water land will need to be performed by Valley Water pursuant to authorization from those agencies with the appropriate permit jurisdiction.



## **San Jose Data Center (SJC04) TA Technical Appendices**

## **Appendix A**

### **Intersection Volumes**

Intersection Number:		1		Microsoft Data Center SJC04										
Traffix Node Number:		4069												
Intersection Name:		US 101 NB Off-Ramp & Trimble Road												
Peak Hour:		AM										Date of Analysis: 07/22/22		
Count Date:		03/14/17												
Scenario:		631,278 SF Data Center												
SJ Growth Factor (% Per Year): 0.01														
Number of Years: 0.00														
		Movements												
		North Approach			East Approach			South Approach			West Approach			
Scenario:		RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Count		0	0	0	453	1029	0	743	0	1283	0	1368	0	4876
1% Annual Growth (SJ Count Adjustment)		0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Conditions		0	0	0	453	1029	0	743	0	1283	0	1368	0	4876
Approved Project Trips														
San Jose ATI		0	0	0	5	15	0	20	0	0	0	36	0	76
Approved 2		0	0	0	0	0	0	0	0	0	0	0	0	0
Approved 3		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips		0	0	0	5	15	0	20	0	0	0	36	0	76
Background Conditions		0	0	0	458	1044	0	763	0	1283	0	1404	0	4952
Bkgrd check		0	0	0	458	1044	0	763	0	1283	0	1404	0	
Project Trips														
Project Trips		0	0	0	7	4	0	6	0	0	0	10	0	27
Project Trips 2		0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips 3		0	0	0	0	0	0	0	0	0	0	0	0	0
TRAFFIX Rounding Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips		0	0	0	7	4	0	6	0	0	0	10	0	27
Background + Project Conditions		0	0	0	465	1048	0	769	0	1283	0	1414	0	4979
Bkgrd+Proj check		0	0	0	465	1048	0	769	0	1283	0	1414	0	

Intersection Number:		2												
Traffix Node Number:		3728												
Intersection Name:		Orchard Parkway & Trimble Road												
Peak Hour:		AM										Date of Analysis: 07/22/22		
Count Date:		03/17/16												
Scenario:		631,278 SF Data Center												
SJ Growth Factor (% Per Year): 0.01														
Number of Years: 0.00														
		Movements												
		North Approach			East Approach			South Approach			West Approach			
Scenario:		RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Count		77	149	9	54	900	42	25	510	317	333	584	333	3333
1% Annual Growth (SJ Count Adjustment)		0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Conditions		77	149	9	54	900	42	25	510	317	333	584	333	3333
Approved Project Trips														
San Jose ATI (interpolated)		15	23	7	0	21	69	28	24	57	21	198	43	506
Approved 2		0	0	0	0	0	0	0	0	0	0	0	0	0
Approved 3		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips		15	23	7	0	21	69	28	24	57	21	198	43	506
Background Conditions		92	172	16	54	921	111	53	534	374	354	782	376	3839
Bkgrd check		92	172	16	54	921	111	53	534	374	354	782	376	
Project Trips														
Project Trips		0	2	0	0	0	5	1	1	11	16	0	0	36
Project Trips 2		0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips 3		0	0	0	0	0	0	0	0	0	0	0	0	0
TRAFFIX Rounding Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips		0	2	0	0	0	5	1	1	11	16	0	0	36
Background + Project Conditions		92	174	16	54	921	116	54	535	385	370	782	376	3875
Bkgrd+Proj check		92	174	16	54	921	116	54	535	385	370	782	376	

Intersection Number: **3** Microsoft Data Center SJC04  
 Traffic Node Number: 3843  
 Intersection Name: Orchard Parkway & Component Drive  
**Peak Hour:** **AM** Date of Analysis: 07/22/22  
 Count Date: 06/01/17  
 Scenario: 631,278 SF Data Center

SJ Growth Factor (% Per Year): 0.01  
 Number of Years: 0.00

Scenario:	Movements												Total
	North Approach			East Approach			South Approach			West Approach			
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Count	0	285	64	32	0	14	63	867	0	0	0	0	1325
1% Annual Growth (SJ Count Adjustment)	0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Conditions	0	285	64	32	0	14	63	867	0	0	0	0	1325
Approved Project Trips													
San Jose ATI	0	21	6	12	0	0	0	40	0	0	0	0	79
Approved 2	0	0	0	0	0	0	0	0	0	0	0	0	0
Approved 3	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips	0	21	6	12	0	0	0	40	0	0	0	0	79
Background Conditions	0	306	70	44	0	14	63	907	0	0	0	0	1404
Bkgrd check	0	306	70	44	0	14	63	907	0	0	0	0	
Project Trips													
Project Trips	0	9	18	2	0	0	0	8	0	0	0	0	37
Project Trips 2	0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips 3	0	0	0	0	0	0	0	0	0	0	0	0	0
TRAFFIX Rounding Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips	0	9	18	2	0	0	0	8	0	0	0	0	37
Background + Project Conditions	0	315	88	46	0	14	63	915	0	0	0	0	1441
Bkgrd+Proj check	0	315	88	46	0	14	63	915	0	0	0	0	

Intersection Number: **4**  
 Traffic Node Number: 3564  
 Intersection Name: Orchard Parkway & Charcot Avenue  
**Peak Hour:** **AM** Date of Analysis: 07/22/22  
 Count Date: 06/01/17  
 Scenario: 631,278 SF Data Center

SJ Growth Factor (% Per Year): 0.01  
 Number of Years: 0.00

		Movements												Total
		North Approach			East Approach			South Approach			West Approach			
Scenario:		RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Count		145	87	51	85	418	47	4	24	13	163	959	842	2838
1% Annual Growth (SJ Count Adjustment)		0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Conditions		145	87	51	85	418	47	4	24	13	163	959	842	2838
Approved Project Trips														
	San Jose ATI	18	42	69	76	102	7	0	9	0	11	191	16	541
	Approved 2	0	0	0	0	0	0	0	0	0	0	0	0	0
	Approved 3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Approved Trips	18	42	69	76	102	7	0	9	0	11	191	16	541
Background Conditions		163	129	120	161	520	54	4	33	13	174	1150	858	3379
	Bkgrd check	163	129	120	161	520	54	4	33	13	174	1150	858	
Project Trips														
	Project Trips	4	0	5	3	0	0	0	0	0	0	0	5	17
	Project Trips 2	0	0	0	0	0	0	0	0	0	0	0	0	0
	Project Trips 3	0	0	0	0	0	0	0	0	0	0	0	0	0
	TRAFFIX Rounding Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Project Trips	4	0	5	3	0	0	0	0	0	0	0	5	17
Background + Project Conditions		167	129	125	164	520	54	4	33	13	174	1150	863	3396
	Bkgrd+Proj check	167	129	125	164	520	54	4	33	13	174	1150	863	

Intersection Number:		1		Microsoft Data Center SJC04										
Traffix Node Number:		4069												
Intersection Name:		US 101 NB Off-Ramp & Trimble Road												
Peak Hour:		PM		Date of Analysis: 07/22/22										
Count Date:		03/14/17												
Scenario:		631,278 SF Data Center												
SJ Growth Factor (% Per Year): 0.01														
Number of Years: 0.00														
Movements														
		North Approach			East Approach			South Approach			West Approach			
Scenario:		RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Count		0	0	0	707	1961	0	319	0	509	0	1208	0	4704
1% Annual Growth (SJ Count Adjustment)		0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Conditions		0	0	0	707	1961	0	319	0	509	0	1208	0	4704
Approved Project Trips														
San Jose ATI		0	0	0	10	51	0	14	0	0	0	27	0	102
Approved 2		0	0	0	0	0	0	0	0	0	0	0	0	0
Approved 3		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips		0	0	0	10	51	0	14	0	0	0	27	0	102
Background Conditions		0	0	0	717	2012	0	333	0	509	0	1235	0	4806
Bkgrd check		0	0	0	717	2012	0	333	0	509	0	1235	0	
Project Trips														
Project Trips		0	0	0	9	5	0	3	0	0	0	5	0	22
Project Trips 2		0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips 3		0	0	0	0	0	0	0	0	0	0	0	0	0
TRAFFIX Rounding Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips		0	0	0	9	5	0	3	0	0	0	5	0	22
Background + Project Conditions		0	0	0	726	2017	0	336	0	509	0	1240	0	4828
Bkgrd+Proj check		0	0	0	726	2017	0	336	0	509	0	1240	0	

Intersection Number:		2												
Traffix Node Number:		3728												
Intersection Name:		Orchard Parkway & Trimble Road												
Peak Hour:		PM		Date of Analysis: 07/22/22										
Count Date:		03/17/16												
Scenario:		631,278 SF Data Center												
SJ Growth Factor (% Per Year): 0.01														
Number of Years: 0.00														
Movements														
		North Approach			East Approach			South Approach			West Approach			
Scenario:		RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	Total
Existing Count		380	379	67	13	1042	77	42	95	274	209	836	49	3463
1% Annual Growth (SJ Count Adjustment)		0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Conditions		380	379	67	13	1042	77	42	95	274	209	836	49	3463
Approved Project Trips														
San Jose ATI (interpolated)		31	33	14	0	100	99	65	14	93	56	148	35	688
Approved 2		0	0	0	0	0	0	0	0	0	0	0	0	0
Approved 3		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Approved Trips		31	33	14	0	100	99	65	14	93	56	148	35	688
Background Conditions		411	412	81	13	1142	176	107	109	367	265	984	84	4151
Bkgrd check		411	412	81	13	1142	176	107	109	367	265	984	84	
Project Trips														
Project Trips		0	1	0	0	0	2	2	2	14	8	0	0	29
Project Trips 2		0	0	0	0	0	0	0	0	0	0	0	0	0
Project Trips 3		0	0	0	0	0	0	0	0	0	0	0	0	0
TRAFFIX Rounding Adjustment		0	0	0	0	0	0	0	0	0	0	0	0	0
Total Project Trips		0	1	0	0	0	2	2	2	14	8	0	0	29
Background + Project Conditions		411	413	81	13	1142	178	109	111	381	273	984	84	4180
Bkgrd+Proj check		411	413	81	13	1142	178	109	111	381	273	984	84	

Intersection Number: **3** Microsoft Data Center SJC04  
 Traffic Node Number: 3843  
 Intersection Name: Orchard Parkway & Component Drive  
**Peak Hour:** PM  
 Count Date: 06/01/17  
 Scenario: 631,278 SF Data Center

Date of Analysis: 07/22/22

SJ Growth Factor (% Per Year): 0.01

Number of Years: 0.00

		Movements												Total
		North Approach			East Approach			South Approach			West Approach			
Scenario:		RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Count		0	874	23	77	0	113	20	231	0	0	0	0	1338
1% Annual Growth (SJ Count Adjustment)		0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Conditions		0	874	23	77	0	113	20	231	0	0	0	0	1338
Approved Project Trips														
	San Jose ATI	7	53	13	16	0	0	0	134	17	5	0	11	256
	Approved 2	0	0	0	0	0	0	0	0	0	0	0	0	0
	Approved 3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Approved Trips	7	53	13	16	0	0	0	134	17	5	0	11	256
Background Conditions		7	927	36	93	0	113	20	365	17	5	0	11	1594
	Bkgrd check	7	927	36	93	0	113	20	365	17	5	0	11	
Project Trips														
	Project Trips	0	12	22	1	0	0	0	4	0	0	0	0	39
	Project Trips 2	0	0	0	0	0	0	0	0	0	0	0	0	0
	Project Trips 3	0	0	0	0	0	0	0	0	0	0	0	0	0
	TRAFFIX Rounding Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Project Trips	0	12	22	1	0	0	0	4	0	0	0	0	39
Background + Project Conditions		7	939	58	94	0	113	20	369	17	5	0	11	1633
	Bkgrd+Proj check	7	939	58	94	0	113	20	369	17	5	0	11	

Intersection Number: **4**  
 Traffic Node Number: 3564  
 Intersection Name: Orchard Parkway & Charcot Avenue  
**Peak Hour:** PM  
 Count Date: 06/01/17  
 Scenario: 631,278 SF Data Center

Date of Analysis: 07/22/22

SJ Growth Factor (% Per Year): 0.01

Number of Years: 0.00

		Movements												Total
		North Approach			East Approach			South Approach			West Approach			
Scenario:		RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	
Existing Count		515	235	219	65	650	38	102	109	146	20	345	84	2528
1% Annual Growth (SJ Count Adjustment)		0	0	0	0	0	0	0	0	0	0	0	0	0
Existing Conditions		515	235	219	65	650	38	102	109	146	20	345	84	2528
Approved Project Trips														
	San Jose ATI	32	86	113	56	175	3	0	34	0	25	94	11	629
	Approved 2	0	0	0	0	0	0	0	0	0	0	0	0	0
	Approved 3	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Approved Trips	32	86	113	56	175	3	0	34	0	25	94	11	629
Background Conditions		547	321	332	121	825	41	102	143	146	45	439	95	3157
	Bkgrd check	547	321	332	121	825	41	102	143	146	45	439	95	
Project Trips														
	Project Trips	5	0	7	2	0	0	0	0	0	0	0	2	16
	Project Trips 2	0	0	0	0	0	0	0	0	0	0	0	0	0
	Project Trips 3	0	0	0	0	0	0	0	0	0	0	0	0	0
	TRAFFIX Rounding Adjustment	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total Project Trips	5	0	7	2	0	0	0	0	0	0	0	2	16
Background + Project Conditions		552	321	339	123	825	41	102	143	146	45	439	97	3173
	Bkgrd+Proj check	552	321	339	123	825	41	102	143	146	45	439	97	



## **Appendix B**

### **Approved Trips Inventory (ATI)**

**AM PROJECT TRIPS**

04/12/2022

**Intersection of** : Charcot Av & O Nel Dr / Orchard Py**Traffic Node Number** : 3564

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
C15-054 (3-14457) Office/Industrial 1657 ALVISO-MILPITAS ROAD 237 INDUSTRIAL CENTER/ CILKER	0	0	0	0	0	0	0	18	0	0	3	0
H83-01-001 (3-12093) Office/Industrial JUNCTION AV, N/O PLUMERIA ULTRATECH STEPPER - ORIGINAL APPROVED TRIPS	0	0	0	0	0	0	0	1	0	0	1	0
NSJ LEGACY	0	0	0	52	37	18	16	172	11	7	98	45
NORTH SAN JOSE												
PDC17-026 (3-03628) LEGACY 350/370 W. TRIMBLE ROAD	0	9	0	17	5	0	0	0	0	0	0	31
<b>TOTAL:</b>	<b>0</b>	<b>9</b>	<b>0</b>	<b>69</b>	<b>42</b>	<b>18</b>	<b>16</b>	<b>191</b>	<b>11</b>	<b>7</b>	<b>102</b>	<b>76</b>

	<b>LEFT</b>	<b>THRU</b>	<b>RIGHT</b>
<b>NORTH</b>	69	42	18
<b>EAST</b>	7	102	76
<b>SOUTH</b>	0	9	0
<b>WEST</b>	16	191	11

**PM PROJECT TRIPS**

04/12/2022

**Intersection of :** Charcot Av & O Nel Dr / Orchard Py**Traffic Node Number :** 3564

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
C15-054 (3-14457) Office/Industrial 1657 ALVISO-MILPITAS ROAD 237 INDUSTRIAL CENTER/ CILKER	0	0	0	0	0	0	0	3	0	0	20	0
H83-01-001 (3-12093) Office/Industrial JUNCTION AV, N/O PLUMERIA ULTRATECH STEPPER - ORIGINAL APPROVED TRIPS	0	22	0	0	3	0	0	0	0	0	0	0
NSJ LEGACY	0	0	0	79	73	32	11	91	25	3	155	15
NORTH SAN JOSE												
PDC17-026 (3-03628) LEGACY 350/370 W. TRIMBLE ROAD	0	12	0	34	10	0	0	0	0	0	0	41
<b>TOTAL:</b>	<b>0</b>	<b>34</b>	<b>0</b>	<b>113</b>	<b>86</b>	<b>32</b>	<b>11</b>	<b>94</b>	<b>25</b>	<b>3</b>	<b>175</b>	<b>56</b>

	<b>LEFT</b>	<b>THRU</b>	<b>RIGHT</b>
<b>NORTH</b>	113	86	32
<b>EAST</b>	3	175	56
<b>SOUTH</b>	0	34	0
<b>WEST</b>	11	94	25

[illegible]

**AM PROJECT TRIPS**

04/12/2022

**Intersection of :** Orchard Py & W Trimble Rd**Traffic Node Number :** 3728

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PD14-007 (3-18698) Office/Industrial NW CORNER OF NORTECH PKWY AND DISK DR TRAMMEL CROW (MFG.)	3	7	0	0	0	0	0	1	0	0	3	0
PDC17-026 (3-03628) LEGACY 350/370 W. TRIMBLE ROAD	11	3	14	0	22	0	14	25	17	69	0	0
<b>TOTAL:</b>	<b>57</b>	<b>24</b>	<b>28</b>	<b>7</b>	<b>23</b>	<b>15</b>	<b>43</b>	<b>198</b>	<b>21</b>	<b>69</b>	<b>21</b>	<b>0</b>

	<b>LEFT</b>	<b>THRU</b>	<b>RIGHT</b>
<b>NORTH</b>	7	23	15
<b>EAST</b>	69	21	0
<b>SOUTH</b>	57	24	28
<b>WEST</b>	43	198	21

[illegible]



**PM PROJECT TRIPS**

04/12/2022

**Intersection of :** Orchard Py & W Trimble Rd**Traffix Node Number :** 3728

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
PD14-007 (3-18698) Office/Industrial NW CORNER OF NORTECH PKWY AND DISK DR TRAMMEL CROW (MFG.)	0	0	0	0	0	0	0	3	0	0	18	0
PDC17-026 (3-03628) LEGACY 350/370 W. TRIMBLE ROAD	30	9	35	0	33	0	28	50	54	99	0	0
<b>TOTAL:</b>	<b>93</b>	<b>14</b>	<b>65</b>	<b>14</b>	<b>33</b>	<b>31</b>	<b>35</b>	<b>148</b>	<b>56</b>	<b>99</b>	<b>100</b>	<b>0</b>

	<b>LEFT</b>	<b>THRU</b>	<b>RIGHT</b>
<b>NORTH</b>	14	33	31
<b>EAST</b>	99	100	0
<b>SOUTH</b>	93	14	65
<b>WEST</b>	35	148	56

**AM PROJECT TRIPS**

04/12/2022

**Intersection of** : Orchard Py & Component Dr**Traffix Node Number** : 3843

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ LEGACY	0	0	0	0	0	0	0	0	0	0	0	0
NORTH SAN JOSE												
PDC17-026 (3-03628) LEGACY 350/370 W. TRIMBLE ROAD	0	40	0	6	21	0	0	0	0	0	0	12
<b>TOTAL:</b>	<b>0</b>	<b>40</b>	<b>0</b>	<b>6</b>	<b>21</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>12</b>

	<b>LEFT</b>	<b>THRU</b>	<b>RIGHT</b>
<b>NORTH</b>	6	21	0
<b>EAST</b>	0	0	12
<b>SOUTH</b>	0	40	0
<b>WEST</b>	0	0	0

**PM PROJECT TRIPS**

04/12/2022

**Intersection of** : Orchard Py & Component Dr**Traffix Node Number** : 3843

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
NSJ LEGACY	17	81	0	0	9	7	11	0	5	0	0	0
NORTH SAN JOSE												
PDC17-026 (3-03628) LEGACY 350/370 W. TRIMBLE ROAD	0	53	0	13	44	0	0	0	0	0	0	16
<b>TOTAL:</b>	<b>17</b>	<b>134</b>	<b>0</b>	<b>13</b>	<b>53</b>	<b>7</b>	<b>11</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>16</b>

	<b>LEFT</b>	<b>THRU</b>	<b>RIGHT</b>
<b>NORTH</b>	13	53	7
<b>EAST</b>	0	0	16
<b>SOUTH</b>	17	134	0
<b>WEST</b>	11	0	5

**AM PROJECT TRIPS**

04/12/2022

**Intersection of :** W Trimble Rd & NB 101 To Trimble Ramp**Traffic Node Number :** 4069

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
C15-054 (3-14457) Office/Industrial 1657 ALVISO-MILPITAS ROAD 237 INDUSTRIAL CENTER/ CILKER	0	0	11	0	0	0	0	18	0	0	5	0
PDC17-026 (3-03628) LEGACY 350/370 W. TRIMBLE ROAD	0	0	9	0	0	0	0	18	0	0	10	5
<b>TOTAL:</b>	<b>0</b>	<b>0</b>	<b>20</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>5</b>

	LEFT	THRU	RIGHT
<b>NORTH</b>	0	0	0
<b>EAST</b>	0	15	5
<b>SOUTH</b>	0	0	20
<b>WEST</b>	0	36	0

**PM PROJECT TRIPS**

04/12/2022

**Intersection of :** W Trimble Rd & NB 101 To Trimble Ramp**Traffix Node Number :** 4069

Permit No./Proposed Land Use/Description/Location	M09 NBL	M08 NBT	M07 NBR	M03 SBL	M02 SBT	M01 SBR	M12 EBL	M11 EBT	M10 EBR	M06 WBL	M05 WBT	M04 WBR
C15-054 (3-14457) Office/Industrial 1657 ALVISO-MILPITAS ROAD 237 INDUSTRIAL CENTER/ CILKER	0	0	2	0	0	0	0	3	0	0	31	0
PDC17-026 (3-03628) LEGACY 350/370 W. TRIMBLE ROAD	0	0	12	0	0	0	0	24	0	0	20	10
<b>TOTAL:</b>	<b>0</b>	<b>0</b>	<b>14</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>27</b>	<b>0</b>	<b>0</b>	<b>51</b>	<b>10</b>

	LEFT	THRU	RIGHT
<b>NORTH</b>	0	0	0
<b>EAST</b>	0	51	10
<b>SOUTH</b>	0	0	14
<b>WEST</b>	0	27	0

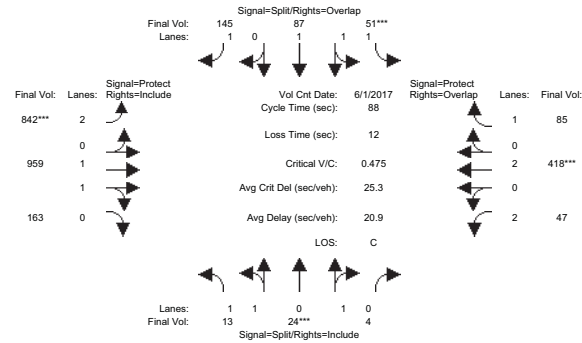
## **Appendix C**

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



Microsoft Data Center  
SJC04  
San Jose, CA  
Level Of Service Computation Report  
2000 HCM Operations (Future Volume Alternative)  
Existing (AM)

## Intersection #3564: Orchard Pkwy &amp; Charcot Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 Jun 2017 <<												
Base Vol:	13	24	4	51	87	145	842	959	163	47	418	85
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	24	4	51	87	145	842	959	163	47	418	85
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	13	24	4	51	87	145	842	959	163	47	418	85
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	24	4	51	87	145	842	959	163	47	418	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	24	4	51	87	145	842	959	163	47	418	85
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	13	24	4	51	87	145	842	959	163	47	418	85

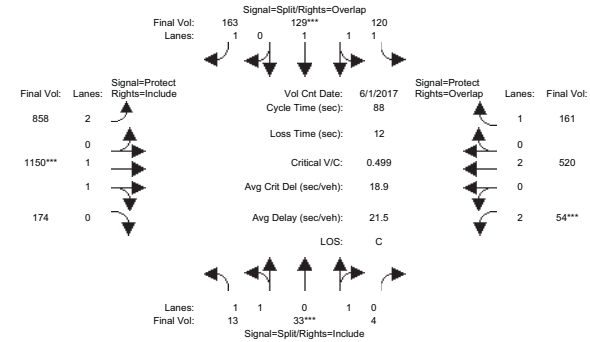
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.92	0.98	0.92	0.83	0.98	0.95	0.83	1.00	0.92
Lanes:	1.00	1.71	0.29	1.15	1.85	1.00	2.00	1.70	0.30	2.00	2.00	1.00
Final Sat.:	1750	3171	529	2013	3434	1750	3150	3162	537	3150	3800	1750

Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.03	0.03	0.08	0.27	0.30	0.30	0.01	0.11	0.05
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.0	10.0	10.0	10.0	10.0	49.7	39.7	44.4	44.4	11.6	16.3	26.3
Volume/Cap:	0.07	0.07	0.07	0.22	0.22	0.15	0.59	0.60	0.60	0.11	0.59	0.16
Delay/Veh:	34.9	34.9	34.9	35.7	35.7	9.2	18.8	16.1	16.1	33.8	34.2	22.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.9	34.9	34.9	35.7	35.7	9.2	18.8	16.1	16.1	33.8	34.2	22.9
LOS by Move:	C	C	C	D	D	A	B	B	B	C	C	C
HCM2k95thQ:	1	1	1	2	2	4	20	21	21	1	10	4

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

Microsoft Data Center  
SJC04  
San Jose, CA  
Level Of Service Computation Report  
2000 HCM Operations (Future Volume Alternative)  
Background (AM)

## Intersection #3564: Orchard Pkwy &amp; Charcot Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 Jun 2017 <<												
Base Vol:	13	24	4	51	87	145	842	959	163	47	418	85
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	24	4	51	87	145	842	959	163	47	418	85
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	9	0	69	42	18	16	191	11	7	102	76
Initial Fut:	13	33	4	120	129	163	858	1150	174	54	520	161
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	33	4	120	129	163	858	1150	174	54	520	161
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	33	4	120	129	163	858	1150	174	54	520	161
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	13	33	4	120	129	163	858	1150	174	54	520	161

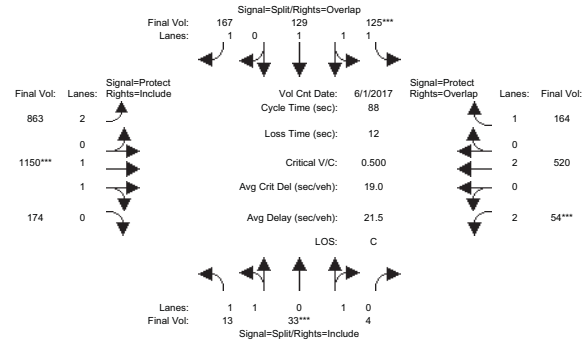
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.93	0.98	0.92	0.83	0.98	0.95	0.83	1.00	0.92
Lanes:	1.00	1.78	0.22	1.49	1.51	1.00	2.00	1.73	0.27	2.00	2.00	1.00
Final Sat.:	1750	3300	400	2625	2821	1750	3150	3213	486	3150	3800	1750

Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.05	0.05	0.09	0.27	0.36	0.36	0.02	0.14	0.09
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.0	10.0	10.0	10.0	10.0	47.3	37.3	49.0	49.0	7.0	18.7	28.7
Volume/Cap:	0.07	0.09	0.09	0.40	0.40	0.17	0.64	0.64	0.64	0.22	0.64	0.28
Delay/Veh:	34.9	35.0	35.0	36.7	36.7	10.5	21.2	14.2	14.2	38.4	33.4	22.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.9	35.0	35.0	36.7	36.7	10.5	21.2	14.2	14.2	38.4	33.4	22.3
LOS by Move:	C	C	C	D	D	B	C	B	B	D	C	C
HCM2k95thQ:	1	1	1	4	4	5	21	24	24	2	12	7

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

Microsoft Data Center  
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San Jose, CA  
Level Of Service Computation Report  
2000 HCM Operations (Future Volume Alternative)  
Project (AM)

## Intersection #3564: Orchard Pkwy &amp; Charcot Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	>>	Count	Date:	1 Jun 2017	<<							
Base Vol:	13	24	4	51	87	145	842	959	163	47	418	85
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	13	24	4	51	87	145	842	959	163	47	418	85
Added Vol:	0	0	0	5	0	4	5	0	0	0	0	3
ATI:	0	9	0	69	42	18	16	191	11	7	102	76
Initial Fut:	13	33	4	125	129	167	863	1150	174	54	520	164
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	13	33	4	125	129	167	863	1150	174	54	520	164
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	13	33	4	125	129	167	863	1150	174	54	520	164
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	13	33	4	125	129	167	863	1150	174	54	520	164

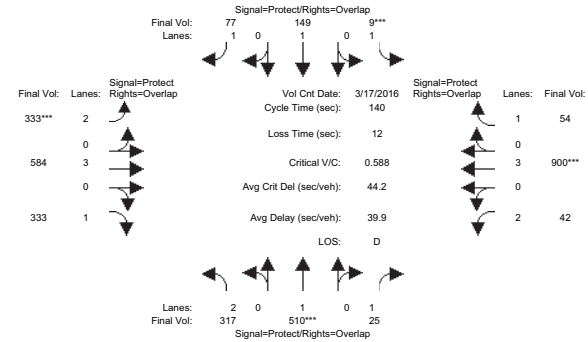
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.98	0.95	0.93	0.98	0.92	0.83	0.98	0.95	0.83	1.00	0.92
Lanes:	1.00	1.78	0.22	1.52	1.48	1.00	2.00	1.73	0.27	2.00	2.00	1.00
Final Sat.:	1750	3300	400	2680	2766	1750	3150	3213	486	3150	3800	1750

Capacity Analysis Module:												
Vol/Sat:	0.01	0.01	0.01	0.05	0.05	0.10	0.27	0.36	0.36	0.02	0.14	0.09
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.0	10.0	10.0	10.0	10.0	47.3	37.3	49.0	49.0	7.0	18.7	28.7
Volume/Cap:	0.07	0.09	0.09	0.41	0.41	0.18	0.65	0.64	0.64	0.22	0.65	0.29
Delay/Veh:	34.9	35.0	35.0	36.7	36.7	10.5	21.2	14.2	14.2	38.4	33.5	22.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.9	35.0	35.0	36.7	36.7	10.5	21.2	14.2	14.2	38.4	33.5	22.4
LOS by Move:	C	C	C	D	D	B	C	B	B	D	C	C
HCM2k95thQ:	1	1	1	4	4	5	21	24	24	2	12	7

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

Microsoft Data Center  
SJC04  
San Jose, CA  
Level Of Service Computation Report  
2000 HCM Operations (Future Volume Alternative)  
Existing (AM)

## Intersection #3728: Orchard Pkwy &amp; Trimble Rd



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0

Volume Module:	>>	Count	Date:	17 Mar 2016	<<							
Base Vol:	317	510	25	9	149	77	333	584	333	42	900	54
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	317	510	25	9	149	77	333	584	333	42	900	54
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	317	510	25	9	149	77	333	584	333	42	900	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	317	510	25	9	149	77	333	584	333	42	900	54
Reduced Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	317	510	25	9	149	77	333	584	333	42	900	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Final Volume:	317	510	25	9	149	77	333	584	333	42	900	54

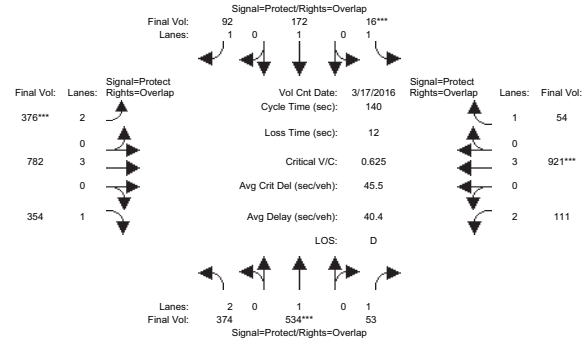
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	1900	1750	3150	5700	1750	3150	5700	1750

Capacity Analysis Module:												
Vol/Sat:	0.10	0.27	0.01	0.01	0.08	0.04	0.11	0.10	0.19	0.01	0.16	0.03
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	38.2	61.0	80.7	7.0	29.8	53.8	24.0	40.3	78.5	19.7	35.9	42.9
Volume/Cap:	0.37	0.62	0.02	0.10	0.37	0.11	0.62	0.36	0.34	0.09	0.62	0.10
Delay/Veh:	41.4	31.8	12.7	64.0	47.6	27.8	55.8	39.7	16.9	52.5	46.7	34.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.4	31.8	12.7	64.0	47.6	27.8	55.8	39.7	16.9	52.5	46.7	34.8
LOS by Move:	D	C	B	E	D	C	E	D	B	D	D	C
HCM2k95thQ:	13	29	1	1	11	5	15	12	15	2	20	3

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

Microsoft Data Center  
SJC04  
San Jose, CA  
Level Of Service Computation Report  
2000 HCM Operations (Future Volume Alternative)  
Background (AM)

## Intersection #3728: Orchard Pkwy &amp; Trimble Rd



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Min. Green:	7	10	10		7	10	10		7	10	10		7	10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Volume Module: >> Count Date: 17 Mar 2016 <<																
Base Vol:	317	510	25		9	149	77		333	584	333		42	900	54	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	317	510	25		9	149	77		333	584	333		42	900	54	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
ATI:	57	24	28		7	23	15		43	198	21		69	21	0	
Initial Fut:	374	534	53		16	172	92		376	782	354		111	921	54	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	374	534	53		16	172	92		376	782	354		111	921	54	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	374	534	53		16	172	92		376	782	354		111	921	54	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Volume:	374	534	53		16	172	92		376	782	354		111	921	54	

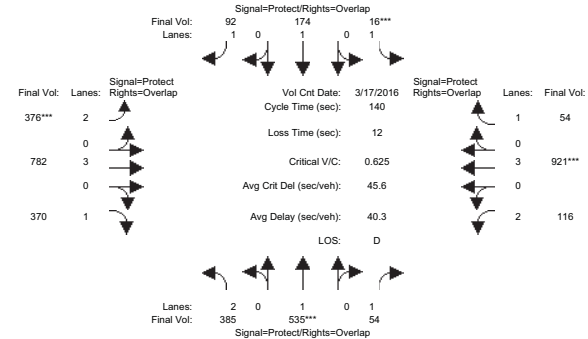
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.83	1.00	0.92		0.92	1.00	0.92		0.83	1.00	0.92		0.83	1.00	0.92	
Lanes:	2.00	1.00	1.00		1.00	1.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00	
Final Sat.:	3150	1900	1750		1750	1900	1750		3150	5700	1750		3150	5700	1750	

Capacity Analysis Module:																
Vol/Sat:	0.12	0.28	0.03		0.01	0.09	0.05		0.12	0.14	0.20		0.04	0.16	0.03	
Crit Moves:	****	****	****		****	****	****		****	****	****		****	****	****	
Green Time:	38.3	60.5	76.7		7.0	29.2	54.9		25.7	44.3	82.6		16.2	34.8	41.8	
Volume/Cap:	0.43	0.65	0.06		0.18	0.43	0.13		0.65	0.43	0.34		0.31	0.65	0.10	
Delay/Veh:	42.3	33.2	14.8		64.8	49.0	27.4		55.6	38.1	14.9		57.3	48.2	35.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	42.3	33.2	14.8		64.8	49.0	27.4		55.6	38.1	14.9		57.3	48.2	35.6	
LOS by Move:	D	C	B		E	D	C		E	D	B		E	D	D	
HCM2k95thQ:	15	31	2		2	13	5		17	16	15		5	21	3	

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

Microsoft Data Center  
SJC04  
San Jose, CA  
Level Of Service Computation Report  
2000 HCM Operations (Future Volume Alternative)  
Project (AM)

## Intersection #3728: Orchard Pkwy &amp; Trimble Rd



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Min. Green:	7	10	10		7	10	10		7	10	10		7	10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Volume Module: >> Count Date: 17 Mar 2016 <<																
Base Vol:	317	510	25		9	149	77		333	584	333		42	900	54	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	317	510	25		9	149	77		333	584	333		42	900	54	
Added Vol:	11	1	1		0	2	0		0	0	16		5	0	0	
ATI:	57	24	28		7	23	15		43	198	21		69	21	0	
Initial Fut:	385	535	54		16	174	92		376	782	370		116	921	54	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	385	535	54		16	174	92		376	782	370		116	921	54	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	385	535	54		16	174	92		376	782	370		116	921	54	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Final Volume:	385	535	54		16	174	92		376	782	370		116	921	54	

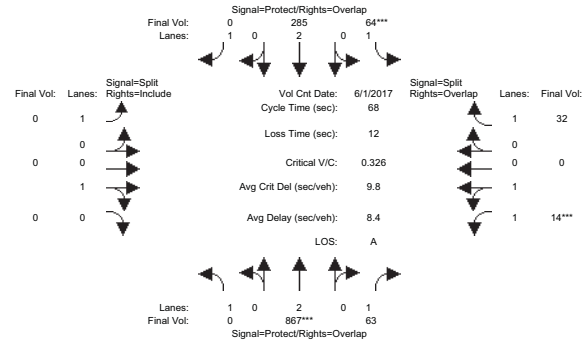
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.83	1.00	0.92		0.92	1.00	0.92		0.83	1.00	0.92		0.83	1.00	0.92	
Lanes:	2.00	1.00	1.00		1.00	1.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00	
Final Sat.:	3150	1900	1750		1750	1900	1750		3150	5700	1750		3150	5700	1750	

Capacity Analysis Module:																
Vol/Sat:	0.12	0.28	0.03		0.01	0.09	0.05		0.12	0.14	0.21		0.04	0.16	0.03	
Crit Moves:	****	****	****		****	****	****		****	****	****		****	****	****	
Green Time:	38.6	60.6	76.7		7.0	28.9	54.6		25.7	44.3	82.9		16.1	34.8	41.8	
Volume/Cap:	0.44	0.65	0.06		0.18	0.44	0.13		0.65	0.43	0.36		0.32	0.65	0.10	
Delay/Veh:	42.2	33.2	14.8		64.8	49.3	27.6		55.6	38.1	15.0		57.4	48.3	35.7	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	42.2	33.2	14.8		64.8	49.3	27.6		55.6	38.1	15.0		57.4	48.3	35.7	
LOS by Move:	D	C	B		E	D	C		E	D	B		E	D	D	
HCM2k95thQ:	15	31	2		2	13	5		17	16	16		5	21	3	

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

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2000 HCM Operations (Future Volume Alternative)  
Existing (AM)

## Intersection #3843: Orchard Pkwy &amp; Component Dr

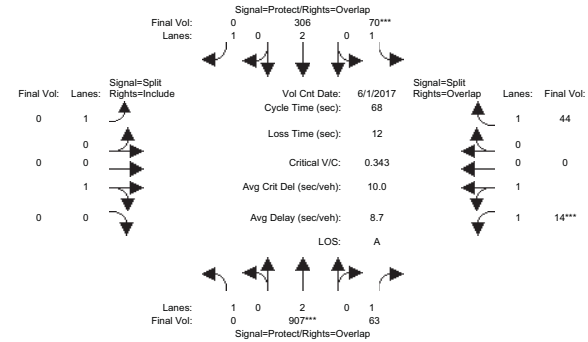


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 Jun 2017 <<												
Base Vol:	0	867	63	64	285	0	0	0	0	14	0	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	867	63	64	285	0	0	0	0	14	0	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	0	867	63	64	285	0	0	0	0	14	0	32
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	867	63	64	285	0	0	0	0	14	0	32
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	867	63	64	285	0	0	0	0	14	0	32
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	867	63	64	285	0	0	0	0	14	0	32
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.93	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	0.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	0	3550	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.23	0.04	0.04	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	0.0	39.0	49.0	7.0	46.0	0.0	0.0	0.0	0.0	10.0	0.0	17.0
Volume/Cap:	0.00	0.40	0.05	0.36	0.11	0.00	0.00	0.00	0.00	0.03	0.00	0.07
Delay/Veh:	0.0	8.1	2.8	29.6	3.9	0.0	0.0	0.0	0.0	24.9	0.0	19.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.1	2.8	29.6	3.9	0.0	0.0	0.0	0.0	24.9	0.0	19.6
LOS by Move:	A	A	A	C	A	A	A	A	A	C	A	B
HCM2k95thQ:	0	10	1	4	2	0	0	0	0	0	0	1

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

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2000 HCM Operations (Future Volume Alternative)  
Background (AM)

## Intersection #3843: Orchard Pkwy &amp; Component Dr

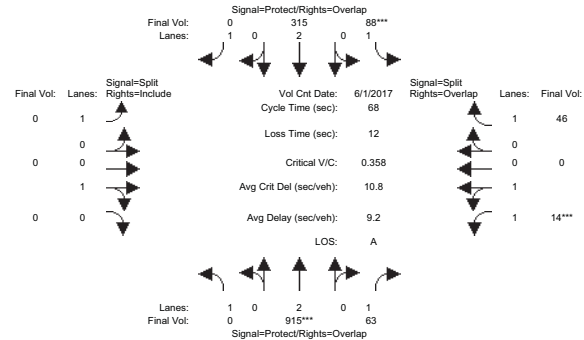


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 Jun 2017 <<												
Base Vol:	0	867	63	64	285	0	0	0	0	14	0	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	867	63	64	285	0	0	0	0	14	0	32
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	40	0	6	21	0	0	0	0	0	0	12
Initial Fut:	0	907	63	70	306	0	0	0	0	14	0	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	907	63	70	306	0	0	0	0	14	0	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	907	63	70	306	0	0	0	0	14	0	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	907	63	70	306	0	0	0	0	14	0	44
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.93	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	0.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	0	3550	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.24	0.04	0.04	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.03
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	0.0	39.0	49.0	7.0	46.0	0.0	0.0	0.0	0.0	10.0	0.0	17.0
Volume/Cap:	0.00	0.42	0.05	0.39	0.12	0.00	0.00	0.00	0.00	0.03	0.00	0.10
Delay/Veh:	0.0	8.3	2.8	29.9	3.9	0.0	0.0	0.0	0.0	24.9	0.0	19.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.3	2.8	29.9	3.9	0.0	0.0	0.0	0.0	24.9	0.0	19.7
LOS by Move:	A	A	A	C	A	A	A	A	A	C	A	B
HCM2k95thQ:	0	10	1	4	2	0	0	0	0	0	0	2

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

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2000 HCM Operations (Future Volume Alternative)  
Project (AM)

## Intersection #3843: Orchard Pkwy &amp; Component Dr

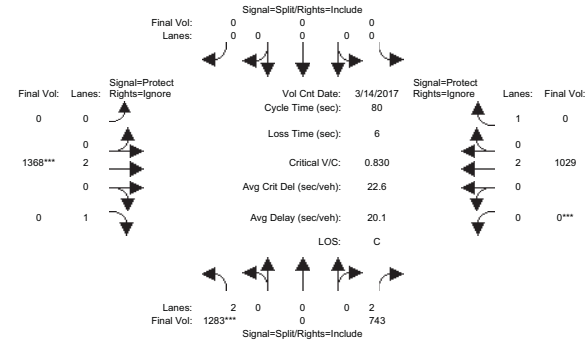


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	7	10	10	10	10	10	10	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 Jun 2017 <<												
Base Vol:	0	867	63	64	285	0	0	0	0	14	0	32
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	867	63	64	285	0	0	0	0	14	0	32
Added Vol:	0	8	0	18	9	0	0	0	0	0	0	2
ATI:	0	40	0	6	21	0	0	0	0	0	0	12
Initial Fut:	0	915	63	88	315	0	0	0	0	14	0	46
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	915	63	88	315	0	0	0	0	14	0	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	915	63	88	315	0	0	0	0	14	0	46
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	915	63	88	315	0	0	0	0	14	0	46
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92	0.93	1.00	0.92
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.00	0.00	2.00	0.00	1.00
Final Sat.:	1750	3800	1750	1750	3800	1750	1750	1900	0	3550	0	1750
Capacity Analysis Module:												
Vol/Sat:	0.00	0.24	0.04	0.05	0.08	0.00	0.00	0.00	0.00	0.00	0.00	0.03
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	0.0	38.1	48.1	7.9	46.0	0.0	0.0	0.0	0.0	10.0	0.0	17.9
Volume/Cap:	0.00	0.43	0.05	0.43	0.12	0.00	0.00	0.00	0.00	0.03	0.00	0.10
Delay/Veh:	0.0	8.8	3.1	29.4	3.9	0.0	0.0	0.0	0.0	24.9	0.0	19.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	8.8	3.1	29.4	3.9	0.0	0.0	0.0	0.0	24.9	0.0	19.0
LOS by Move:	A	A	A	C	A	A	A	A	A	C	A	B
HCM2k95thQ:	0	11	1	5	2	0	0	0	0	0	0	2

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

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2000 HCM Operations (Future Volume Alternative)  
Existing (AM)

## Intersection #4069: US 101 NB Off-Ramp &amp; Trimble Rd

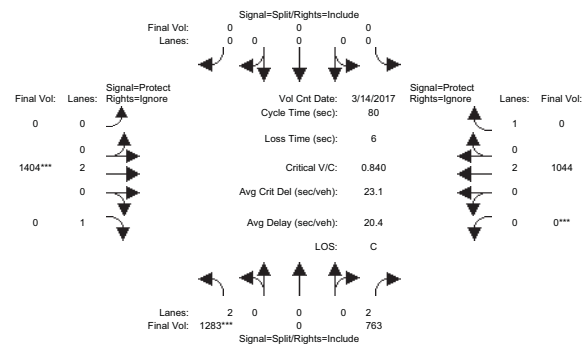


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 14 Mar 2017 <<												
Base Vol:	1283	0	743	0	0	0	0	1368	0	0	1029	453
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1283	0	743	0	0	0	0	1368	0	0	1029	453
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	1283	0	743	0	0	0	0	1368	0	0	1029	453
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	1283	0	743	0	0	0	0	1368	0	0	1029	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1283	0	743	0	0	0	0	1368	0	0	1029	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	1283	0	743	0	0	0	0	1368	0	0	1029	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.83	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	3150	0	3150	0	0	0	0	3800	1750	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.41	0.00	0.24	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.27	0.00
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	39.3	0.0	39.3	0.0	0.0	0.0	0.0	34.7	0.0	0.0	34.7	0.0
Volume/Cap:	0.83	0.00	0.48	0.00	0.00	0.00	0.00	0.83	0.00	0.00	0.62	0.00
Delay/Veh:	21.4	0.0	13.8	0.0	0.0	0.0	0.0	23.7	0.0	0.0	18.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	21.4	0.0	13.8	0.0	0.0	0.0	0.0	23.7	0.0	0.0	18.3	0.0
LOS by Move:	C	A	B	A	A	A	A	C	A	A	B	A
HCM2k95thQ:	32	0	14	0	0	0	0	30	0	0	18	0

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

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2000 HCM Operations (Future Volume Alternative)  
Background (AM)

## Intersection #4069: US 101 NB Off-Ramp &amp; Trimble Rd

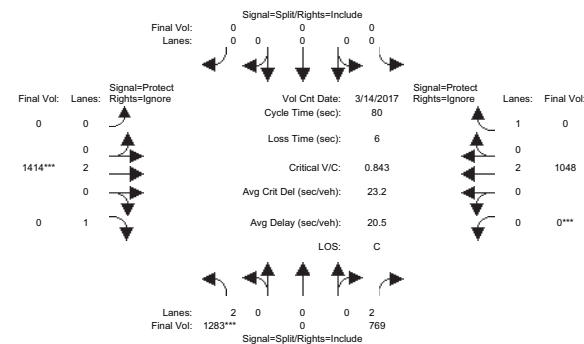


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 14 Mar 2017 <<												
Base Vol:	1283	0	743	0	0	0	0	1368	0	0	1029	453
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1283	0	743	0	0	0	0	1368	0	0	1029	453
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	20	0	0	0	0	36	0	0	15	5
Initial Fut:	1283	0	763	0	0	0	0	1404	0	0	1044	458
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	1283	0	763	0	0	0	0	1404	0	0	1044	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1283	0	763	0	0	0	0	1404	0	0	1044	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	1283	0	763	0	0	0	0	1404	0	0	1044	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.83	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	3150	0	3150	0	0	0	0	3800	1750	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.41	0.00	0.24	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.27	0.00
Crit Moves:	****						****		****			
Green Time:	38.8	0.0	38.8	0.0	0.0	0.0	0.0	35.2	0.0	0.0	35.2	0.0
Volume/Cap:	0.84	0.00	0.50	0.00	0.00	0.00	0.00	0.84	0.00	0.00	0.62	0.00
Delay/Veh:	22.2	0.0	14.3	0.0	0.0	0.0	0.0	23.9	0.0	0.0	18.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.2	0.0	14.3	0.0	0.0	0.0	0.0	23.9	0.0	0.0	18.0	0.0
LOS by Move:	C	A	B	A	A	A	A	C	A	A	B	A
HCM2k95thQ:	33	0	15	0	0	0	0	31	0	0	18	0

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

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2000 HCM Operations (Future Volume Alternative)  
Project (AM)

## Intersection #4069: US 101 NB Off-Ramp &amp; Trimble Rd

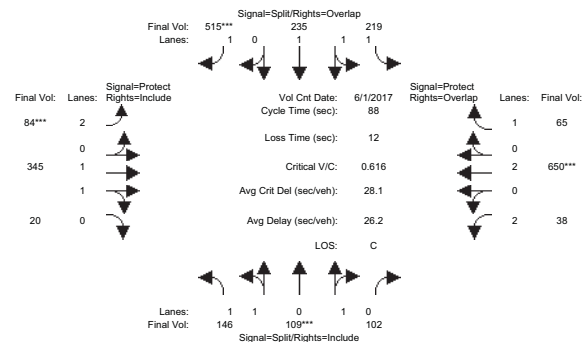


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 14 Mar 2017 <<												
Base Vol:	1283	0	743	0	0	0	0	1368	0	0	1029	453
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	1283	0	743	0	0	0	0	1368	0	0	1029	453
Added Vol:	0	0	6	0	0	0	0	10	0	0	4	7
ATI:	0	0	20	0	0	0	0	36	0	0	15	5
Initial Fut:	1283	0	769	0	0	0	0	1414	0	0	1048	465
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	1283	0	769	0	0	0	0	1414	0	0	1048	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1283	0	769	0	0	0	0	1414	0	0	1048	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	1283	0	769	0	0	0	0	1414	0	0	1048	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.83	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	3150	0	3150	0	0	0	0	3800	1750	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.41	0.00	0.24	0.00	0.00	0.00	0.00	0.37	0.00	0.00	0.28	0.00
Crit Moves:	****						****		****			
Green Time:	38.7	0.0	38.7	0.0	0.0	0.0	0.0	35.3	0.0	0.0	35.3	0.0
Volume/Cap:	0.84	0.00	0.51	0.00	0.00	0.00	0.00	0.84	0.00	0.00	0.62	0.00
Delay/Veh:	22.5	0.0	14.4	0.0	0.0	0.0	0.0	23.9	0.0	0.0	18.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.5	0.0	14.4	0.0	0.0	0.0	0.0	23.9	0.0	0.0	18.0	0.0
LOS by Move:	C	A	B	A	A	A	A	C	A	A	B	A
HCM2k95thQ:	33	0	15	0	0	0	0	31	0	0	18	0

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

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2000 HCM Operations (Future Volume Alternative)  
Existing (PM)

## Intersection #3564: Orchard Pkwy &amp; Charcot Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 Jun 2017 <<												
Base Vol:	146	109	102	219	235	515	84	345	20	38	650	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	109	102	219	235	515	84	345	20	38	650	65
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	146	109	102	219	235	515	84	345	20	38	650	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	146	109	102	219	235	515	84	345	20	38	650	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	109	102	219	235	515	84	345	20	38	650	65
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	146	109	102	219	235	515	84	345	20	38	650	65

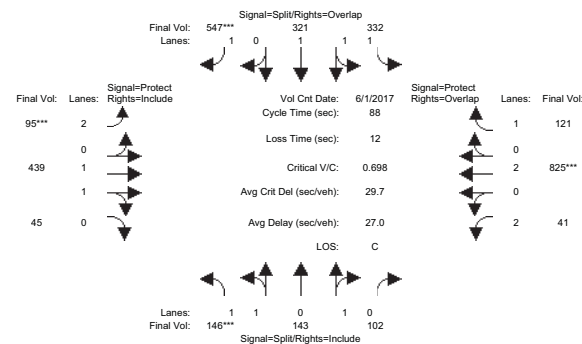
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	0.95	0.95	0.93	0.98	0.92	0.83	0.98	0.95	0.83	1.00	0.92
Lanes:	1.24	0.91	0.85	1.49	1.51	1.00	2.00	1.89	0.11	2.00	2.00	1.00
Final Sat.:	2188	1633	1528	2627	2819	1750	3150	3497	203	3150	3800	1750

Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.07	0.08	0.08	0.29	0.03	0.10	0.10	0.01	0.17	0.04
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.0	10.0	10.0	32.8	32.8	39.8	7.0	19.5	19.5	13.7	26.2	59.0
Volume/Cap:	0.59	0.59	0.59	0.22	0.22	0.65	0.34	0.45	0.45	0.08	0.58	0.06
Delay/Veh:	38.5	38.5	38.5	18.9	18.9	20.6	39.1	30.0	30.0	31.9	26.9	5.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.5	38.5	38.5	18.9	18.9	20.6	39.1	30.0	30.0	31.9	26.9	5.0
LOS by Move:	D	D	D	B	B	C	D	C	C	C	C	A
HCM2k95thQ:	8	8	8	6	6	21	3	9	9	1	14	1

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

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2000 HCM Operations (Future Volume Alternative)  
Background (PM)

## Intersection #3564: Orchard Pkwy &amp; Charcot Av



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 1 Jun 2017 <<												
Base Vol:	146	109	102	219	235	515	84	345	20	38	650	65
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	146	109	102	219	235	515	84	345	20	38	650	65
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	34	0	113	86	32	11	94	25	3	175	56
Initial Fut:	146	143	102	332	321	547	95	439	45	41	825	121
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	146	143	102	332	321	547	95	439	45	41	825	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	143	102	332	321	547	95	439	45	41	825	121
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	146	143	102	332	321	547	95	439	45	41	825	121

Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	0.95	0.93	0.98	0.92	0.83	0.98	0.95	0.83	1.00	0.92
Lanes:	1.14	1.09	0.77	1.57	1.43	1.00	2.00	1.81	0.19	2.00	2.00	1.00
Final Sat.:	1997	1956	1395	2769	2677	1750	3150	3356	344	3150	3800	1750

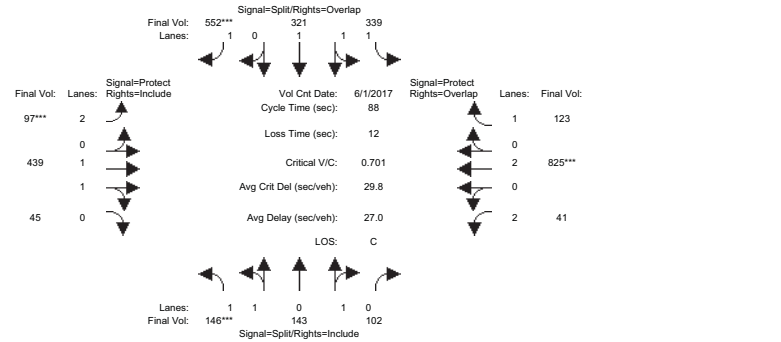
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.07	0.12	0.12	0.31	0.03	0.13	0.13	0.01	0.22	0.07
Crit Moves:	****	****	****	****	****	****	****	****	****	****	****	****
Green Time:	10.0	10.0	10.0	30.5	30.5	37.5	7.0	22.0	22.0	13.4	28.5	59.0
Volume/Cap:	0.64	0.64	0.64	0.35	0.35	0.73	0.38	0.52	0.52	0.09	0.67	0.10
Delay/Veh:	39.7	39.7	39.7	21.4	21.4	24.8	39.4	29.0	29.0	32.1	27.2	5.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.7	39.7	39.7	21.4	21.4	24.8	39.4	29.0	29.0	32.1	27.2	5.2
LOS by Move:	D	D	D	C	C	C	D	C	C	C	C	A
HCM2k95thQ:	9	9	9	9	9	24	4	12	12	1	18	3

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



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Project (PM)

## Intersection #3564: Orchard Pkwy &amp; Charcot Av



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Min. Green:	10	10	10		10	10	10		7	10	10		7	10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Volume Module: >> Count Date: 1 Jun 2017 <<																
Base Vol:	146	109	102		219	235	515		84	345	20		38	650	65	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	146	109	102		219	235	515		84	345	20		38	650	65	
Added Vol:	0	0	0		7	0	5		2	0	0		0	0	2	
ATI:	0	34	0		113	86	32		11	94	25		3	175	56	
Initial Fut:	146	143	102		339	321	552		97	439	45		41	825	123	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	146	143	102		339	321	552		97	439	45		41	825	123	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	146	143	102		339	321	552		97	439	45		41	825	123	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	146	143	102		339	321	552		97	439	45		41	825	123	

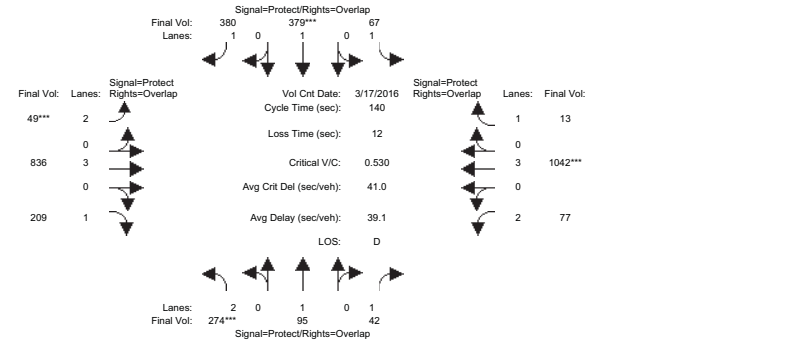
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	0.95	0.95		0.93	0.98	0.92		0.83	0.98	0.95		0.83	1.00	0.92	
Lanes:	1.14	1.09	0.77		1.58	1.42	1.00		2.00	1.81	0.19		2.00	2.00	1.00	
Final Sat.:	1997	1956	1395		2797	2649	1750		3150	3356	344		3150	3800	1750	

Capacity Analysis Module:																
Vol/Sat:	0.07	0.07	0.07		0.12	0.12	0.32		0.03	0.13	0.13		0.01	0.22	0.07	
Crit Moves:	****				****		****		****		****		****		****	
Green Time:	10.0	10.0	10.0		30.7	30.7	37.7		7.0	21.9	21.9		13.3	28.3	59.0	
Volume/Cap:	0.64	0.64	0.64		0.35	0.35	0.74		0.39	0.52	0.52		0.09	0.68	0.10	
Delay/Veh:	39.7	39.7	39.7		21.3	21.3	24.8		39.5	29.1	29.1		32.2	27.4	5.2	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	39.7	39.7	39.7		21.3	21.3	24.8		39.5	29.1	29.1		32.2	27.4	5.2	
LOS by Move:	D	D	D		C	C	C		D	C	C		C	C	A	
HCM2k95thQ:	9	9	9		9	9	24		4	12	12		1	18	3	

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

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2000 HCM Operations (Future Volume Alternative)  
Existing (PM)

## Intersection #3728: Orchard Pkwy &amp; Trimble Rd



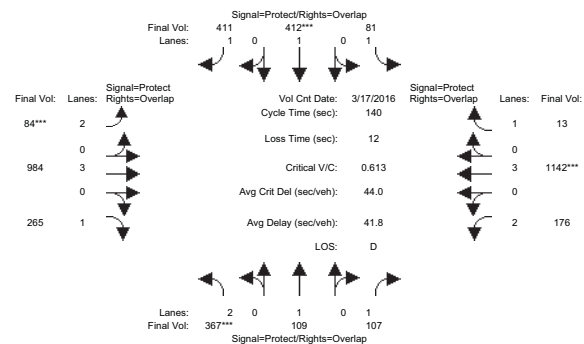
Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Min. Green:	7	10	10		7	10	10		7	10	10		7	10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Volume Module: >> Count Date: 17 Mar 2016 <<																
Base Vol:	274	95	42		67	379	380		49	836	209		77	1042	13	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	274	95	42		67	379	380		49	836	209		77	1042	13	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
ATI:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	274	95	42		67	379	380		49	836	209		77	1042	13	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	274	95	42		67	379	380		49	836	209		77	1042	13	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	274	95	42		67	379	380		49	836	209		77	1042	13	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	274	95	42		67	379	380		49	836	209		77	1042	13	

Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.83	1.00	0.92		0.92	1.00	0.92		0.83	1.00	0.92		0.83	1.00	0.92	
Lanes:	2.00	1.00	1.00		1.00	1.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00	
Final Sat.:	3150	1900	1750		1750	1900	1750		3150	5700	1750		3150	5700	1750	

Capacity Analysis Module:																
Vol/Sat:	0.09	0.05	0.02		0.04	0.20	0.22		0.02	0.15	0.12		0.02	0.18	0.01	
Crit Moves:	****				****		****		****		****		****		****	
Green Time:	22.4	43.4	57.2		30.4	51.4	58.4		7.0	40.4	62.8		13.8	47.1	77.6	
Volume/Cap:	0.54	0.16	0.06		0.18	0.54	0.52		0.31	0.51	0.27		0.25	0.54	0.01	
Delay/Veh:	55.3	35.2	25.1		44.8	35.9	31.0		65.3	41.8	24.4		58.8	38.0	14.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	55.3	35.2	25.1		44.8	35.9	31.0		65.3	41.8	24.4		58.8	38.0	14.0	
LOS by Move:	E	D	C		D	D	C		E	D	C		E	D	B	
HCM2k95thQ:	13	6	2		5	23	23		2	18	11		4	21	1	

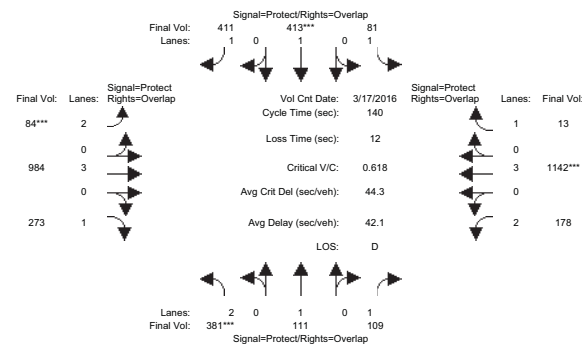
Note: Queue reported is the number of cars per lane.

## Intersection #3728: Orchard Pkwy &amp; Trimble Rd



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	7	10	10	10	10	10	7	10	10	7	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
-----												
Volume Module: >> Count Date: 17 Mar 2016 <<												
Base Vol:	274	95	42	67	379	380	49	836	209	77	1042	13
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	274	95	42	67	379	380	49	836	209	77	1042	13
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATT:	93	14	65	14	33	31	35	148	56	99	100	0
Initial Fut:	367	109	107	81	412	411	84	984	265	176	1142	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	367	109	107	81	412	411	84	984	265	176	1142	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	367	109	107	81	412	411	84	984	265	176	1142	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	367	109	107	81	412	411	84	984	265	176	1142	13
-----												
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.92	0.92	1.00	0.92	0.83	1.00	0.92	0.83	1.00	0.92
Lanes:	2.00	1.00	1.00	1.00	1.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3150	1900	1750	1750	1900	1750	3150	5700	1750	3150	5700	1750
-----												
Capacity Analysis Module:												
Vol/Sat:	0.12	0.06	0.06	0.05	0.22	0.23	0.03	0.17	0.15	0.06	0.20	0.01
Crit Moves:	****			****			****			****		
Green Time:	26.4	44.5	57.3	31.1	49.2	56.2	7.0	39.6	66.0	12.8	45.4	76.5
Volume/Cap:	0.62	0.18	0.15	0.21	0.62	0.59	0.53	0.61	0.32	0.61	0.62	0.01
Delay/Veh:	54.1	34.7	26.1	44.7	39.4	34.1	68.4	44.2	23.3	65.0	40.6	14.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.1	34.7	26.1	44.7	39.4	34.1	68.4	44.2	23.3	65.0	40.6	14.5
LOS by Move:	D	C	C	D	D	C	E	D	C	E	D	B
HCM2k95thQ:	17	7	6	6	26	26	4	22	14	9	24	1
Note: Queue reported is the number of cars per lane.												

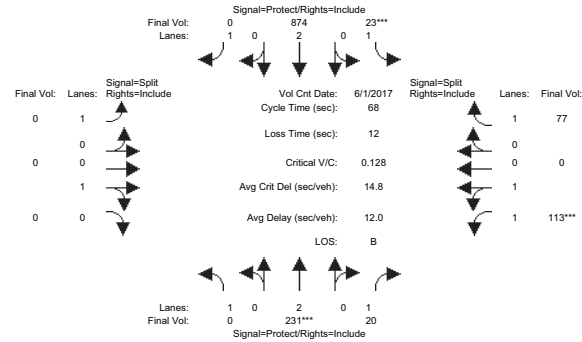
## Intersection #3728: Orchard Pkwy &amp; Trimble Rd



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Min. Green:	7	10	10		7	10	10		7	10	10		7	10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
-----																
Volume Module: >> Count Date: 17 Mar 2016 <<																
Base Vol:	274	95	42		67	379	380		49	836	209		77	1042	13	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Base:	274	95	42		67	379	380		49	836	209		77	1042	13	
Added Vol:	14	2	2		0	1	0		0	0	8		2	0	0	
ATT:	93	14	65		14	33	31		35	148	56		99	100	0	
Initial Fut:	381	111	109		81	413	411		84	984	273		178	1142	13	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	381	111	109		81	413	411		84	984	273		178	1142	13	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	381	111	109		81	413	411		84	984	273		178	1142	13	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	381	111	109		81	413	411		84	984	273		178	1142	13	
-----																
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adj/segment:	0.83	1.00	0.92		0.92	1.00	0.92		0.83	1.00	0.92		0.83	1.00	0.92	
Lanes:	2.00	1.00	1.00		1.00	1.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00	
Final Sat.:	3150	1900	1750		1750	1900	1750		3150	5700	1750		3150	5700	1750	
-----																
Capacity Analysis Module:																
Vol/Sat:	0.12	0.06	0.06		0.05	0.22	0.23		0.03	0.17	0.16		0.06	0.20	0.01	
Crit Moves:	****				****				****				****			
Green Time:	27.2	44.7	57.5		31.3	48.8	55.8		7.0	39.2	66.3		12.8	45.0	76.3	
Volume/Cap:	0.62	0.18	0.15		0.21	0.62	0.59		0.53	0.62	0.33		0.62	0.62	0.01	
Delay/Veh:	53.7	34.6	26.0		44.5	39.8	34.4		68.4	44.6	23.2		65.2	41.0	14.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	53.7	34.6	26.0		44.5	39.8	34.4		68.4	44.6	23.2		65.2	41.0	14.6	
LOS by Move:	D	C	C		D	D	C		E	D	C		E	D	B	
HCM2k95thq:	18	7	6		6	26	26		4	22	14		9	24	1	
Note: Queue reported is the number of cars per lane.																

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2000 HCM Operations (Future Volume Alternative)  
Existing (PM)

## Intersection #3843: Orchard Pkwy &amp; Component Dr



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Min. Green:	7	10	10		7	10	10		10	10	10		10	10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Volume Module: >> Count Date: 1 Jun 2017 <<																
Base Vol:	0	231	20		23	874	0		0	0	0		113	0	77	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	231	20		23	874	0		0	0	0		113	0	77	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
ATI:	0	0	0		0	0	0		0	0	0		0	0	0	
Initial Fut:	0	231	20		23	874	0		0	0	0		113	0	77	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	231	20		23	874	0		0	0	0		113	0	77	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	231	20		23	874	0		0	0	0		113	0	77	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	231	20		23	874	0		0	0	0		113	0	77	

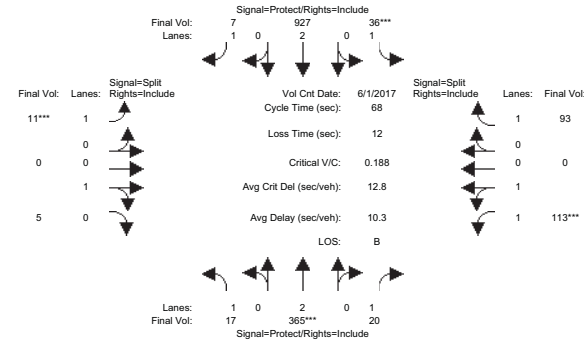
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	1.00	0.92		0.92	1.00	0.92		0.92	1.00	0.92		0.93	1.00	0.92	
Lanes:	1.00	2.00	1.00		1.00	2.00	1.00		1.00	1.00	0.00		2.00	0.00	1.00	
Final Sat.:	1750	3800	1750		1750	3800	1750		1750	1900	0		3550	0	1750	

Capacity Analysis Module:																
Vol/Sat:	0.00	0.06	0.01		0.01	0.23	0.00		0.00	0.00	0.00		0.03	0.00	0.04	
Crit Moves:	****	****	****		****	****	****		****	****	****		****	****	****	
Green Time:	0.0	28.4	28.4		7.0	35.4	0.0		0.0	0.0	0.0		20.6	0.0	20.6	
Volume/Cap:	0.00	0.15	0.03		0.13	0.44	0.00		0.00	0.00	0.00		0.11	0.00	0.15	
Delay/Veh:	0.0	12.3	11.7		28.0	10.3	0.0		0.0	0.0	0.0		17.1	0.0	17.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	0.0	12.3	11.7		28.0	10.3	0.0		0.0	0.0	0.0		17.1	0.0	17.4	
LOS by Move:	A	B	B		C	B	A		A	A	A		B	A	B	
HCM2k95thQ:	0	3	1		1	11	0		0	0	0		2	0	3	

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

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

## Intersection #3843: Orchard Pkwy &amp; Component Dr



Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Min. Green:	7	10	10		7	10	10		10	10	10		10	10	10	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Volume Module: >> Count Date: 1 Jun 2017 <<																
Base Vol:	0	231	20		23	874	0		0	0	0		113	0	77	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	231	20		23	874	0		0	0	0		113	0	77	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
ATI:	17	134	0		13	53	7		11	0	5		0	0	16	
Initial Fut:	17	365	20		36	927	7		11	0	5		113	0	93	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	17	365	20		36	927	7		11	0	5		113	0	93	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	17	365	20		36	927	7		11	0	5		113	0	93	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	17	365	20		36	927	7		11	0	5		113	0	93	

Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	1.00	0.92		0.92	1.00	0.92		0.92	1.00	0.95		0.93	1.00	0.92	
Lanes:	1.00	2.00	1.00		1.00	2.00	1.00		1.00	0.00	1.00		2.00	0.00	1.00	
Final Sat.:	1750	3800	1750		1750	3800	1750		1750	0	1800		3550	0	1750	

Capacity Analysis Module:																
Vol/Sat:	0.01	0.10	0.01		0.02	0.24	0.00		0.01	0.00	0.00		0.03	0.00	0.05	
Crit Moves:	****	****	****		****	****	****		****	****	****		****	****	****	
Green Time:	1.6	34.8	34.8		7.4	40.6	40.6		2.3	0.0	2.3		19.2	0.0	19.2	
Volume/Cap:	0.41	0.19	0.02		0.19	0.41	0.01		0.19	0.00	0.08		0.11	0.00	0.19	
Delay/Veh:	39.1	9.0	8.2		28.0	7.4	5.5		33.5	0.0	32.4		18.1	0.0	18.7	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	39.1	9.0	8.2		28.0	7.4	5.5		33.5	0.0	32.4		18.1	0.0	18.7	
LOS by Move:	D	A	A		C	A	A		C	A	C		B	A	B	
HCM2k95thQ:	1	4	0		2	10	0		1	0	0		2	0	3	

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

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

Volume Module: >> Cnt Date: 1 Jun 2017 <<												
Base Vol:	0	231	20	23	874	0	0	0	0	113	0	77
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	0	231	20	23	874	0	0	0	0	113	0	77
Added Vol:	0	4	0	22	12	0	0	0	0	0	0	1
ATI:	17	134	0	13	53	7	11	0	5	0	0	16
Initial Fut:	17	369	20	58	939	7	11	0	5	113	0	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	17	369	20	58	939	7	11	0	5	113	0	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	369	20	58	939	7	11	0	5	113	0	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	17	369	20	58	939	7	11	0	5	113	0	94

Capacity Analysis Mule:												
Vol/Sat:	0.01	0.10	0.01	0.03	0.25	0.00	0.01	0.00	0.00	0.03	0.00	0.05
Crit Moves:	****				****		****			****		
Green Time:	1.7	26.3	26.3	18.4	43.0	43.0	1.1	0.0	1.1	10.2	0.0	10.2
Volume/Cap:	0.39	0.25	0.03	0.12	0.39	0.01	0.39	0.00	0.17	0.21	0.00	0.36
Delay/Vec:	38.4	14.3	13.0	18.8	6.2	4.6	41.9	0.0	35.8	25.6	0.0	26.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Vec:	38.4	14.3	13.0	18.8	6.2	4.6	41.9	0.0	35.8	25.6	0.0	26.8
LOS by Move:	D	B	B	B	A	A	D	A	D	C	A	C
HC2k95th0:	1	5	1	2	10	0	2	0	1	3	0	

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Traffix 8 0 0715

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

[illegible]

Volume Module: >> Count Date: 14 Mar 2017 <<												
Base Vol:	509	0	319	0	0	0	1208	0	0	1961	707	
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Initial Bse:	509	0	319	0	0	0	1208	0	0	1961	707	
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	
ATI:	0	0	0	0	0	0	0	0	0	0	0	
Initial Fut:	509	0	319	0	0	0	1208	0	0	1961	707	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	509	0	319	0	0	0	1208	0	0	1961	0	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	
Reduced Vol:	509	0	319	0	0	0	1208	0	0	1961	0	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	509	0	319	0	0	0	1208	0	0	1961		

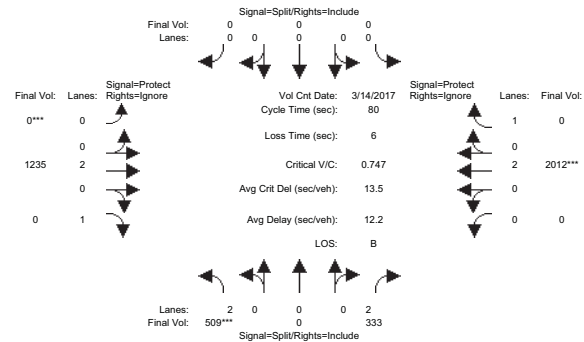
Capacity Analysis Module:												
Vol/Sat:	0.16	0.00	0.10	0.00	0.00	0.00	0.00	0.32	0.00	0.00	0.52	0.00
Crit Moves:	****						****				****	
Green Time:	17.6	0.0	17.6	0.0	0.0	0.0	0.0	56.4	0.0	0.0	56.4	0.0
Volume/Cap:	0.73	0.00	0.46	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.73	0.00
Delay/Veh:	33.0	0.0	27.5	0.0	0.0	0.0	0.0	5.2	0.0	0.0	8.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.0	0.0	27.5	0.0	0.0	0.0	0.0	5.2	0.0	0.0	8.3	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2k95thile:	16	0	9	0	0	0	0	13	0	0	26	0

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Traffix 8.0.0715

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

## Intersection #4069: US 101 NB Off-Ramp &amp; Trimble Rd

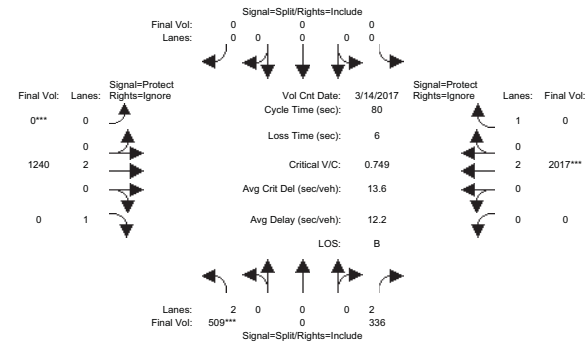


Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 14 Mar 2017 <<												
Base Vol:	509	0	319	0	0	0	0	1208	0	0	1961	707
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	509	0	319	0	0	0	0	1208	0	0	1961	707
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
ATI:	0	0	14	0	0	0	0	27	0	0	51	10
Initial Fut:	509	0	333	0	0	0	0	1235	0	0	2012	717
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	509	0	333	0	0	0	0	1235	0	0	2012	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	509	0	333	0	0	0	0	1235	0	0	2012	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	509	0	333	0	0	0	0	1235	0	0	2012	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.83	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	3150	0	3150	0	0	0	0	3800	1750	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.16	0.00	0.11	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.53	0.00
Crit Moves:	****						****			****		
Green Time:	17.3	0.0	17.3	0.0	0.0	0.0	0.0	56.7	0.0	0.0	56.7	0.0
Volume/Cap:	0.75	0.00	0.49	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.75	0.00
Delay/Veh:	33.9	0.0	28.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	8.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.9	0.0	28.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	8.4	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2k95thQ:	17	0	9	0	0	0	0	13	0	0	27	0

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

Microsoft Data Center  
SJC04  
San Jose, CA  
Level Of Service Computation Report  
2000 HCM Operations (Future Volume Alternative)  
Project (PM)

## Intersection #4069: US 101 NB Off-Ramp &amp; Trimble Rd

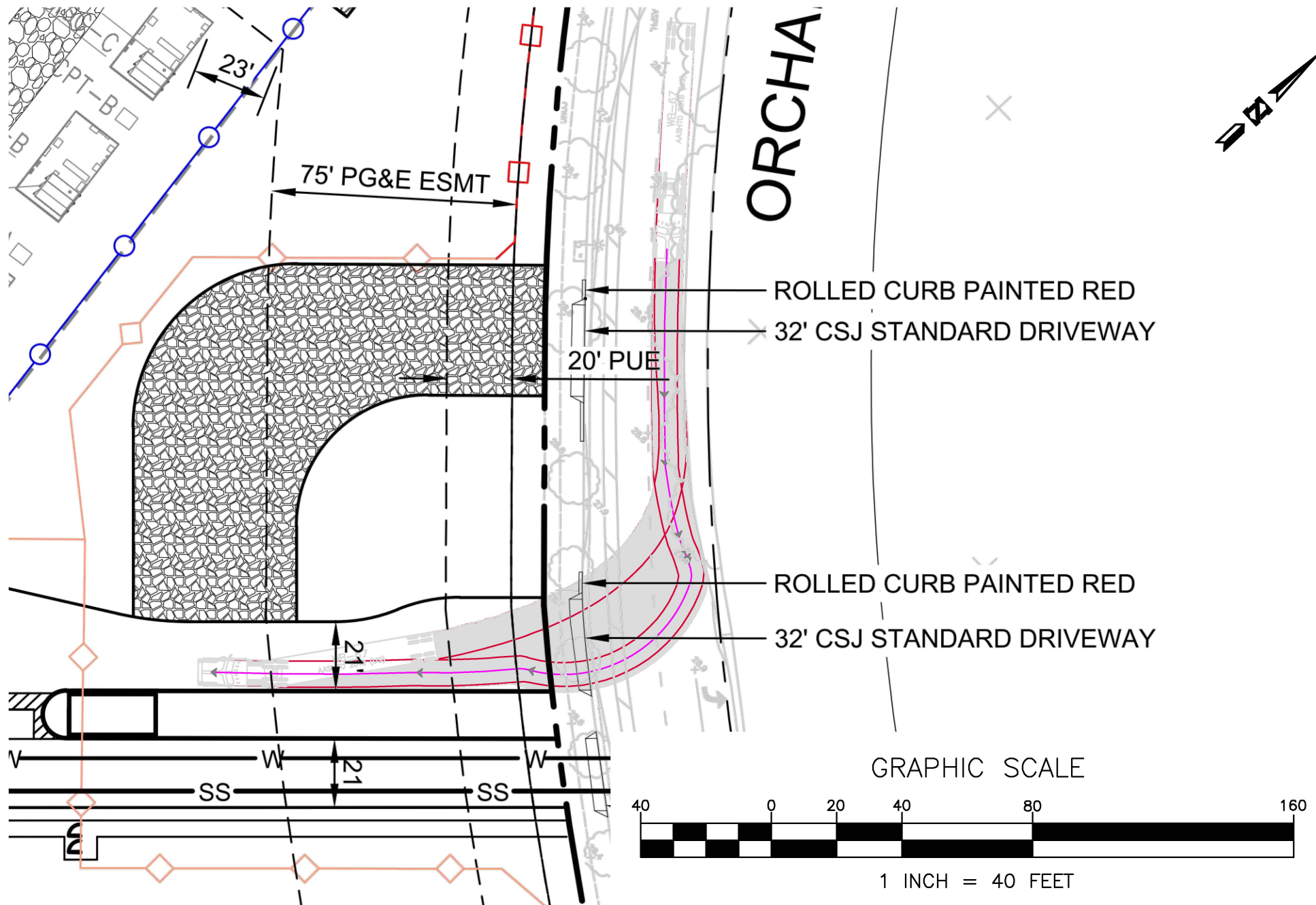



Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Min. Green:	10	0	10	0	0	0	0	10	10	0	10	10
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Volume Module: >> Count Date: 14 Mar 2017 <<												
Base Vol:	509	0	319	0	0	0	0	1208	0	0	1961	707
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	509	0	319	0	0	0	0	1208	0	0	1961	707
Added Vol:	0	0	3	0	0	0	0	5	0	0	5	9
ATI:	0	0	14	0	0	0	0	27	0	0	51	10
Initial Fut:	509	0	336	0	0	0	0	1240	0	0	2017	726
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	509	0	336	0	0	0	0	1240	0	0	2017	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	509	0	336	0	0	0	0	1240	0	0	2017	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
Final Volume:	509	0	336	0	0	0	0	1240	0	0	2017	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.83	1.00	0.83	0.92	1.00	0.92	0.92	1.00	0.92	0.92	1.00	0.92
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	2.00	1.00
Final Sat.:	3150	0	3150	0	0	0	0	3800	1750	0	3800	1750
Capacity Analysis Module:												
Vol/Sat:	0.16	0.00	0.11	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.53	0.00
Crit Moves:	****						****			****		
Green Time:	17.3	0.0	17.3	0.0	0.0	0.0	0.0	56.7	0.0	0.0	56.7	0.0
Volume/Cap:	0.75	0.00	0.49	0.00	0.00	0.00	0.00	0.46	0.00	0.00	0.75	0.00
Delay/Veh:	33.9	0.0	28.1	0.0	0.0	0.0	0.0	5.1	0.0	0.0	8.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.9	0.0	28.1	0.0	0.0	0.0	0.0	5.1	0.0	0.0	8.4	0.0
LOS by Move:	C	A	C	A	A	A	A	A	A	A	A	A
HCM2k95thQ:	17	0	10	0	0	0	0	13	0	0	27	0

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

## **Appendix D**

### **Truck Turning Templates**



DRAWN J. CHANG	SCALE 1" = 40'	 <b>HEXAGON TRANSPORTATION CONSULTANTS, INC.</b> <small>100 Century Center Court, Suite 501 San Jose, California 95112 PH: (408) 971-6100 www.hextrans.com</small>	<b>CITY OF SAN JOSE</b>	FIGURE NO.
CHECKED R. RODRIGUEZ	DATE 6/1/2022		<b>MICROSOFT DATA CENTER (SJC04) TRUCK TURNING TEMPLATE</b>	<b>1</b>